



2020 Autonomous Vehicles Readiness Index

Study overview and highlights



Background



What is the AVRI?

The Autonomous Vehicles Readiness Index (AVRI) assesses the level of preparedness for autonomous vehicles across various countries and jurisdictions.

30 countries and jurisdictions

4 pillars

28 variables

28 variables



Policy & legislation

- AV regulations
- Number of government funded AV pilots
- AV department
- KPMG Change Readiness Index government capability pillar
- WEF future orientation of government
- WEF efficiency of the legal system in challenging regulations
- Assessment of the data-sharing environment new variable)



Technology & innovation

- Industry partnerships
- The number of AV firms with headquarters in the country
- The number of AV related patents
- Investment in AV related firms
- WEF NRI availability of the latest technology
- WEF NRI capacity for innovation
- Cybersecurity
- Huawei assessment of cloud computing, artificial intelligence and IoT
- Market Share of EVs



Infrastructure

- The number of electric vehicle charging stations
- 4G coverage
- WEF GCI road quality score
- KPMG Change Readiness Index technology infrastructure score
- Speedtest assessment of mobile connection speed
- Huawei assessment of broadband technology



Consumer acceptance

- Percent of the population living near AV test areas
- KPMG Change Readiness Index people and civil society technology use sub indicator
- WEF CGI ICT adoption
- WEF CGI digital skills
- NRI Individual readiness
- Ridesharing market penetration

Study highlights



30 countries and jurisdictions part of AVRI 2020

1. Singapore
2. The Netherlands
3. Norway
4. United States
5. Finland
6. Sweden
7. South Korea
8. United Arab Emirates
9. United Kingdom
10. Denmark*
11. Japan
12. Canada
13. Taiwan*
14. Germany
15. Australia
16. Israel
17. New Zealand
18. Austria
19. France
20. China
21. Belgium*
22. Spain
23. Czech Republic
24. Italy*
25. Hungary
26. Russia
27. Chile*
28. Mexico
29. India
30. Brazil

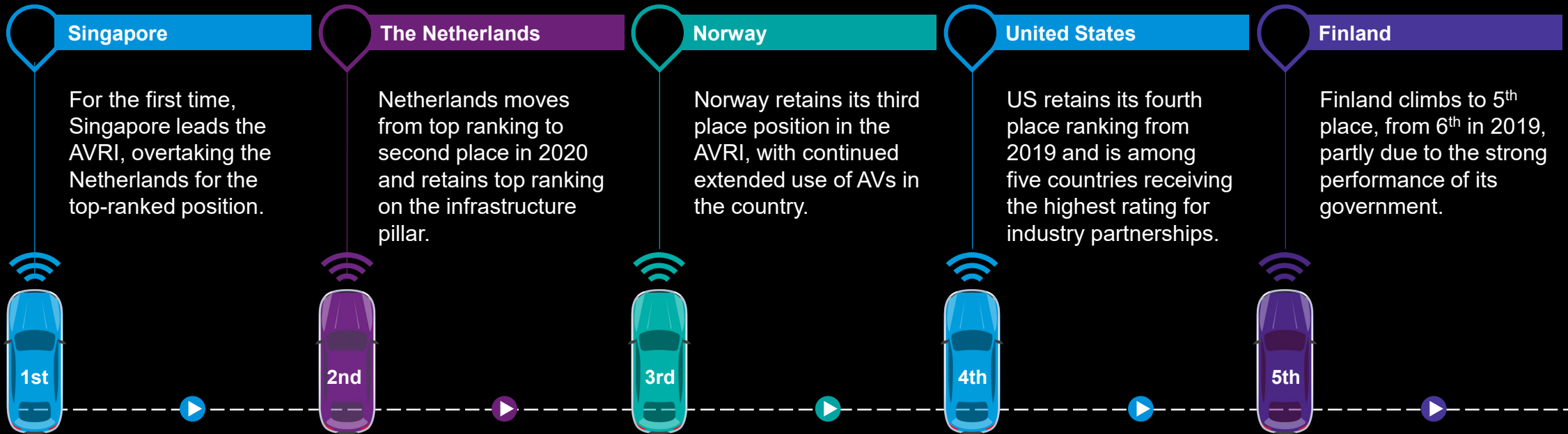
*Added in 2020

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27. Chile*
28. Mexico
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30. Brazil

