

AI in the Real world

Where Are the Driverless Cars?

Eindhoven, October 29th, 2019

AI Evolution

Now:

- Consumer data-driven machine learning
- Speech recognition, language processing, computer vision, etc

Towards:

- Industry data-driven machine learning, sensor-based data-driven algorithms
- Convergence of data- and (physics)model-based machine learning
- Truly intelligent: self-directed learning, use noisy data, real-time performance, etc.

EAISI Vision

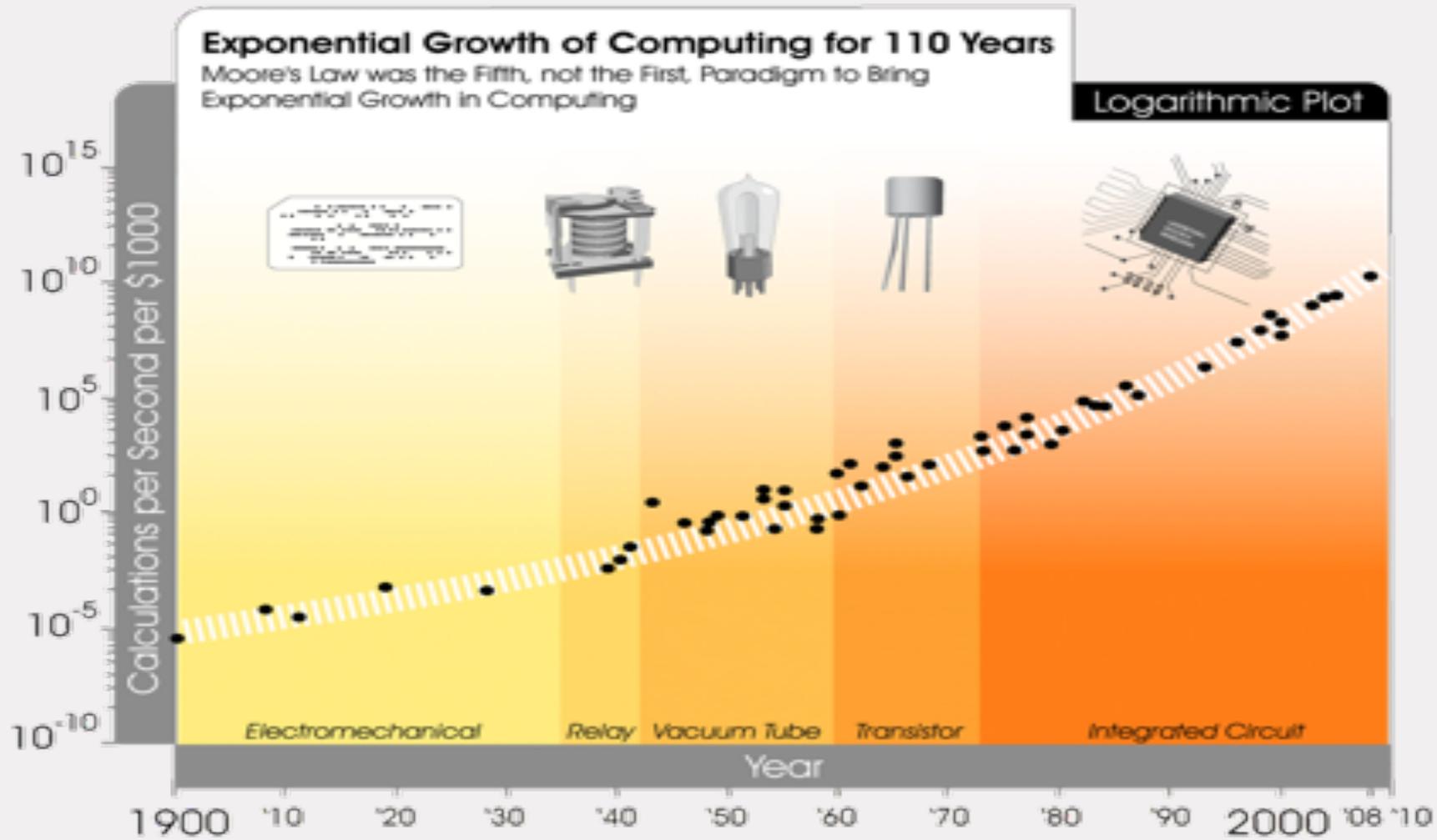
AI for the the real world

*With AI moving Data-only to Data-Human-Machine,
we aim to use our traditional strengths
to significantly leverage the huge potential
of this next generation AI*

TU/e is investing 100 M€ in new AI institute in the next 5 years

- As much as 50 new AI-related professor positions across the TU/e, on top of 100 existing AI-related positions
- Research, targeted for industrial application
- Education
 - New MSc and BSc programs in AI
 - Multi-disciplinary challenge-based learning
- Co-location and AI-labs in dedicated building at TU/e campus, together with student teams

