

# **Autonomous vehicles and international policy**

**Håkan Burden**



## Top 5 AV countries

Confused 14 February 2022:

[https://www.confused.com/car-insurance/av-readiness?awc=5648\\_1653893309\\_e5a2b8e784faa1c2bb34e2ea01294ed8&utm\\_source=affiliatewindow&utm\\_medium=affiliate&utm\\_campaign=id\\_dm\\_aj\\_1040+quote#3](https://www.confused.com/car-insurance/av-readiness?awc=5648_1653893309_e5a2b8e784faa1c2bb34e2ea01294ed8&utm_source=affiliatewindow&utm_medium=affiliate&utm_campaign=id_dm_aj_1040+quote#3)



# Top 5 AV countries

## Policy:

Legislation in place

## Technology & Innovation:

HQs & patents

## Consumer acceptance:

Increase in searches for  
"autonomous cars"

## Infrastructure:

Public EV chargers and  
road quality

# Top 5 AV countries

**USA 8.62:**  
Number of HQs,  
EV chargers and  
patents

**JAPAN 7.59:**  
Road quality,  
number of patents  
and HQs

**FRANCE 7.37:**  
A driver-less trial  
in 2021, number of  
patents and HQs

**UK 6.92:**  
Number of HQs  
and legislation

**GERMANY 6.74:**  
Number of patents  
and infrastructure

# Sweden?

# 7. Sweden

## Road quality:

1. Netherlands	6.4
2. Switzerland	6.3
3. Japan	6.1
8. USA	5.5
...	
<b>11. Sweden</b>	<b>5.3</b>

Source: theglobaleconomy.com

## Patents:

1. USA	127.570
2. South Korea	25.861
3. Japan	21.242
4. Germany	13.817
...	
<b>7. Sweden</b>	<b>4.693</b>

Source: worldwide.espacenet.com

## HQs:

USA	50
Israel	11
UK	5
Japan	3
...	
<b>7. Sweden</b>	<b>1</b>

Source: crunchbase.com

## 7. Sweden

Consumer acceptance:

Chile +22.1%

Slovakia +20.8%

...

**Sweden ±0.0%**

...

Denmark -20.4%

Source: [ads.google.com](https://ads.google.com)







## 7. Sweden

Policy:

Japan	4 (Approval in place for driving AVs)
Germany	4
UK	3 (Same as 4 but with exceptions)
USA	3

...

<b>Sweden</b>	<b>2 (Approval in place for testing AVs )</b>
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...

France	2
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Source: national agencies' webpages and/or newspapers



# Policy in more detail

**UNECE:** UN regulation No. 157 on ALKS  
60km/h, high-ways, "Traffic jam assistant"

**Japan 4:** Implementation of ALKS, new law for  
level 4 on the way

**France 2:** Approval in place for three levels of  
autonomy, remote intervention and OEM  
responsibility for traffic fines

**Germany 4:** Technical specs for level 4 autonomy,  
*Technische Aufsicht*, product liability

**USA 3:** Only legal in certain states, driver-less  
services in California and Arizona

**UK 3:** ALKS is being implemented, product  
liability, separate type approval for usage

**Sweden 2:** Trialling is allowed and based on risk  
assessment

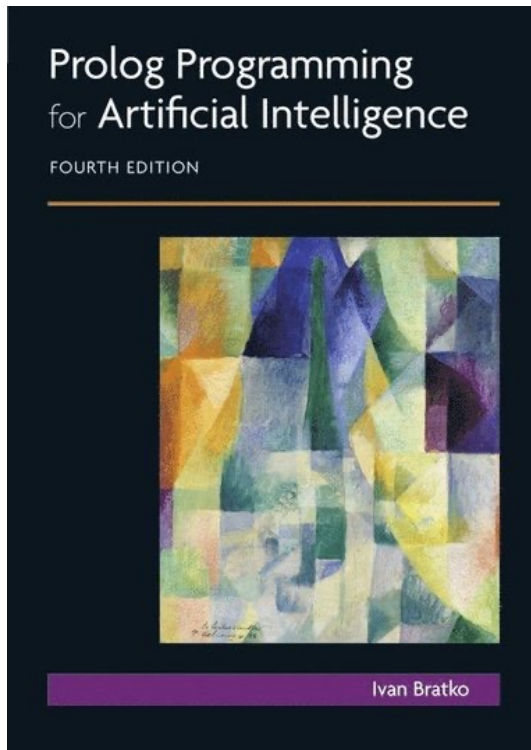
New law under investigation. Three responsible  
roles – driver, owner and OEM