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Top ranked countries



1 | Singapore



Policy and legislation



Technology and innovation



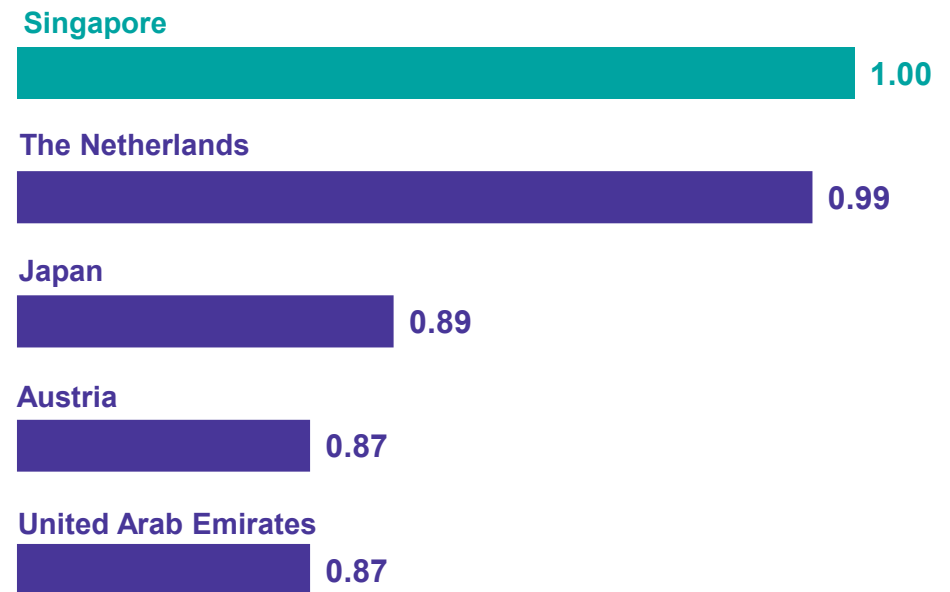
Infrastructure



Consumer acceptance

- + Singapore in the lead for the first time
- + Leading on consumer acceptance and policy and legislation pillars
- + Expanded AV testing to cover all public roads in Western Singapore
- + Aims to serve three areas with driverless buses from 2022
- + Charging points to increase significantly with incentives for buying EVs

Quality of roads top five



Source: World Economic Forum, *Global competitiveness report* (2019)

2 | The Netherlands



Policy and legislation



Technology and innovation



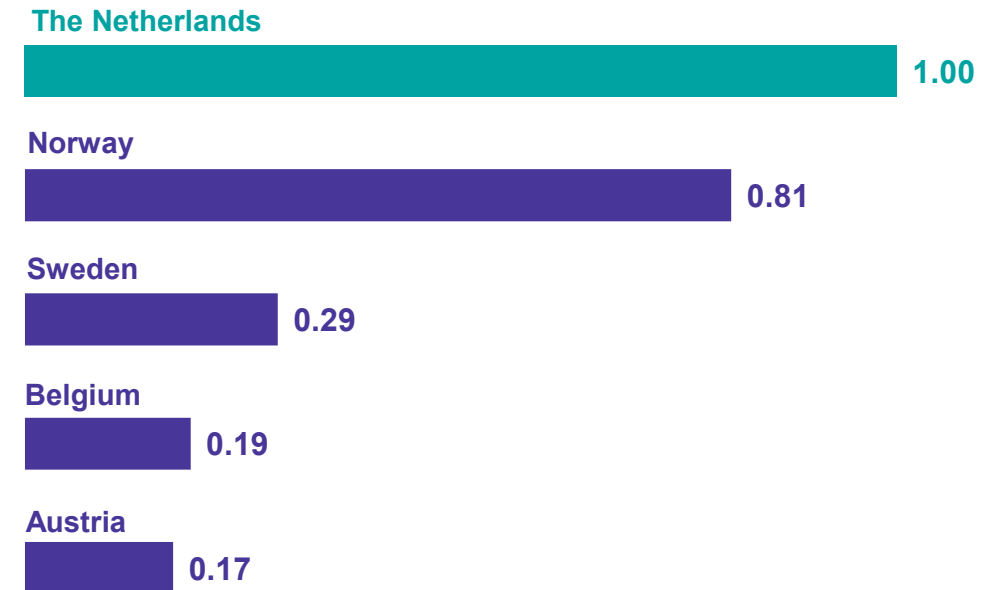
Infrastructure



Consumer acceptance

- + Leading on EV charging stations per capita
- + Second only to Singapore on road quality
- + An extensive series of pilots in the region means over 80% of population live near AV testing sites
- + Extended its use of smart road furniture

EV charging stations top five



Source: International Energy Agency, Global EV outlook (2019). Scaled by population.

