



Autonomous Vehicles in California

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Testing Regulations *Summary*

\$5 MILLION

INSURANCE, bond,
or self-insurance

EXCLUDES

Commercial vehicles
>10,000 GVW
motorcycles



2 YEARS

TEST PERMIT valid

TEST DRIVER MUST

DRIVING RECORD clear of
DUI, at-fault, no more than
1 point

COMPLETE
test driver
training
program



EMPLOYEE
contractor, or
designee of
manufacturer

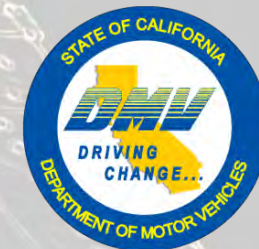


SEATED IN
driver seat
during test

MANUFACTURER MUST

REPORT COLLISIONS
within 10 days

REPORT
disengagements
annually

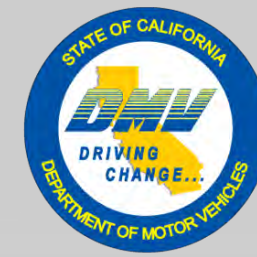


Approved Testing Permits *Manufacturers*





Manufacturers



AVT001	Volkswagen	AVT020	NVIDIA Corp	AVT037	Aurora Innovation	AVT054	Gatik AI
AVT002	Mercedes Benz	AVT021	Auto X	AVT038	Nullmax	AVT055	DiDi
AVT003	Waymo	AVT022	Subaru	AVT039	Samsung	AVT056	TORC Robotics
AVT004	Aptiv Solutions	AVT023	Udacity, Inc	AVT040	Continental	AVT057	BoxBot, Inc
AVT005	Tesla Motors	AVT024	Navya, Inc	AVT041	Voyage	AVT058	EasyMile
AVT006	Bosch	AVT025	Renovo	AVT042	Cyngyn	AVT059	Mando
AVT007	Nissan	AVT026	UATC, LLC (Uber)	AVT043	Roadstar.AI	AVT060	Xmotors.ai
AVT008	GM Cruise	AVT027	Plus AI, Inc	AVT044	Changan	AVT061	Imagry Inc
AVT009	BMW	AVT028	Nuro, Inc	AVT043	Roadstar.AI	AVT062	Ridecell
AVT010	Honda	AVT027	Plus AI, Inc	AVT044	Changan	AVT063	AAA-NCU
AVT011	Ford	AVT028	Nuro, Inc	AVT045	Lyft, Inc	AVT064	ThorDrive
AVT012	Zoox, Inc	AVT029	Udelv	AVT046	PhantomAI	AVT065	Helm.AI
AVT013	Drive.AI	AVT030	Apple, Inc	AVT047	Qualcomm	AVT066	Argo AI
AVT014	Faraday & Future	AVT031	Bauer's Intelligent	AVT048	aiPod, Inc.	AVT067	Qcraft.ai
AVT015	Baidu	AVT032	Pony.AI	AVT049	SF Motors	AVT068	Altas Robotics
AVT016	Wheego Electric	AVT033	TuSimple	AVT050	Toyota RI	AVT069	Deeproute.ai
AVT017	Valeo	AVT034	WeRide Corp	AVT051	Apex.AI	AVT070	Kaizr, Inc
AVT018	NIO USA	AVT035	SAIC Innovation	AVT052	Intel	AVT071	Leonis Tech
AVT019	Telenav	AVT036	Aimotive, Inc	AVT053	Ambarella		