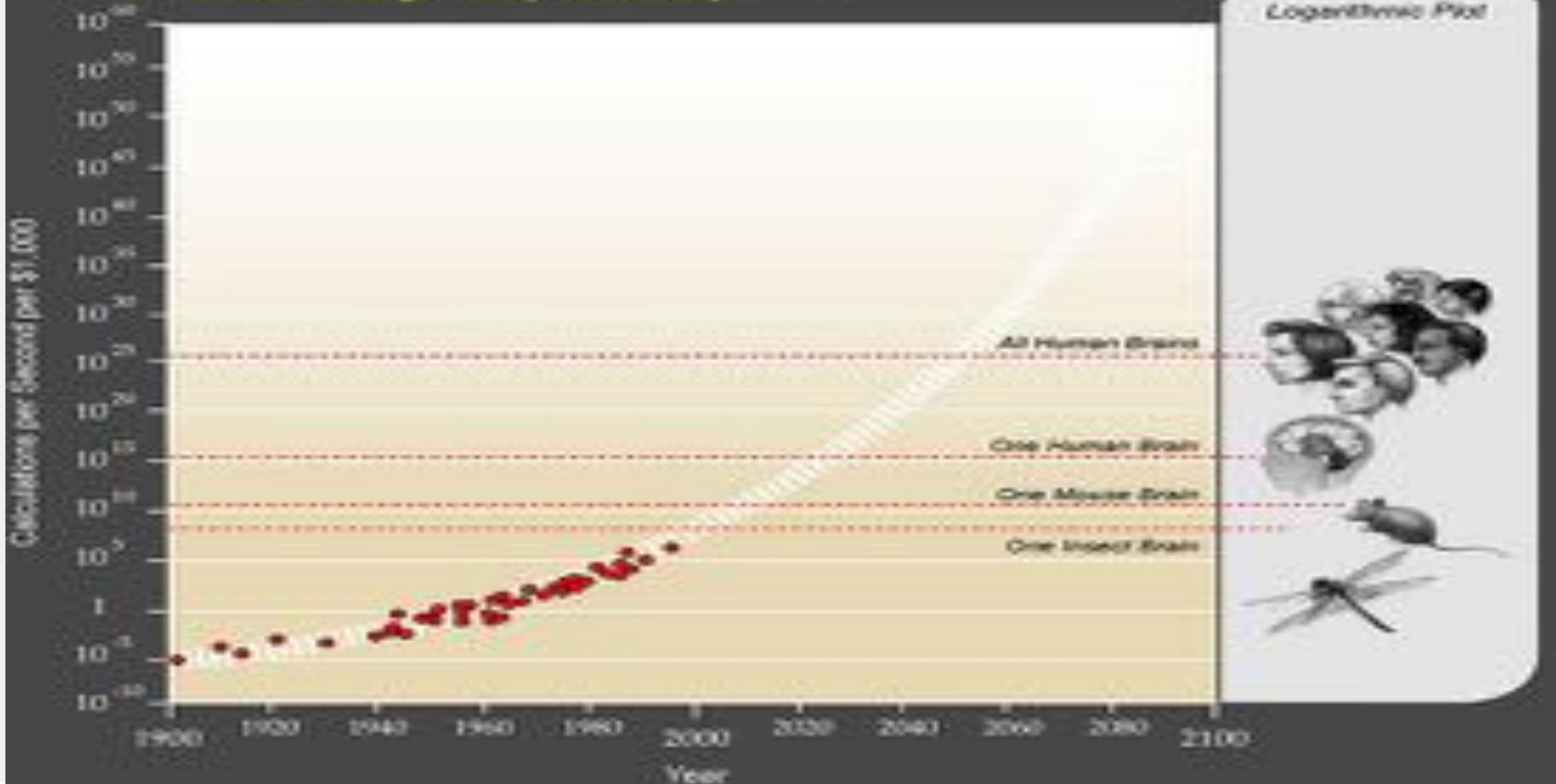




Source: Raymond Kurzweil, *Kurzweil Accelerating Intelligence*

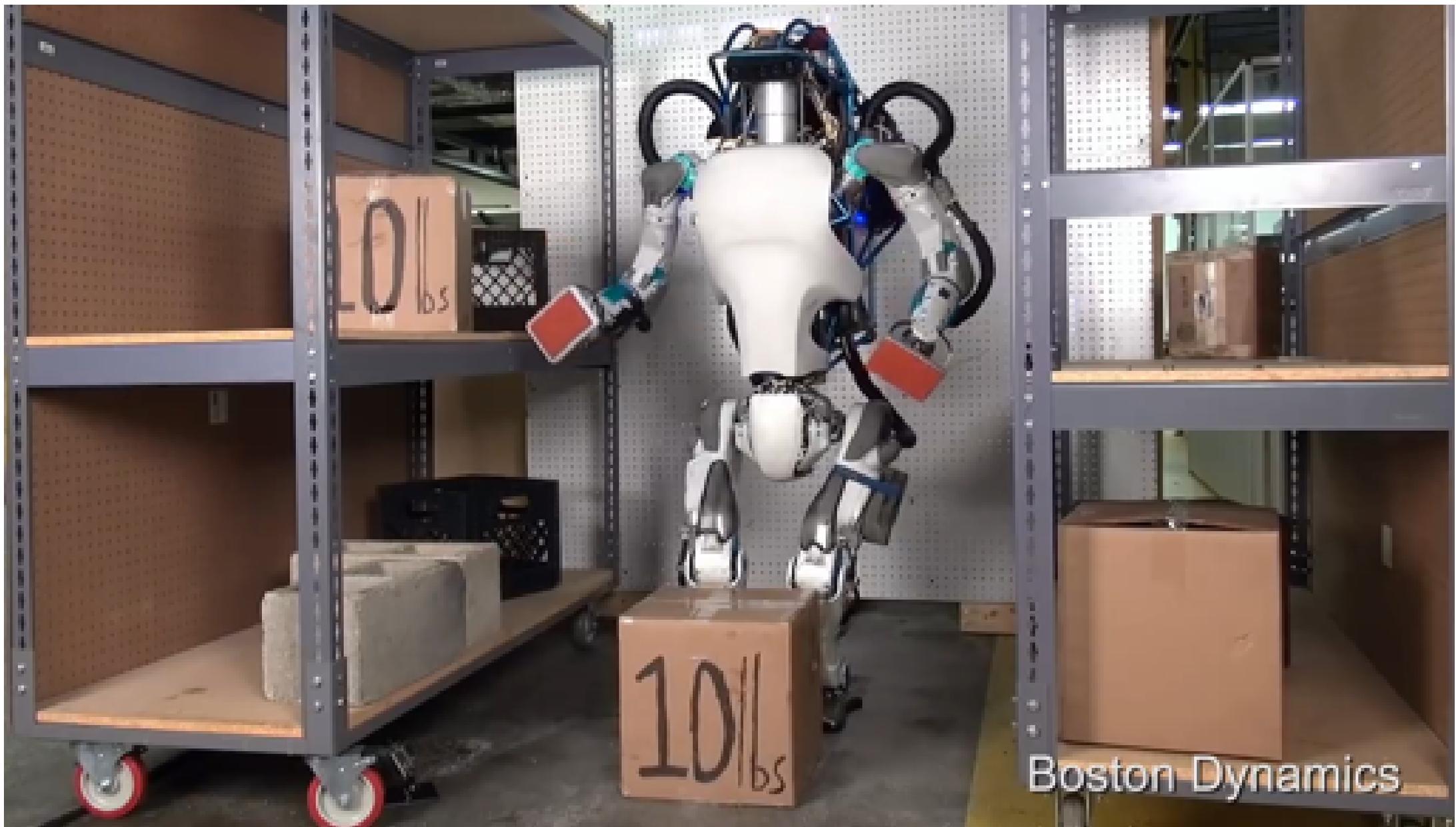
Exponential Growth of Computing

Twentieth through twenty-first century





Boston Dynamics



