

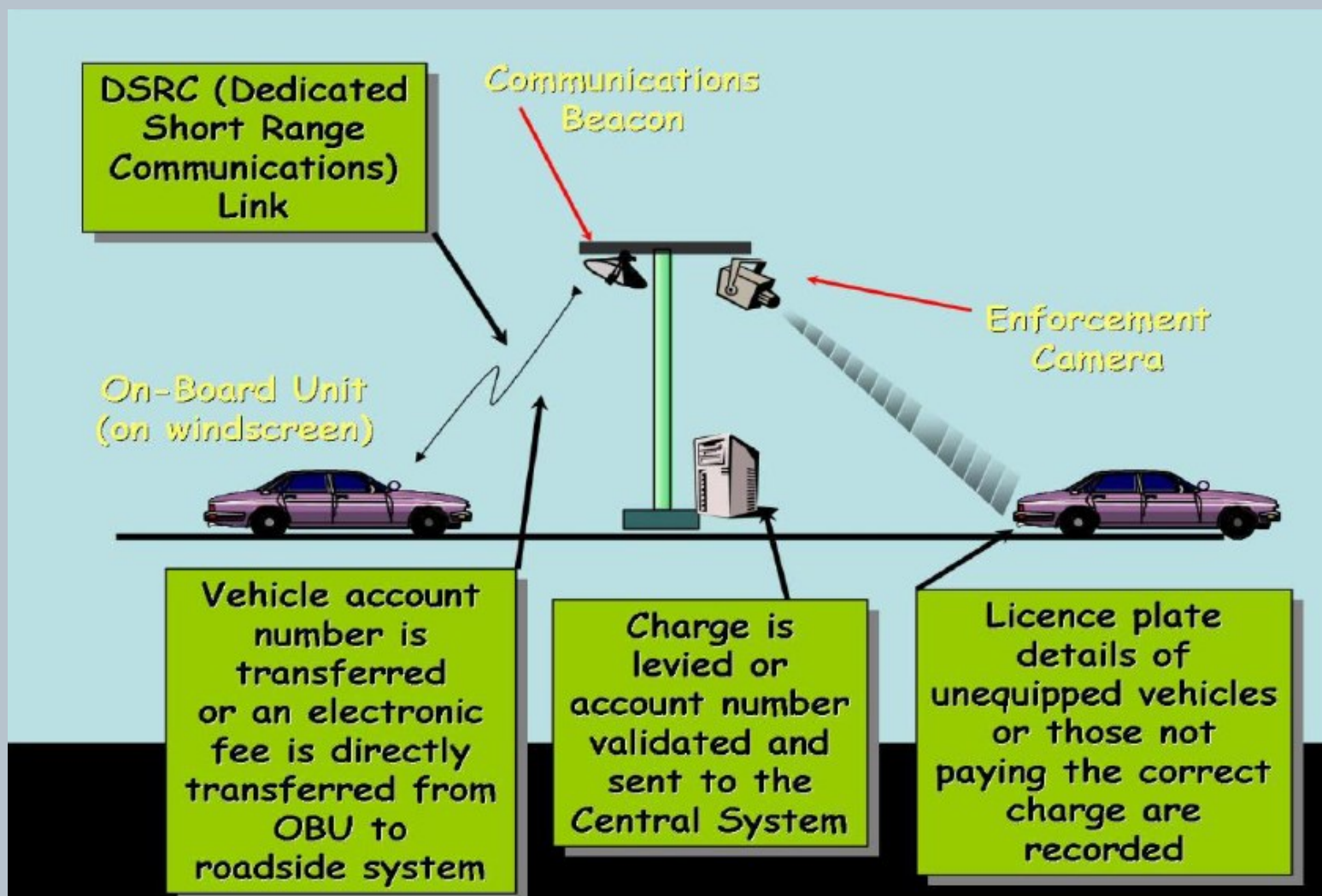
LECTURE

10