**EU July 2022:** Amendments to Regulation  
2019/2144 and 2018/858.  
Campfire seating, software updates, small-scale  
type approval of AVs, technical specs for braking  
and steering

**EU July 2025 (?)**: AI Act →

# The AI Act

# AI according to the EU



The term AI refers to systems that receive input, infer how this can be used to achieve a set of human-defined objectives and generate output that can influence the environments they interact with, using one or more AI technologies:

- 1) Machine learning, such as deep learning
- 2) Logic- and knowledge-based approaches, including expert systems
- 3) Statistical methods, such as for optimisation

# High-risk AI-systems

An AI system poses a high risk if ...

... it is (part of) a safety  
component,

... a third party is required during  
the certification process, and

... the product category is listed in  
Annex II.A

High-risk AI systems shall be  
**CE-marked**

## Annex II.A

Directive EC 2006/42 – Machinery

Directive EC 2009/48 – Toys

Directive EU 2013/53 – Leisure boats

Directive EU 2014/33 – Elevators

Directive EU 2014/34 – Explosive environments

Directive EU 2014/53 – Radio equipment

Directive EU 2014/68 – High-pressure equipment

Regulation EU 2016/424 – Cable-ways

Regulation EU 2016/425 – Personal protective wear

Regulation EU 2016/426 – Combustible gases

Regulation EU 2017/745 och 746 – Medical equipment



# **The same AI system poses no risk if covered by the following sectorial regulation**

Civilian aviation and air safety  
Regulation EC 300/2008, EU 2018/1139  
among others

**Two- or three wheeled machines or  
quadricycles**  
Regulation EU 168/2013

Marine quipment  
Directive EU 2014/90

**Forestry and agricultural vehicles**  
Regulation EU 167/2013

Interoperability of the rail system  
Directive 2016/797

**Vehicles and vehicle equipment**  
Regulation EC 715/2007, EC 595/2009  
and EU 2018/858



## How's that?!

### NLF: New Legislative Framework

Rules that the EU can decide over on its own, such as machinery and toys (Annex II.A)

### OAL: Old Approach Legislation

Products governed by other international bodies, such as UNECE (Annex II.B)

→ The proposal explicitly states that over time the regulation or corresponding requirements should be applicable for OAL products

# And there is more!

Under specific activities you find the heading  
**Critical infrastructure and protection of environment:**

- AI systems intended to be used as safety components in the **management and operation of road traffic** and the supply of water, gas, heating and electricity;
- AI systems intended to be used to control or as safety components of digital infrastructure;
- AI systems intended to be used to control **emissions and pollution**







# Fines

A company that does not comply with the requirements on data quality will be fined the higher value of...

... €30.000.000, or

... 6% of world-wide annual turnover

Lesser offences get a rebate, so that filing incomplete information to a notified body (third-party certifier) results in €10.000.000 / 2% of turnover in fines



# In conclusion

Measuring AV readiness is difficult

So, it's ok to be sceptic when people say they can

Different initiatives are filling the void left by UNECE

Some initiatives will be relevant even if not branded as automotive



# Finally

Colleagues:

Jenny Lundahl

Susanne Stenberg

Kristina Andersson

Drive Sweden Newsletter:

<https://www.drivesweden.net/en/newsletters>

**Thanks!**

**[hakan.burden@ri.se](mailto:hakan.burden@ri.se)**