Boston Dynamics



Bosstown Dynamics

The Internet of Vehicles











[schlijper.nl](https://www.schlijper.nl)
today

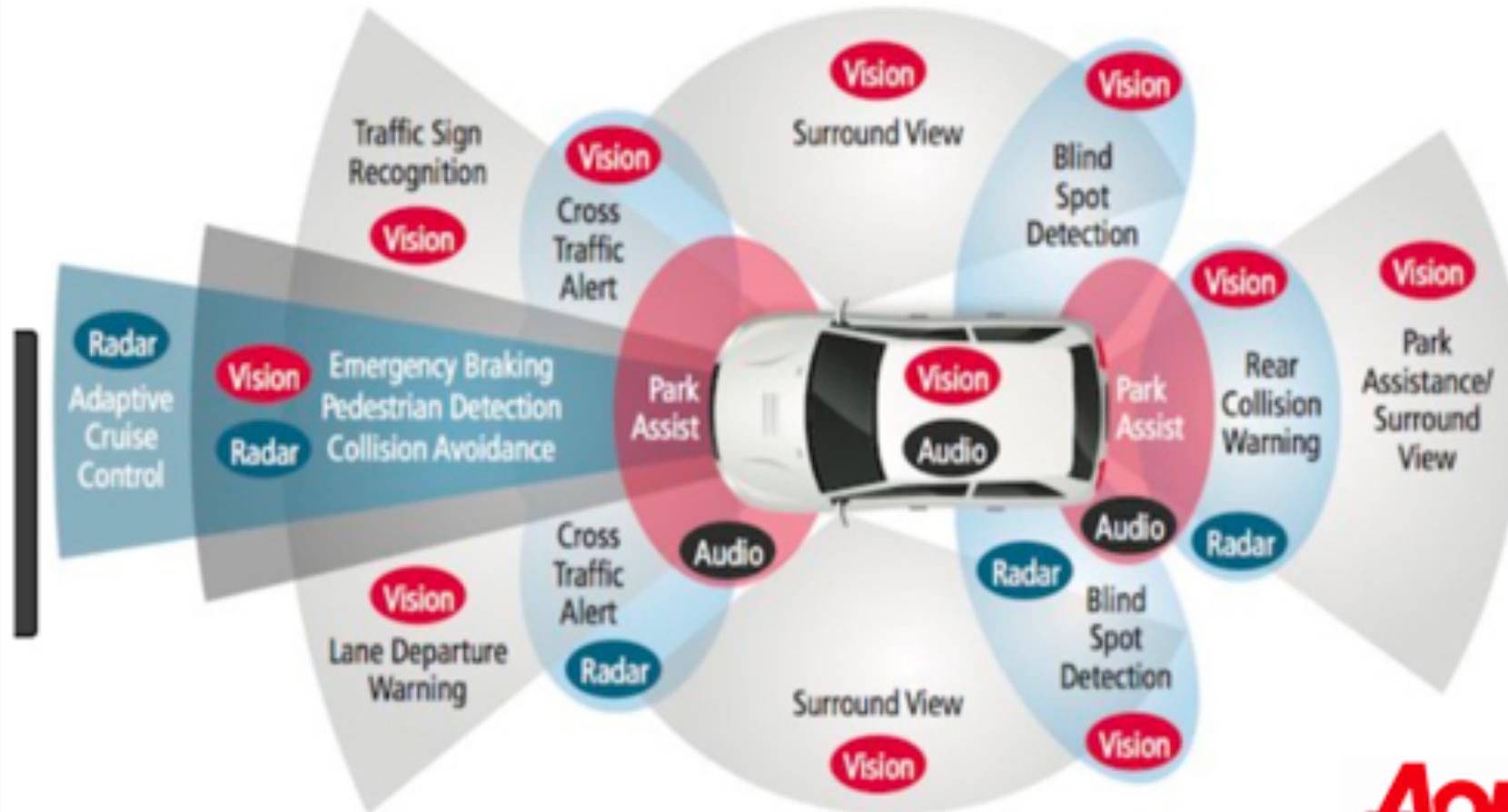


Traffic is chaos per definition

It mainly functions because people color outside the lines
