#### Future of Infrastructure

# Vehicle-to-X (V2X) communication technology

The need for more intelligent control solutions arises from complex traffic situations at urban intersections



Health

& Safety

In 2013, more than

2,000 people

seriously injured

in railway accidents

were killed or

#### Transport is fundamental to economic growth and quality of life

In the EU it represents...





of every household's budget



of Gross Domestic Product (GDP)



of total employment (that's **10 million** employees) ...but results in important challenges



Environment

Road traffic accounts for **1/5** of the total **CO**<sub>2</sub> emissions in Europe

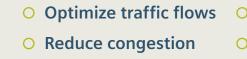


Efficiency

Congestion costs Europe about **1% of GDP** every year



Vehicle-to-X refers to an intelligent transport system where all vehicles and infrastructure systems are interconnected with each other. This connectivity will provide more precise knowledge of the traffic situation across the entire road network which in turn will help:



O Cut accident numbers

O Minimize emissions



# Car2X

Already in development

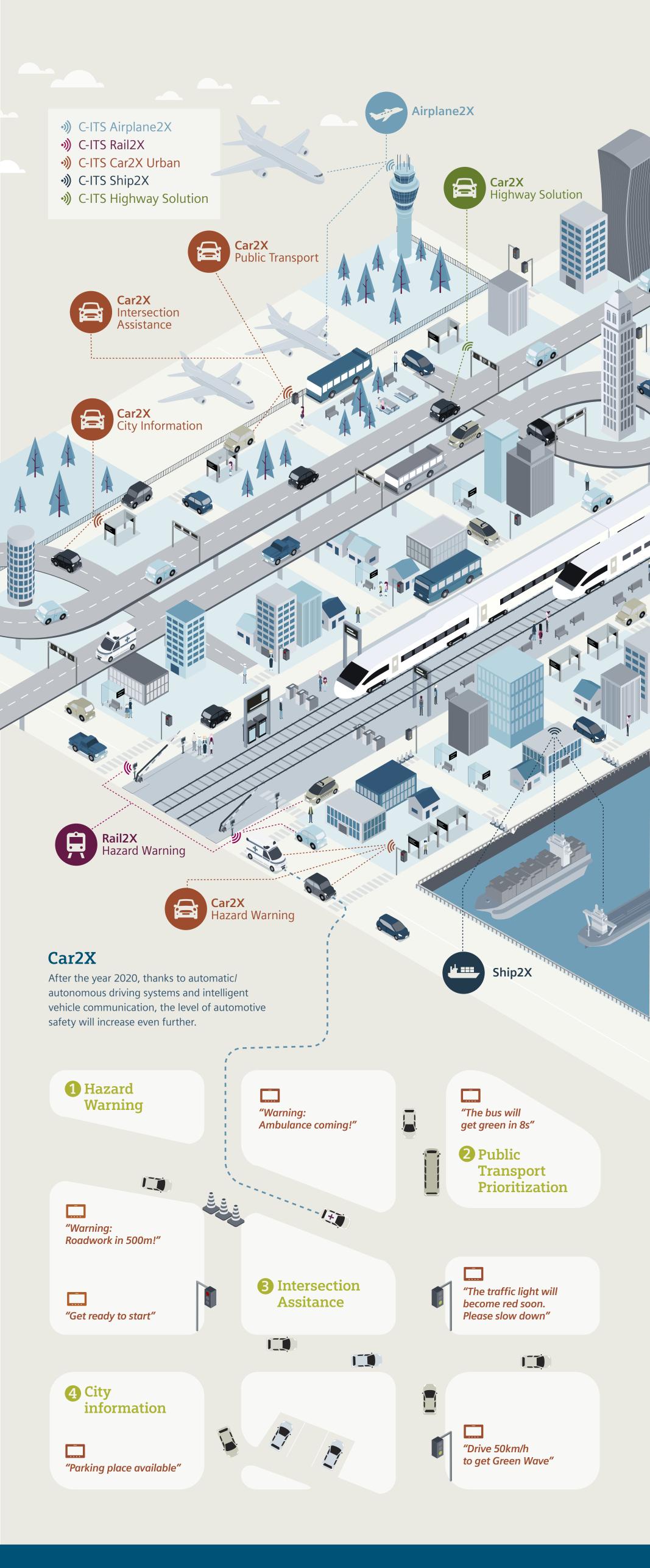
Vehicle2X / Car2X technology enables vehicles to automatically pass along messages regarding road conditions, traffic flow, and obstacles before these appear in the driver's visual range. Vehicles receive signals from intelligent road signs.