3 | Norway

10

Policy and legislation

5

Technology and innovation

3

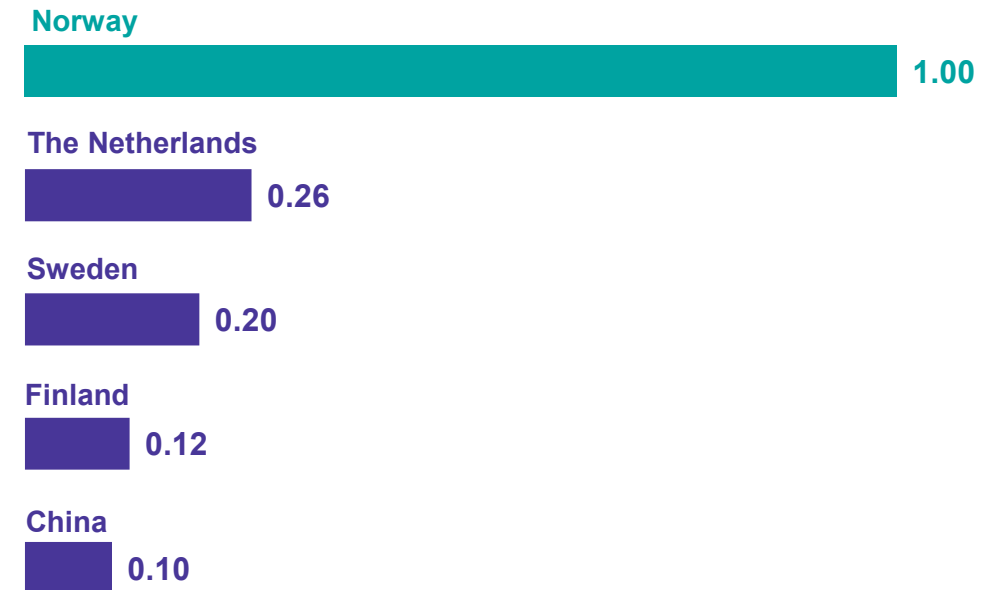
Infrastructure

5

Consumer acceptance

- + Extended use of AVs with several bus routes in Oslo now driverless
- + Speed limit for driverless vehicles increasing from 16kph to 20kph
- + Majority of passenger vehicles bought in Norway in 2019 were battery or plugin hybrids
- + Taxes on internal combustion vehicles/fuels and subsidies for EVs
- + Testing AVs in extreme weather, with pilots of driverless trucks, cars and buses in the Svalbard islands

Market share of electric cars top five



Source: EV-Volumes.com (2019)