(...same for innovative companies, ...and for society)

AI should never be allowed to do so





AON
Empower Results®

EAISI EINDHOVEN
AI SYSTEMS
INSTITUTE

TU/e

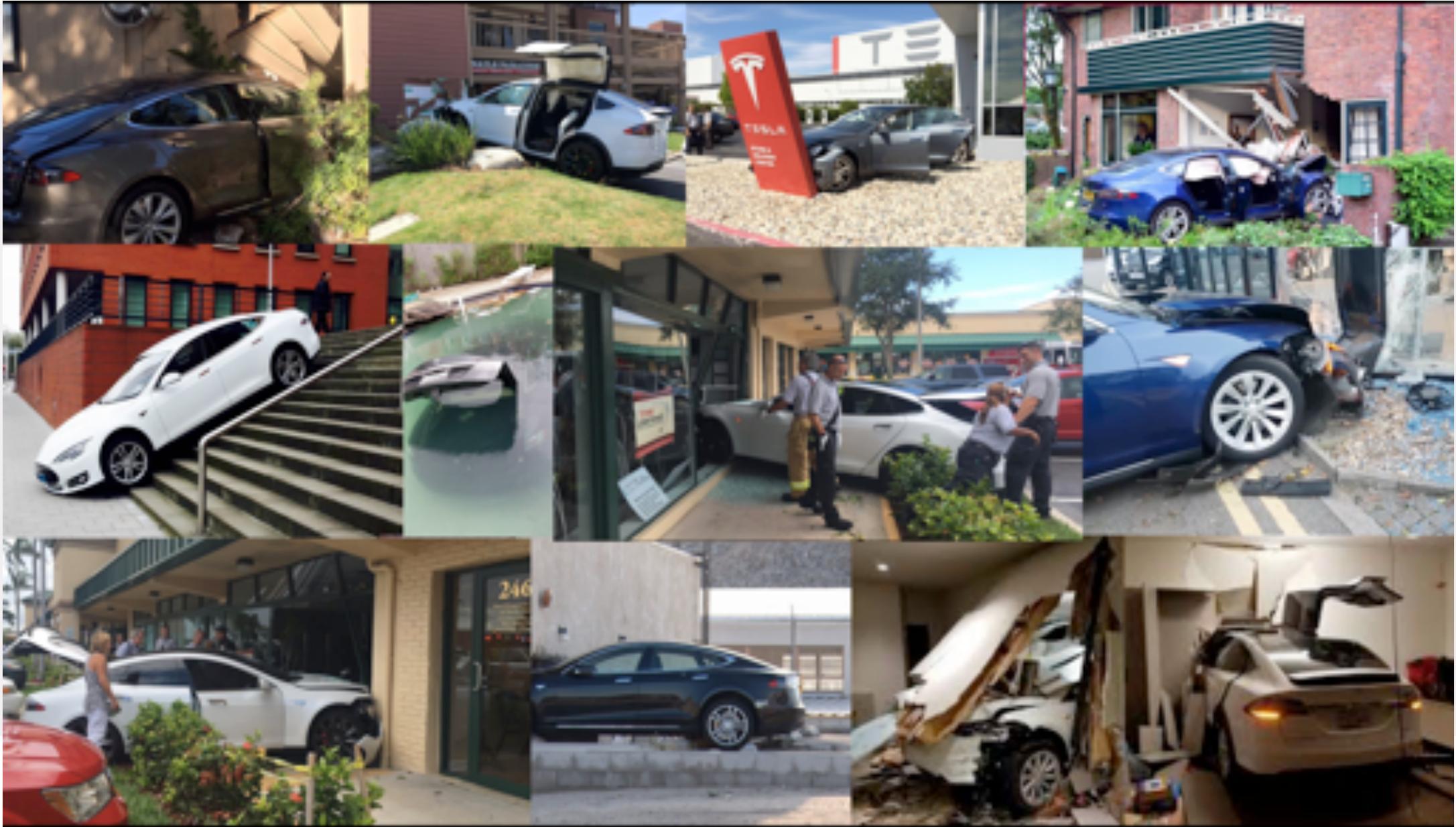
Mandatory ADAS technology from 2021 in EU