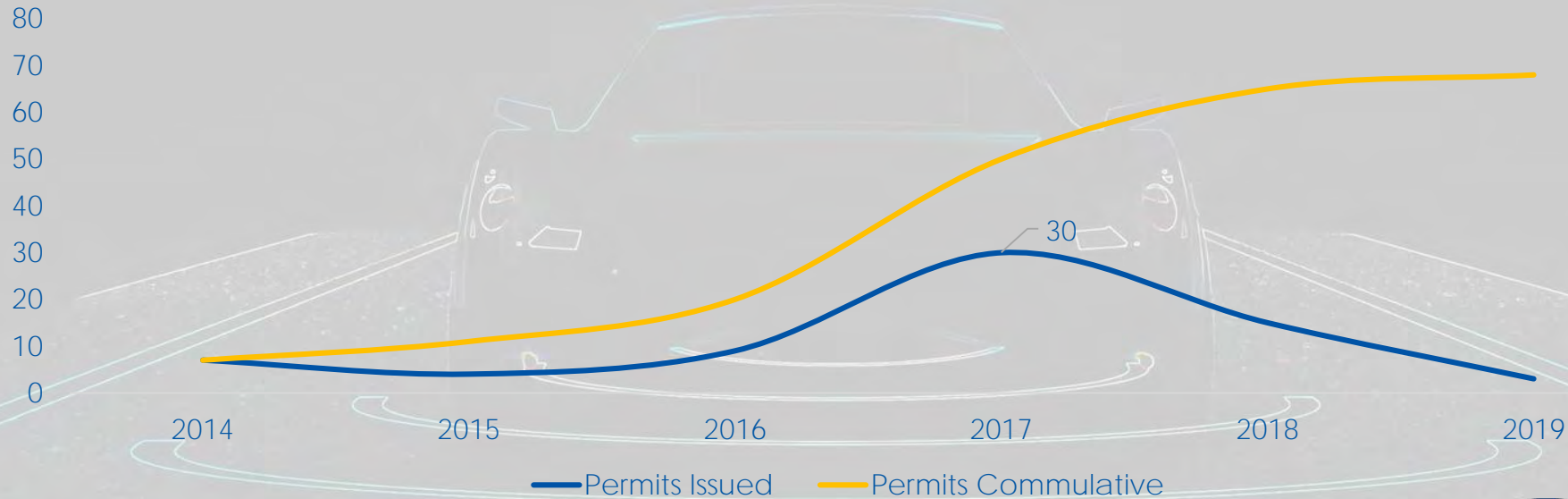
Autonomous Testing Permits—by the numbers

ISSUED **71**
testing permits
2 DRIVERLESS