4 | United States



Policy and legislation



Technology and innovation



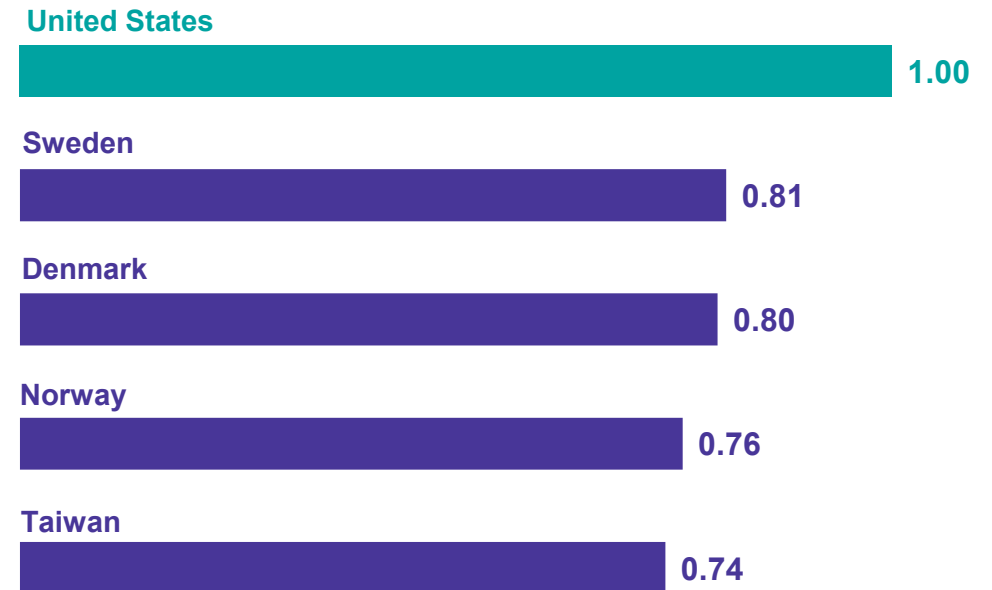
Infrastructure



Consumer acceptance

- + US is second only to Israel on technology and innovation pillar
- + 420 AV company headquarters, 44% of all tracked in the AVRI study
- + Cities including Detroit and Pittsburgh undertaking innovative work to introduce and promote AVs
- + American technology companies and vehicle makers continue to dominate AV development

Cloud computing, AI and IoT top five



Source: Huawei, Global connectivity index (2019)

5 | Finland



Policy and legislation



Technology and innovation



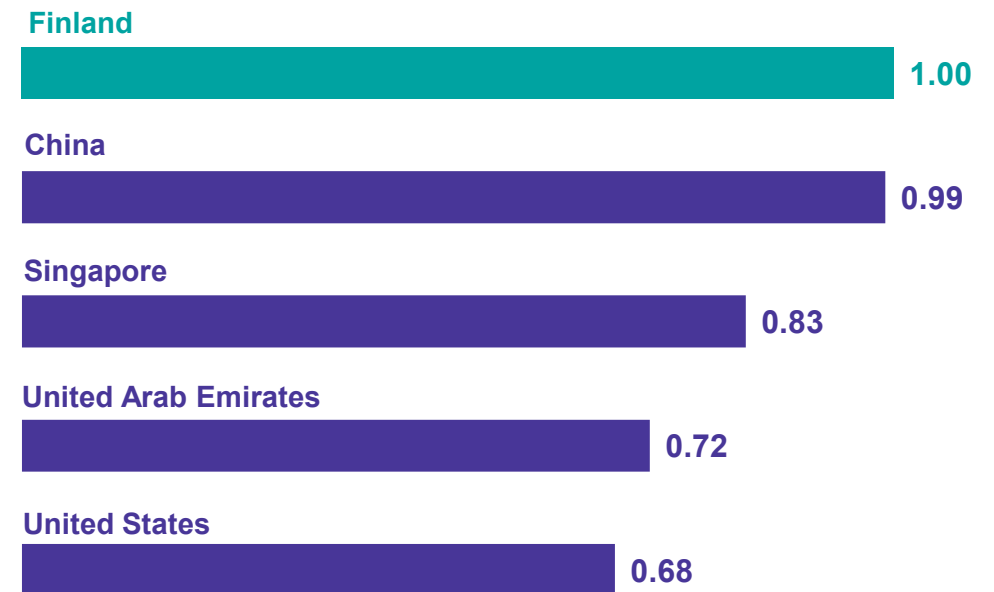
Infrastructure



Consumer acceptance

- + Highest rating for AV-specific regulations
- + Country's entire road network is open for AV trials
- + Helsinki and Espoo run public AV bus services with latter using all-weather vehicle
- + Leads on measures of digital skills, benefiting from breadth of talented engineers
- + Makes greatest use of ride-hailing services

Online ride-hailing market penetration top five



Source: Statista (2020)

Key messages



Key messages

- Since last edition of the AVRI, countries and jurisdictions have some of the appropriate legislation and regulations in place to enable AVs
- Much of the hard work on national implementation remains — putting infrastructure in place, establishing data protocols, and setting policies on licensing and insurance
- Many of the most exciting developments are taking place at the local level, led by cities
- Shared AV vans and buses may be at least as important as private driverless cars
- AVs can be used to help transform an area's transport
- The safety case for AVs is getting stronger
- AVs will need both local and national government focus and support to become ubiquitous





Thank you

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