1. Advanced emergency braking (cars)
2. Alcohol interlock installation facilitation (cars, vans, trucks, buses)
3. Drowsiness and attention detection (cars, vans, trucks, buses)
4. Distraction recognition / prevention (cars, vans, trucks, buses)
5. Event (accident) data recorder (cars and vans)
6. Emergency stop signal (cars, vans, trucks, buses)
7. Full-width frontal occupant protection crash test - improved seatbelts (cars and vans)
8. Head impact zone enlargement for pedestrians and cyclists -safety glass in case of crash (cars and vans)
9. Intelligent speed assistance (cars, vans, trucks, buses)
10. Lane keeping assist (cars, vans)
11. Pole side impact occupant protection (cars, vans)
12. Reversing camera or detection system (cars, vans, trucks, buses)
13. Tire pressure monitoring system (vans, trucks, buses)
14. Vulnerable road user detection and warning on front and side of vehicle (trucks and buses)
15. Vulnerable road user improved direct vision from driver's position (trucks and buses)



“Our Vision is that by 2020, nobody should be seriously injured or killed in a new Volvo Car.”

Hakan Samuelsson, CEO, Volvo Cars







2018/03/15 17:03:31 AUKEY DR02



2018/03/15 17:03:31 AUKEY DR02

Select all images with

traffic

Select all images with a

bus

Select all images with

bicycles

Click verify once

Select all images with

cars

Select all squares with

vehicles

If there are none,

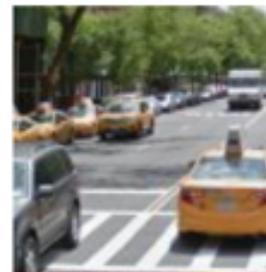
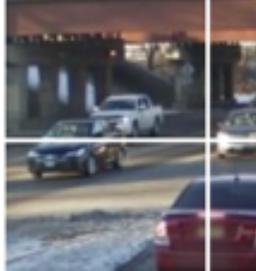
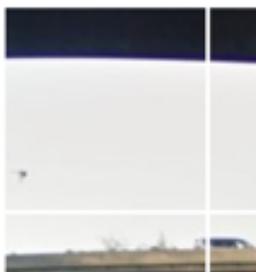
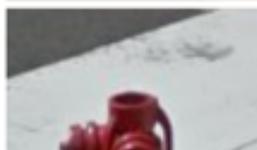
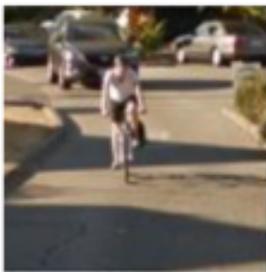
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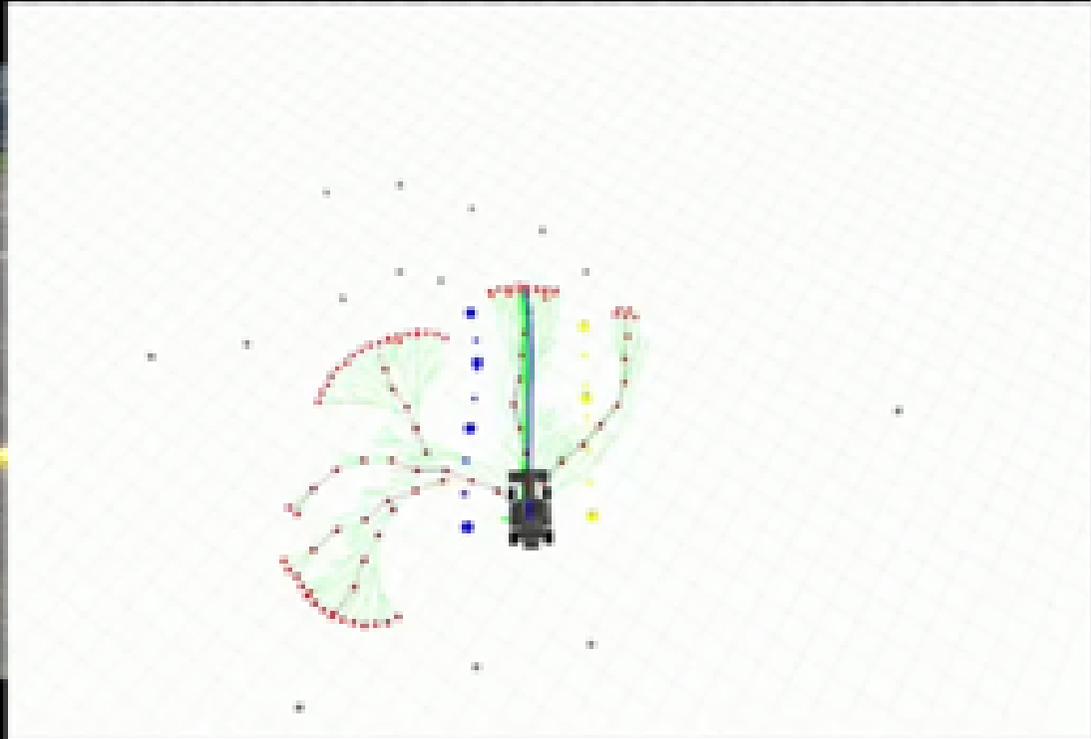
crosswalks

