

## **Mobility challenges for the elderly, young, disadvantaged, and handicapped.**

**Challenge topic(s):** 5.2 Governance and human rights

**Area(s) for inquiry:** 5.2C Diversity and discrimination (Ability, access, and inclusion)

**Syllabus coverage:** Concepts: 2.1 Change, 2.3 Identity, 2.5 Space, 2.7 Value and ethics;  
Content: 3.3B Apps, 3.7A Autonomous vehicles;  
Contexts: 4.1B Home, leisure and tourism

### **About the challenge**

There are many citizens around the world who are unable to drive and do not have convenient access to transport. This includes children, citizens with disabilities, disadvantaged citizens, and the elderly. This situation is especially prevalent in larger cities and in outlying communities that may be isolated from facilities.

Today's lifestyle requires citizens to have mobility., whether they are a child going to school, an adult travelling to their workplace, or an elderly citizen carrying out their weekly shopping. There is a concern that the way we choose to live today has made us reliant on transport.

Many governments have identified this problem and provide public transport to address it; however, many citizens find public transportation, such as buses or railways, an unsuitable option, as they can be unreliable and do not always take them close enough to where they need to go, especially if the person has difficulties walking.

Many citizens use automobiles due to the convenience and flexibility they bring, but certain factors, such as age (young and old), health, and disability, mean that not all citizens are eligible for a driver's license.

### **About the interventions**

Two interventions are outlined here.

#### **Intervention 1**

Governments are developing policies and regulations to allow the trialling and implementation of autonomous vehicles (large scale, government/state-based). Autonomous vehicles that are privately owned, a taxi company with a fleet of self-driving cars that can be booked by the public, and autonomous vehicles owned by government organizations are being offered as a service to the public. For example, an autonomous minibus can be booked by citizens to take them to their hospital appointments. A country's readiness for autonomous vehicles can be determined using measures such as the Autonomous Vehicle Readiness Index (AVRI).

#### **Intervention 2**

Transport network companies (TNCs), which are either privately or publicly owned, provide ride-sharing websites or mobile apps offering on-demand transportation services.

Each intervention brings with it a range of impacts and implications to consider and should be evaluated using the HL extension framework in the Guide and through inquiry from the perspective of identity, space, value and ethics.

**Additional terminology**

- Autonomous Vehicle Readiness Index (AVRI)
- Ethical decision-making model, e.g., Markkula (Santa Clara)
- Society of Automotive Engineers (SAE) Scale
- Transport network company (TNC)