

The Autonomous Transportation Journey

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CALIFORNIA TRANSIT ASSOCIATION'S 52ND ANNUAL FALL CONFERENCE & EXPO

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How we got here




BUS

- 13 countries



TRAMWAY & LRT

- 22 networks
- 9 countries



PASSENGER RAIL

- 33 networks
- 6 countries



BRT

- 6 networks
- France & Colombia



COACH

- 10 countries



PARKING

- 107 Park & Rides
- 52,200 parking spaces
- France and Ireland




CAR-SHARING




FERRY

- 12 operations
- 5 countries



TAXI & MINI-CAB

- USA, United-Kingdom, Netherlands & France



MOBILITY CENTERS



BIKE SHARING




METRO

- 3 networks
- Seoul, Mumbai & CDGVal




DIGITAL SERVICES & MOBILITY COMPANIONS



SHUTTLE SERVICES

- 7 countries



PARATRANSIT & AMBULANCE SERVICES



BUS

- 13 countries



TAXI

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PARATRANSIT & AMBULANCE SERVICES





PERSONALIZED AUTONOMOUS CONNECTED ELECTRIC



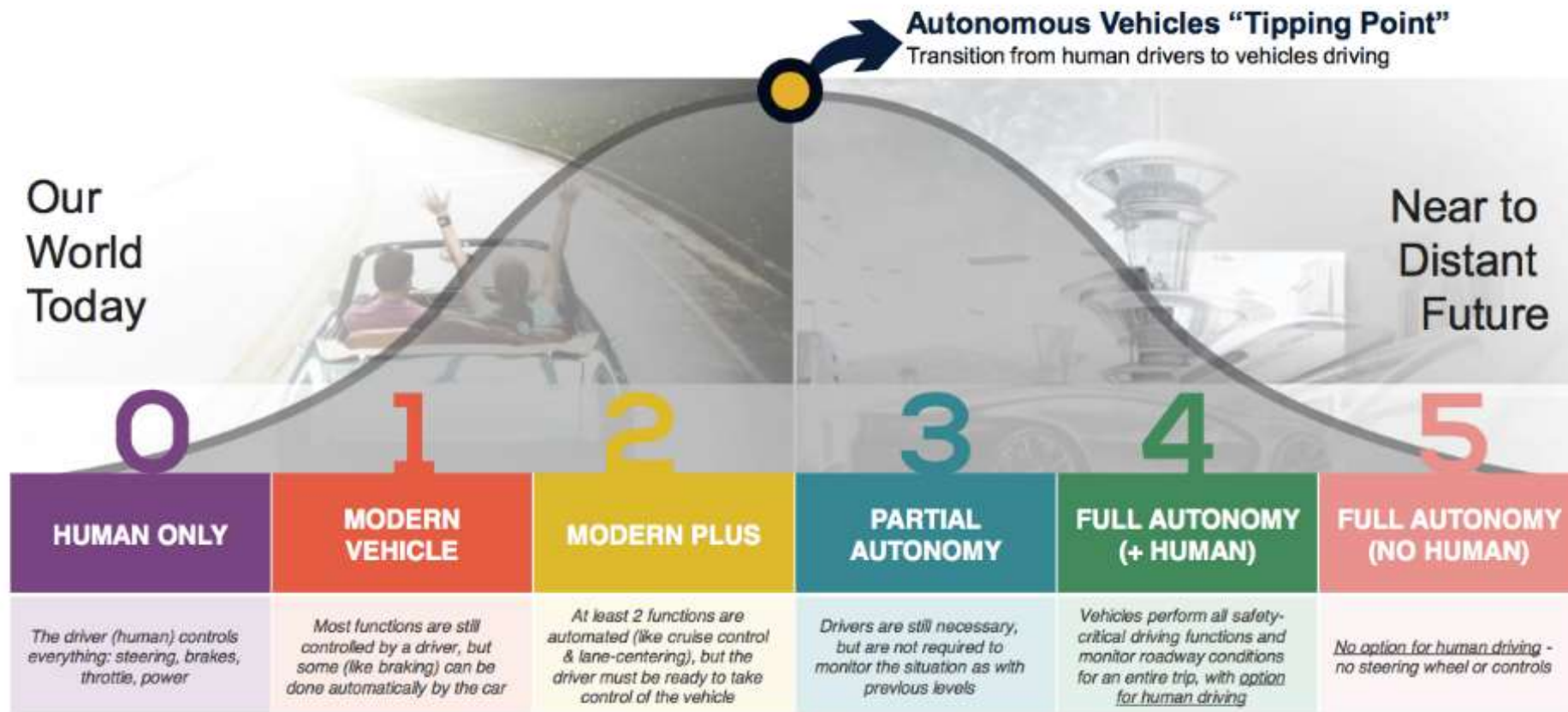
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› The levels of Autonomous Vehicles