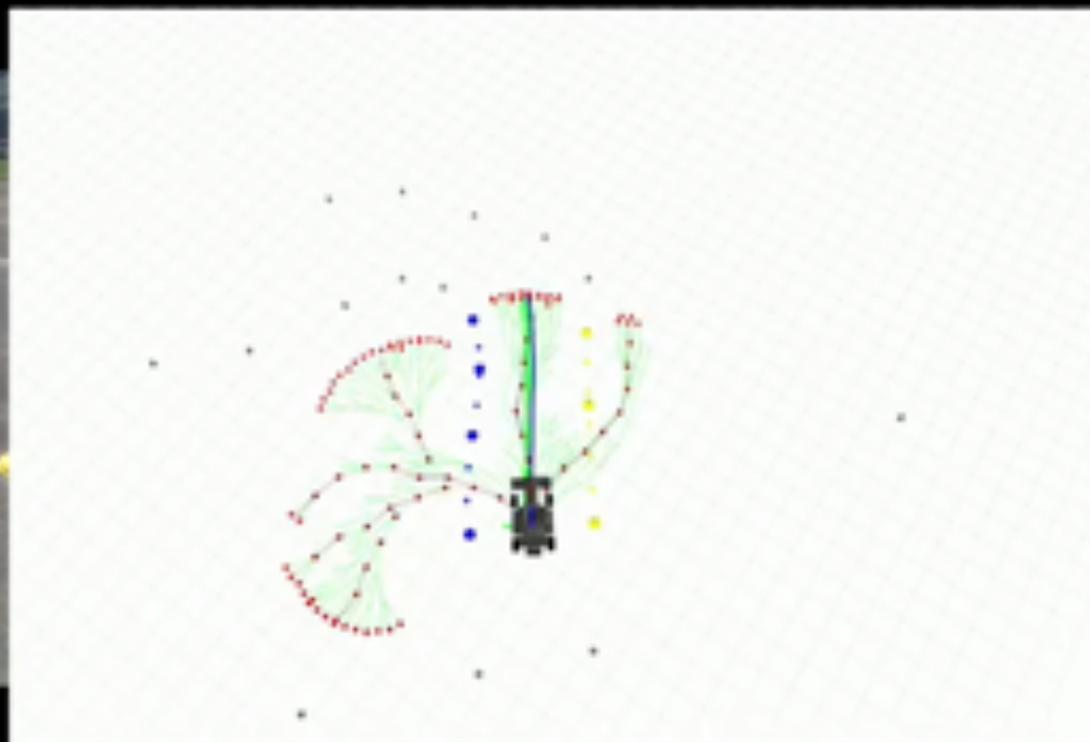
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The Internet of Vehicles