permit issued

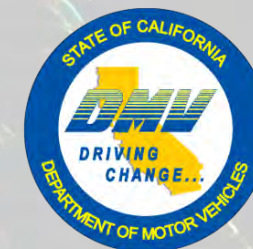
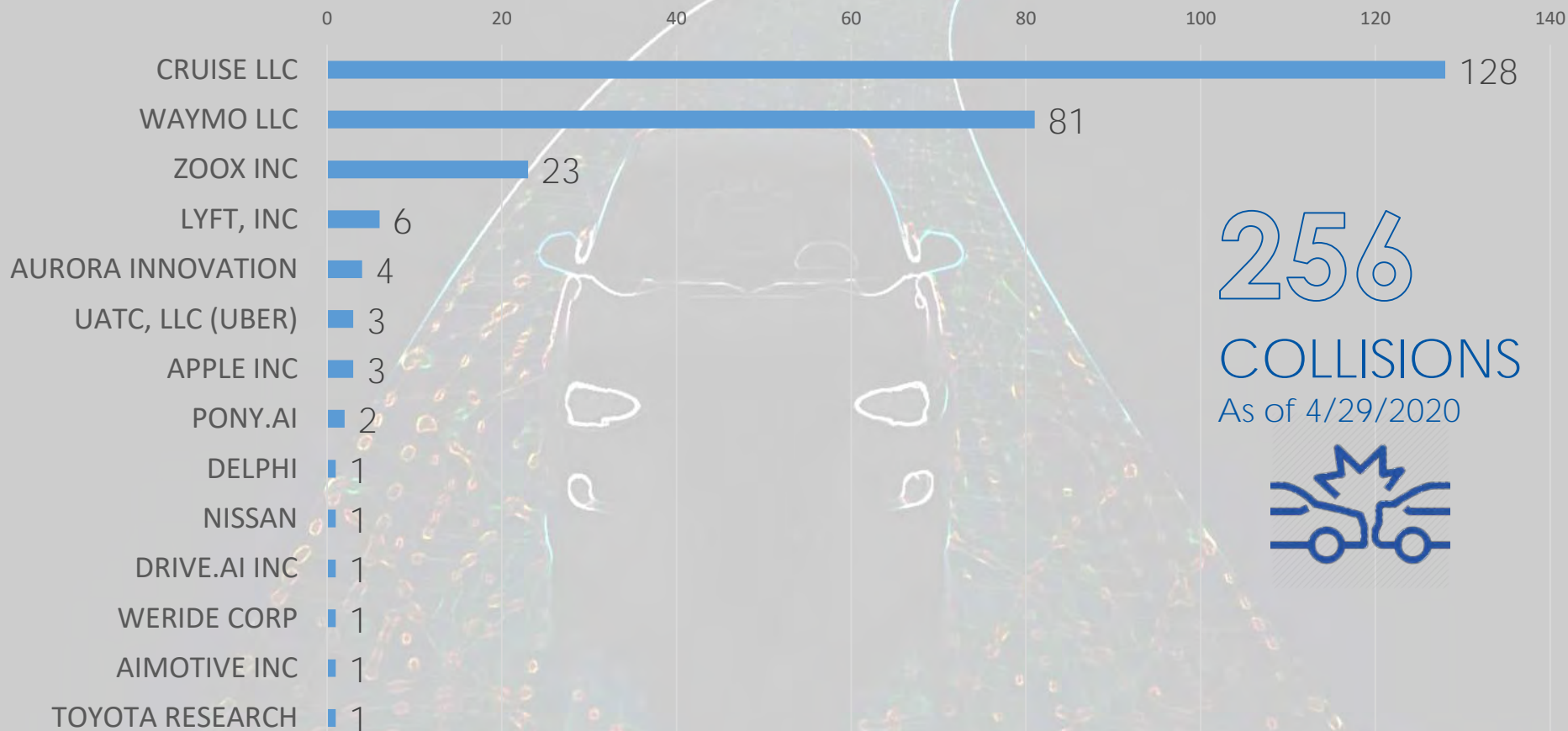
ACTIVE PERMITS
to test with
a driver **65**