<http://www.techrepublic.com/article/autonomous-driving-levels-0-to-5-understanding-the-differences/>

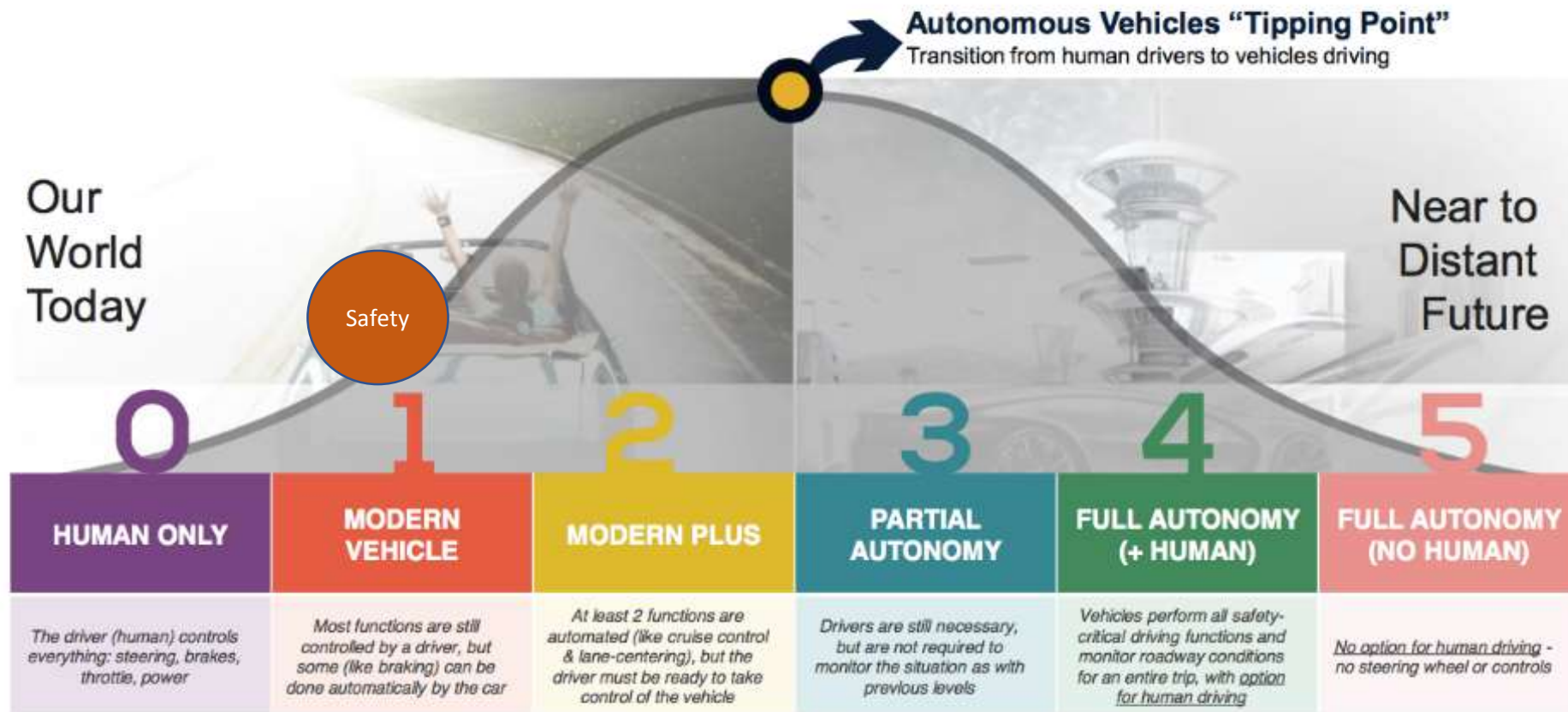
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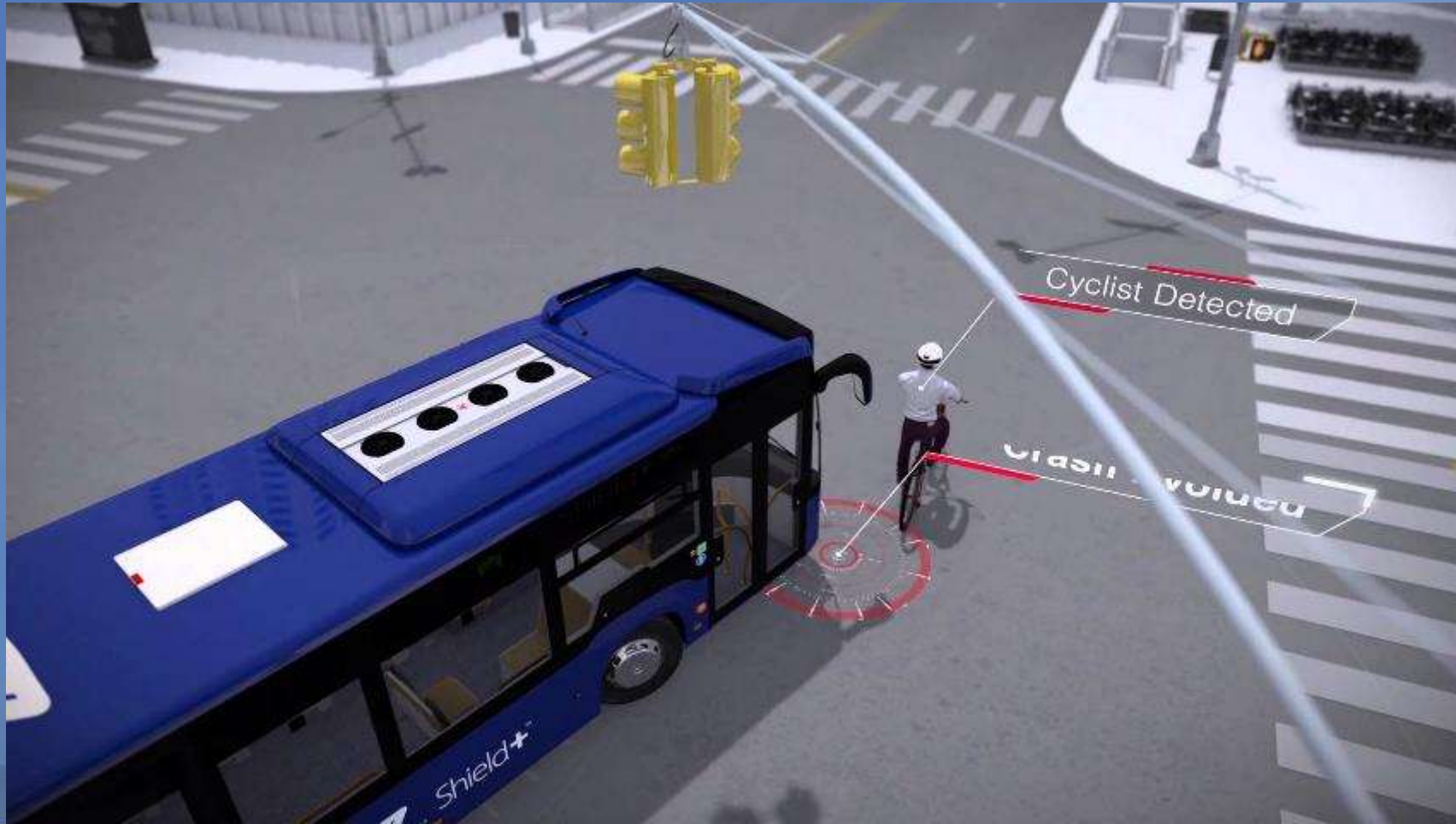