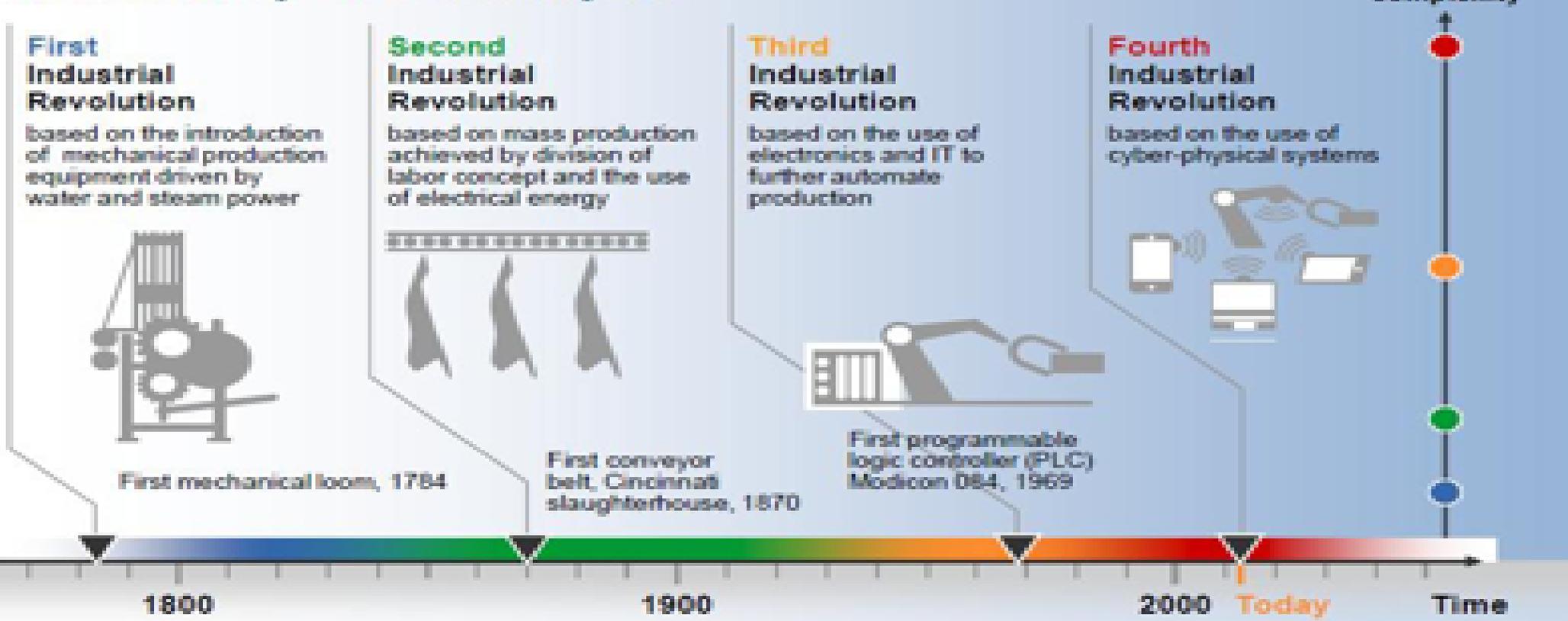






Industry 4.0

From Industry 1.0 to Industry 4.0



The job taker



jobs

Will Your Job Be Done By A Machine?

MAY 21, 2015 4:08 PM ET

QUOCTRUNG BUI 

Machines can do some [surprising things](#). But what you really want to know is this: Will your job be around in the future?

We have the "definitive" guide.

Researchers took a shot at estimating how technology will affect the job market in 20 years. Find your job below to see what the data say about your future.