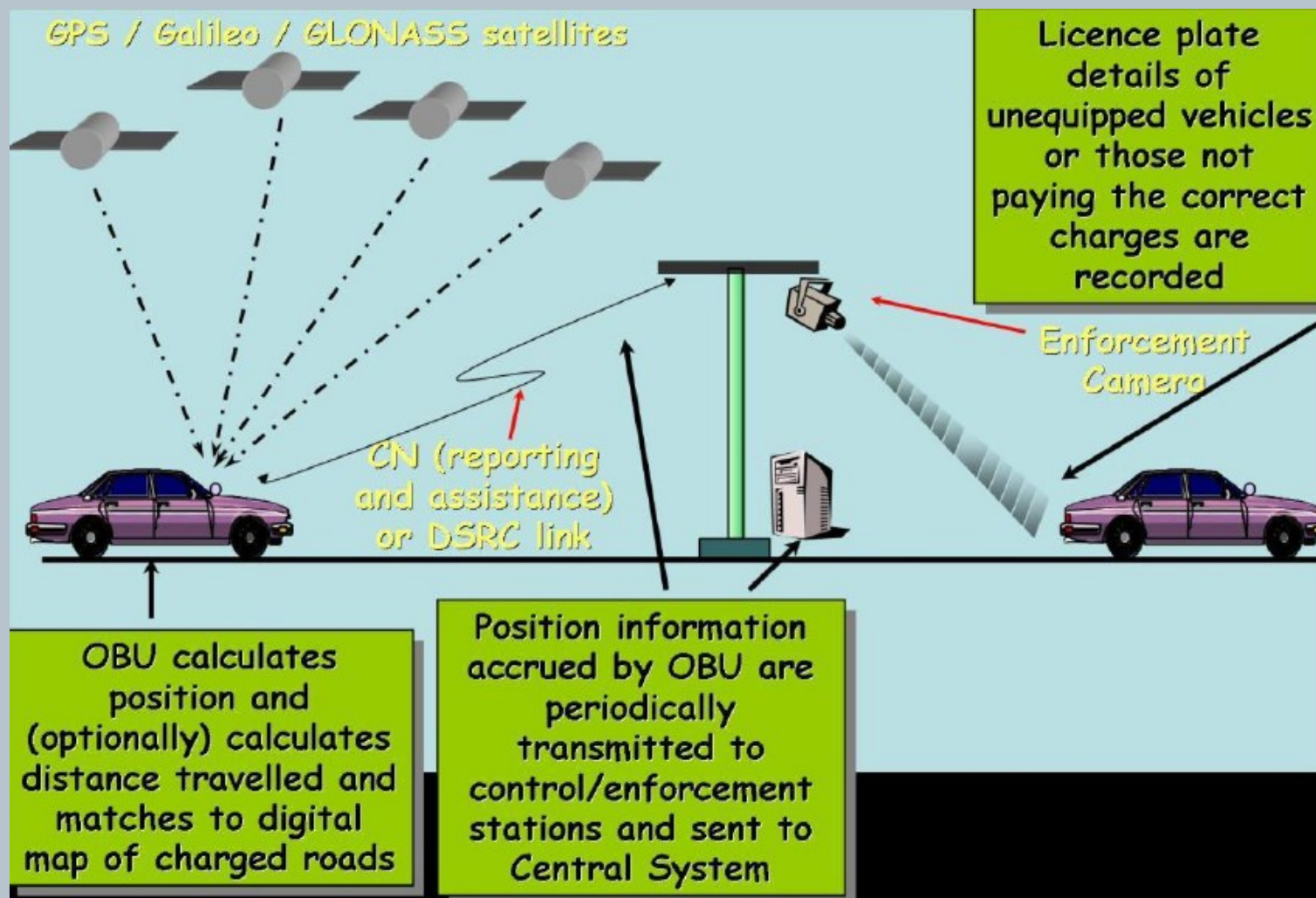
Supplement to
*Electronic Toll
Collection Systems*