## Rail2X, Ship2X, Airplane2X

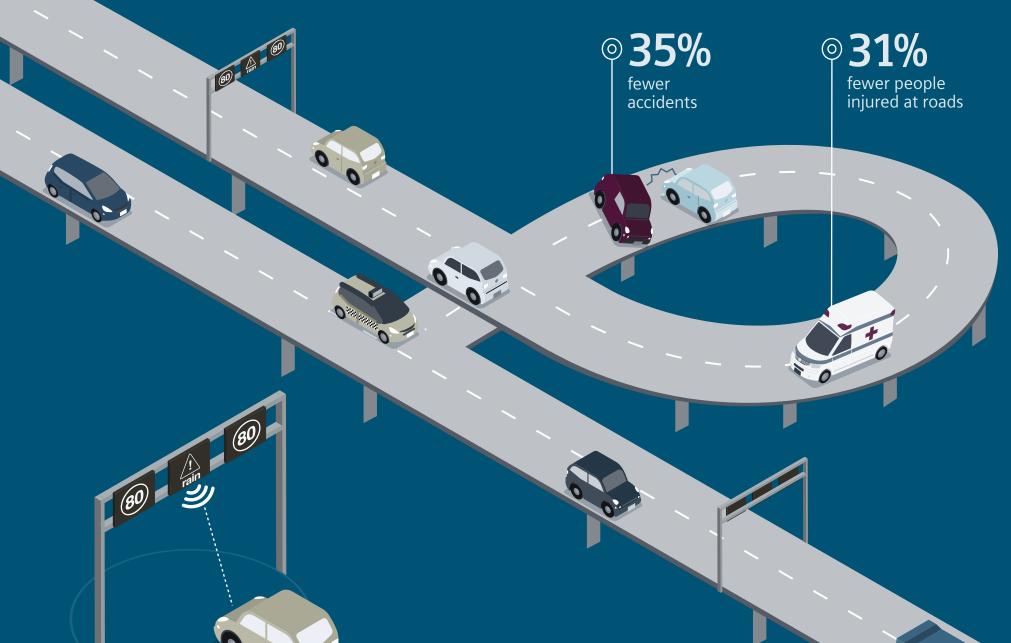
Currently commencing

Rail2X, Ship2X and Airplane2X will use the same technology as Car2X. The basic definition for the application of this technology is currently in progress.



# Siemens implemented the first fully dynamic IU-System

The effects on Germany's A9 highway show how much intelligent traffic information and guidance systems are capable of achieving.





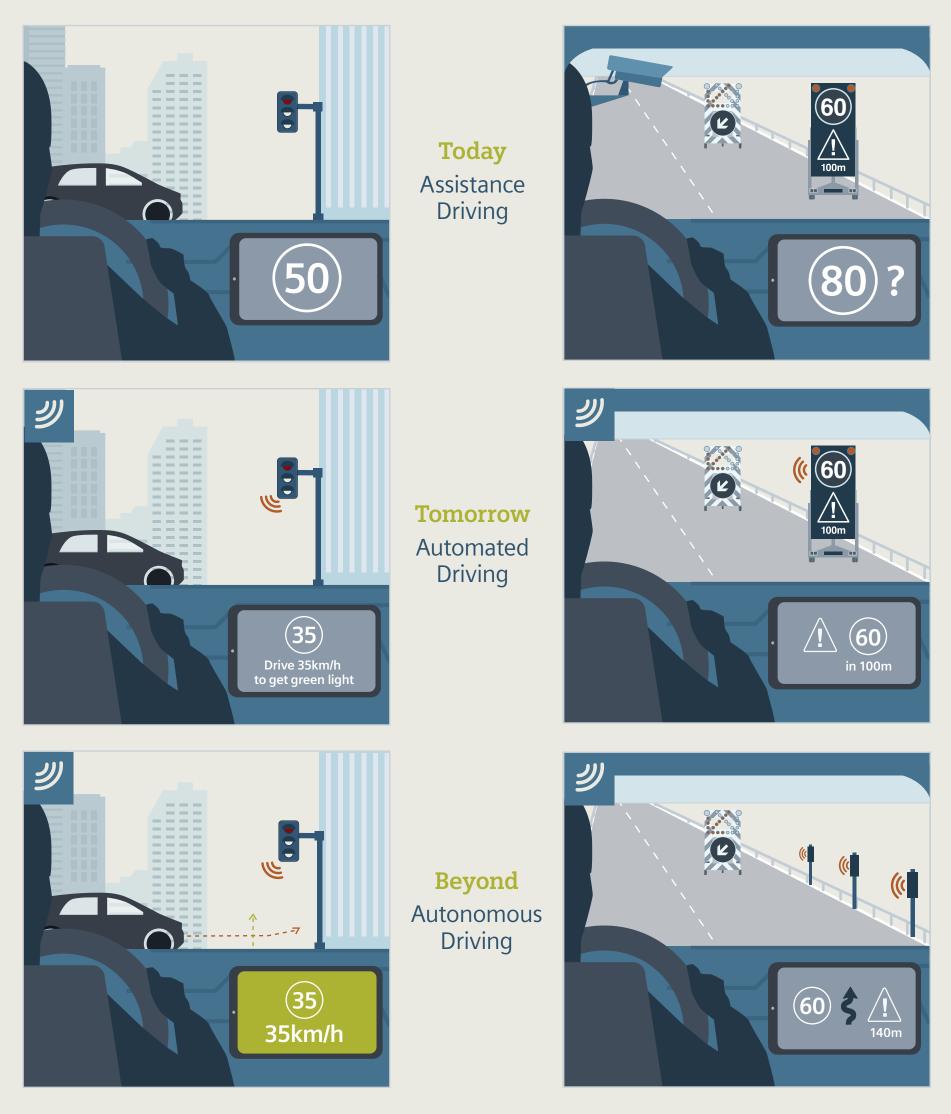
Car2X will further improve the traffic systems and avoid even more accidents.

# Long term vision for Sitraffic

Siemens provides complete solutions and develops solutions for eco communication systems of cooperative infrastructure systems.

### Urban

#### Highway



Increased safety, increased efficiency and fewer traffic jams are achieved through the implementation of cooperative systems for communication of infrastructures, with motor vehicles and road users.