Business and Financial Operations

Accountants and Auditors

SHARE



Accountants and Auditors have a

93.5%

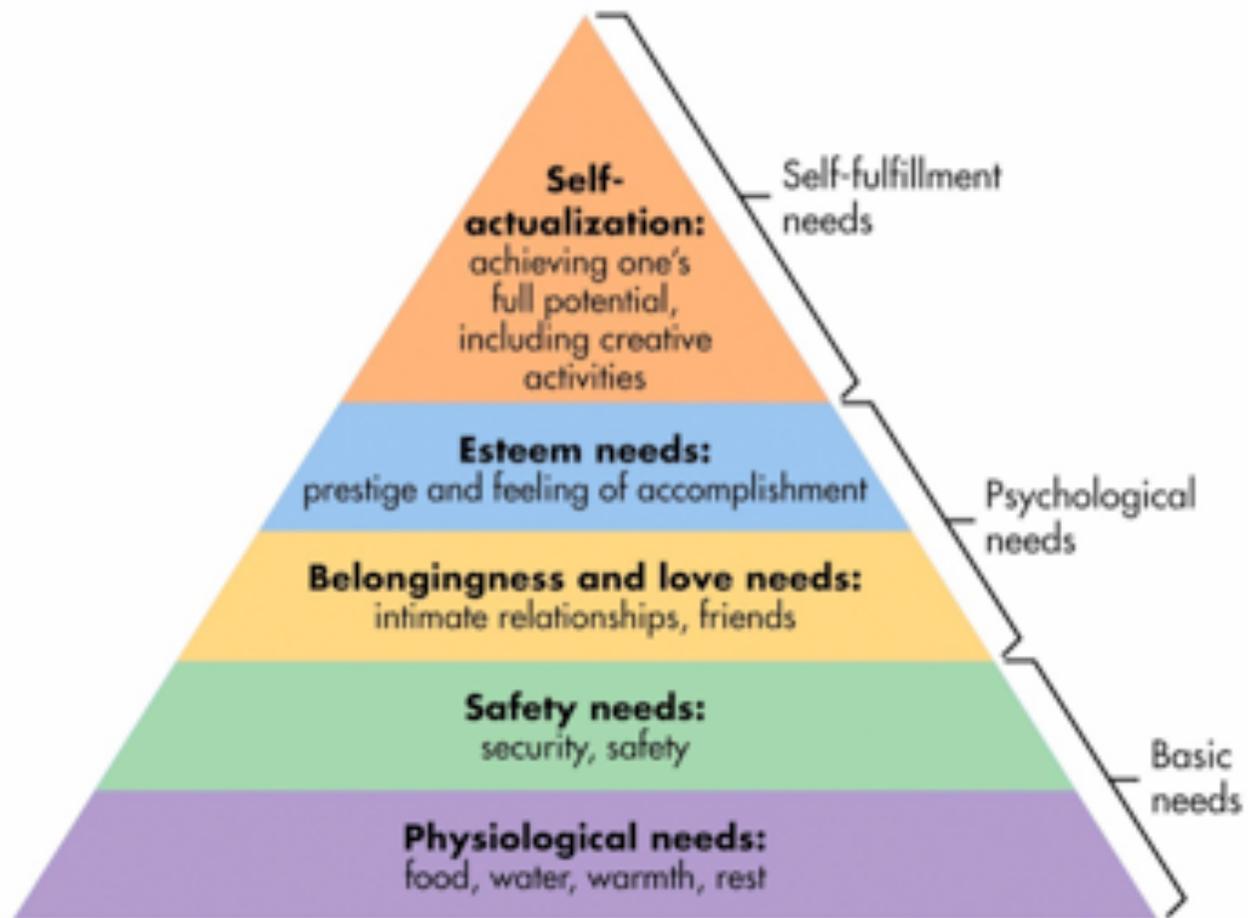
chance of being automated.

How do we know this? Some aspects of a job are easier to automate than others. It all depends on the tasks. Look at the orange bars to see how Accountants and Auditors compare with other professions...

<http://www.npr.org/sections/money/2015/05/21/408234543/will-your-job-be-done-by-a-machine>

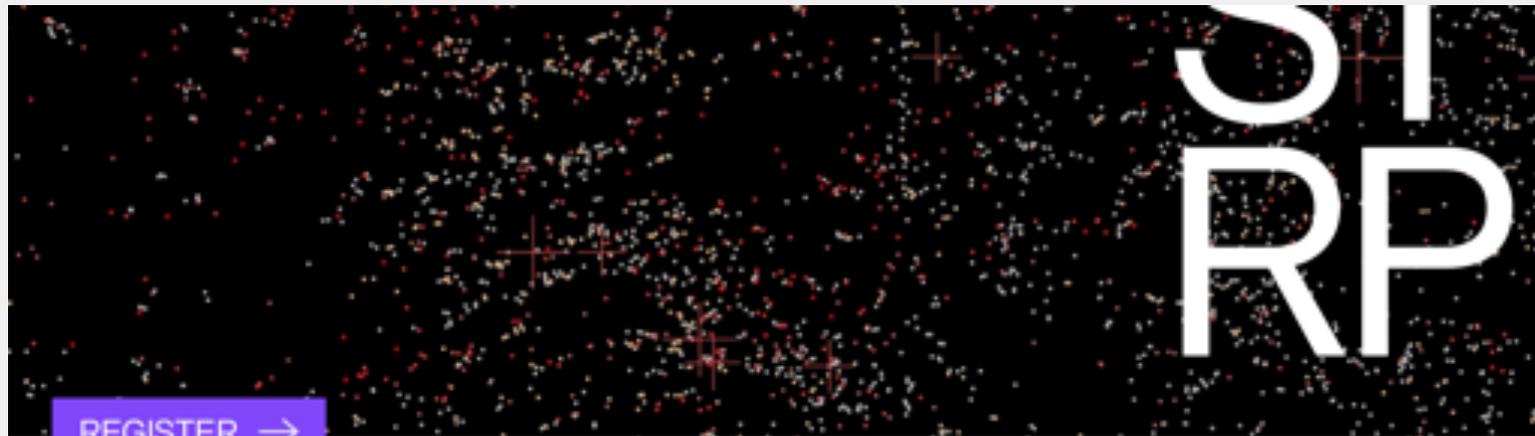








Thursday 31/10 www.strp.nl



REGISTER →

How intelligent is AI?

STRP Scenario #3

31 OCTOBER

Social

Thursday 31 October 2019, 20:00

Natlab, Strijp-S, Eindhoven

Language: English

Tickets: €10,- via the ticket link

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“The real danger is not that computers will begin to think like humans, but that humans will begin to think like computers.”

Sydney J. Harris



AI for the real world