Recapitulation: Electronic fee collection systems

DSRC



GNSS/CN

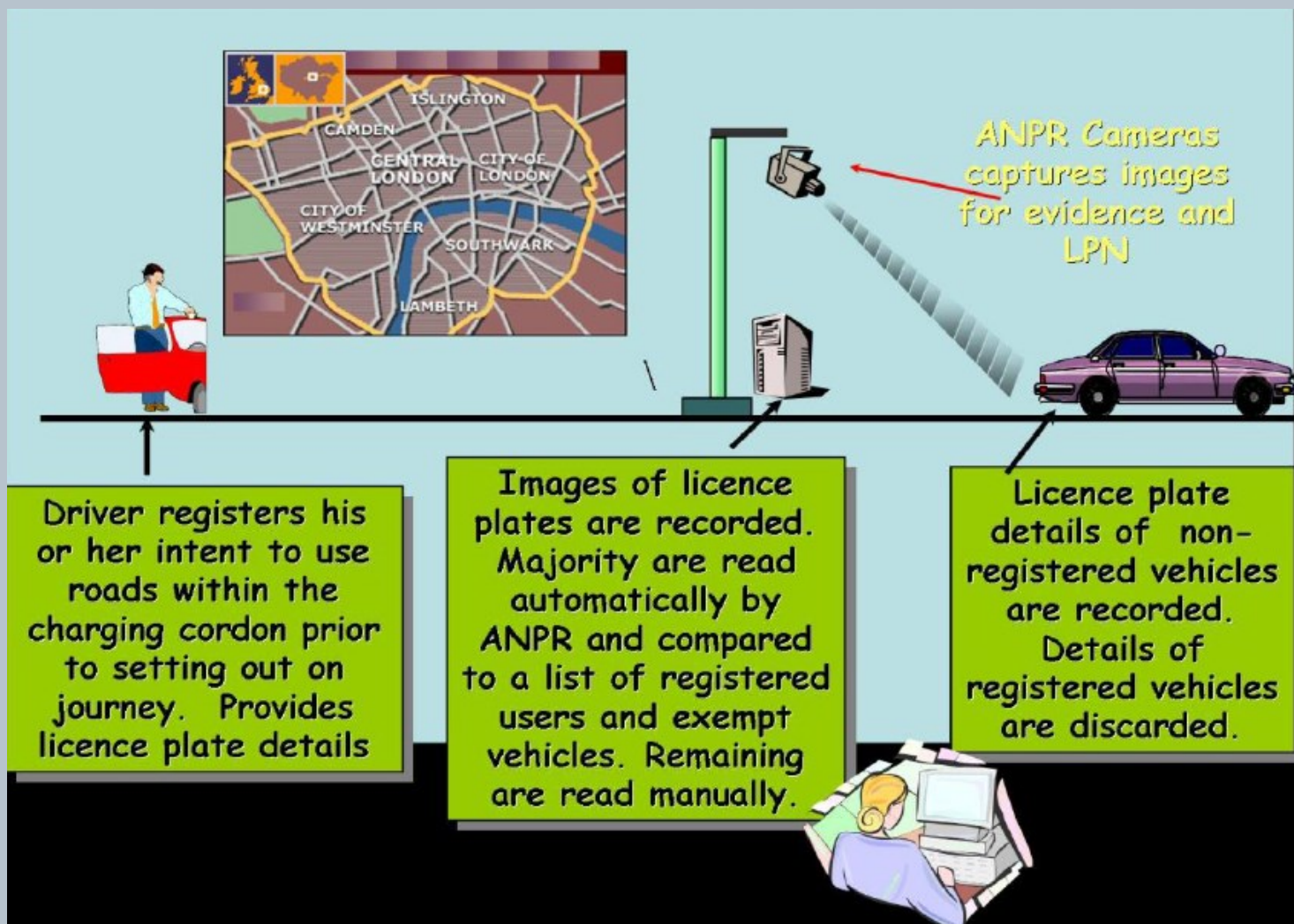


LSVA (Swiss system)

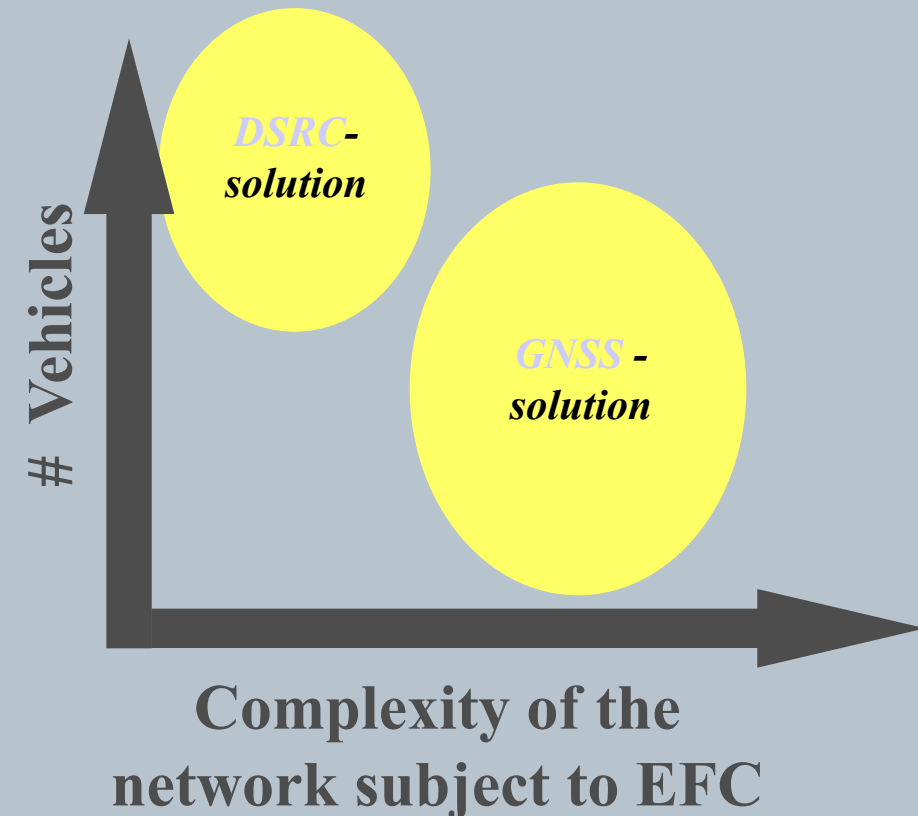
- LSVA = Leistungsabhängige Schwerverkehrsabgabe
- Nationwide on the whole Swiss road network
- Operated by Swiss Customs Authority
- Started 1 January 2001 for all vehicles above 3.5 t
- Pay per kilometre driven on any road, distance taken from **Vehicle Tachograph**
- DSRC beacons at the border stations
- according to CEN TC 278 standards
- Tariff classes based on maximum permitted weight and on emission class
- Non-swiss vehicles use ID card, that is issued after registration, data are transferred manually. Payment is done when leaving Switzerland



City EFC



DSRC / GNSS-CN technology comparision



GNSS-solution: Very high flexibility when expanding the area; remote control of the geographical data and sections subject to EFC. Standard telecommunication components
Enables advanced telematic services with additional value
More expansive OBU

DSRC-solution: Lower cost alternative for simple road infrastructure
Lower flexibility when changing the area

Enforcement: enforcementu simple diagram