3,108 TEST DRIVERS


883 VEHICLES
permitted on
public roads

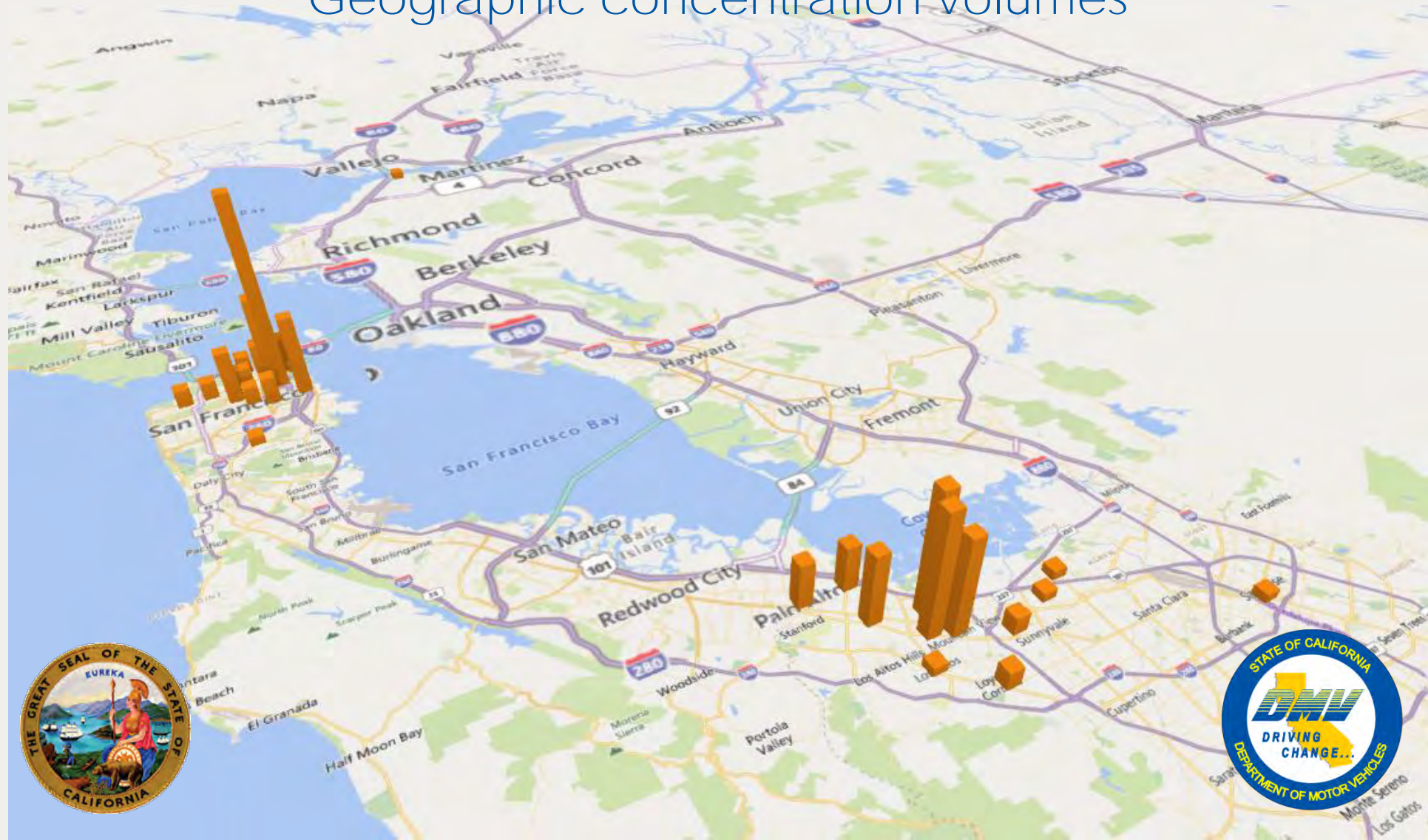



Autonomous Testing Collisions—by the numbers



Autonomous Testing Collisions—by the numbers

Geographic concentration volumes



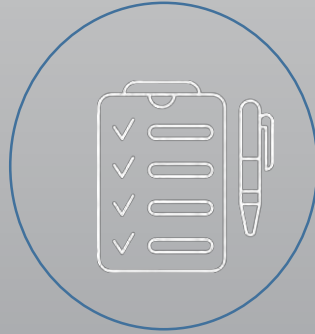
Driverless Testing and Deployment Regulations *Summary*



Safe Operation

NHTSA's Federal Automated Policy

Motor vehicle safety responsibility



Manufacturers Certify

AV has been tested under controlled conditions and is safe to operate

Vehicle meets FMVSS and complies with state traffic laws



Application Requirements

Notification to local authorities

Defines communication link with remote operator

Law Enforcement & First Responder Interaction Plan



Driverless Autonomous Vehicles



Driverless Autonomous Vehicles



Driverless Autonomous Vehicles



Statements of Policy

California & NHTSA

2013 PRELIMINARY

concerning automated vehicles

- Levels of automation
- Recommendations testing autonomous vehicles
- Recommend states do not authorize operation of autonomous vehicles



2014 COLLABORATED

Federal Automated Vehicles Policy

- Vehicle Performance Guidance for Automated Vehicles
- Model State Policy



Statements of Policy

Federal & International

AAMVA

American Association of
Motor Vehicle
Administrators



AV WORKING
group 17 states
& 2 Canadian
provinces



USDOT, NHTSA,
FMCSA Licensing,
technology, law
enforcement



NHTSA funded
AAMVA to develop
MODEL STATE
POLICY



Vice-Chair

Minimize risk of
patchwork
regulations

DELINEATION OF FEDERAL
& STATE RESPONSIBILITIES



Framework for states to
follow as technology
develops

INTERNATIONAL
INTEREST



A SPECIAL NOTE



Dear Bernad Soriano,
Thank you so much for
coming to Bohannon
Middle school's collage
career Day and
talking to us about
your career! Something
I learned from you
is what you have to
do to become an
engineer. One thing
that impressed me
about your career
is how you work

ON SELF driving
cars. Because of
your presentation,
I have decided to
become a Lawyer.
I really appreciated
you coming.

Sincerely,
Alejandro

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