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Safety at Level 1



nice
NASSAU
INTER-COUNTY
EXPRESS

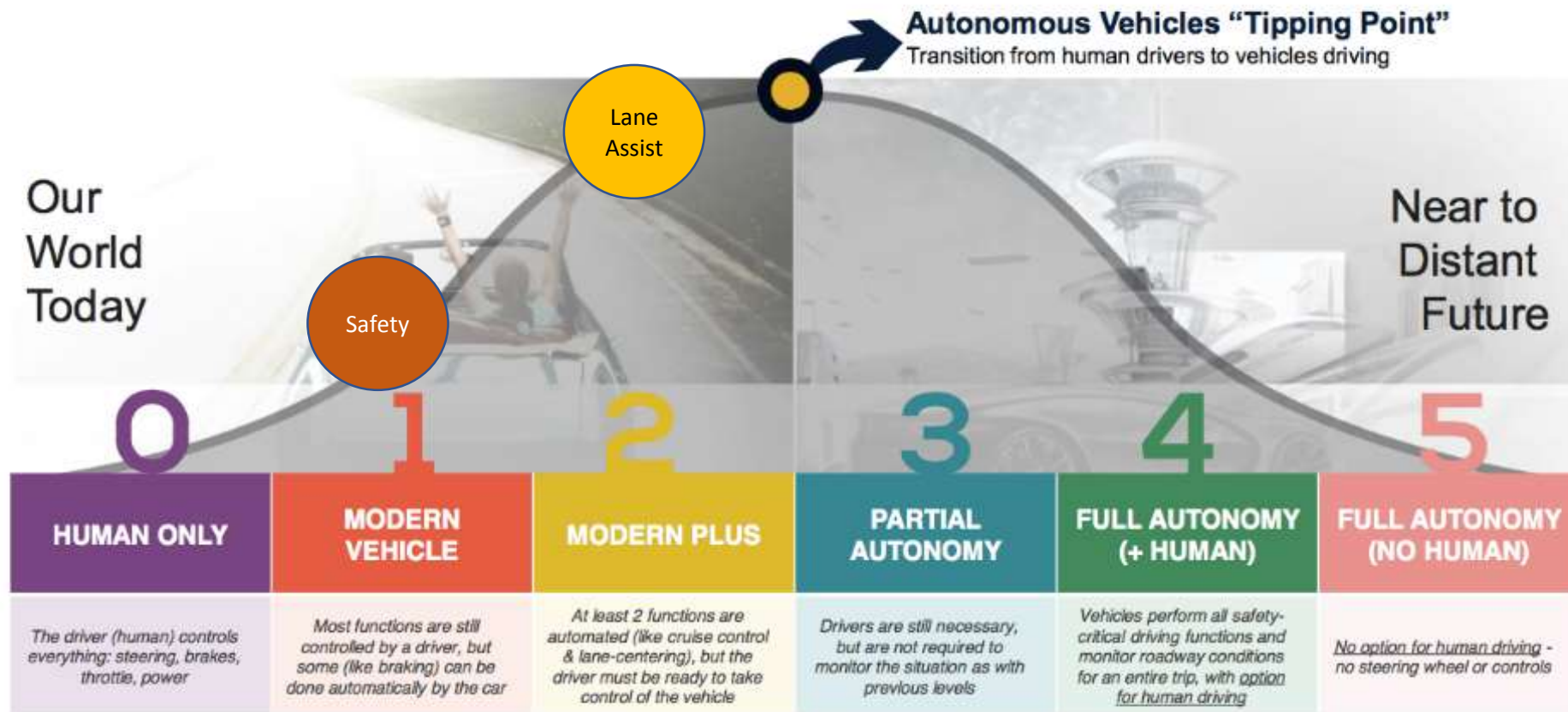


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Lane Assist

- Optical guidance system
- Driving with a Metro experience
- Introduced in Rouen BRT in 2001

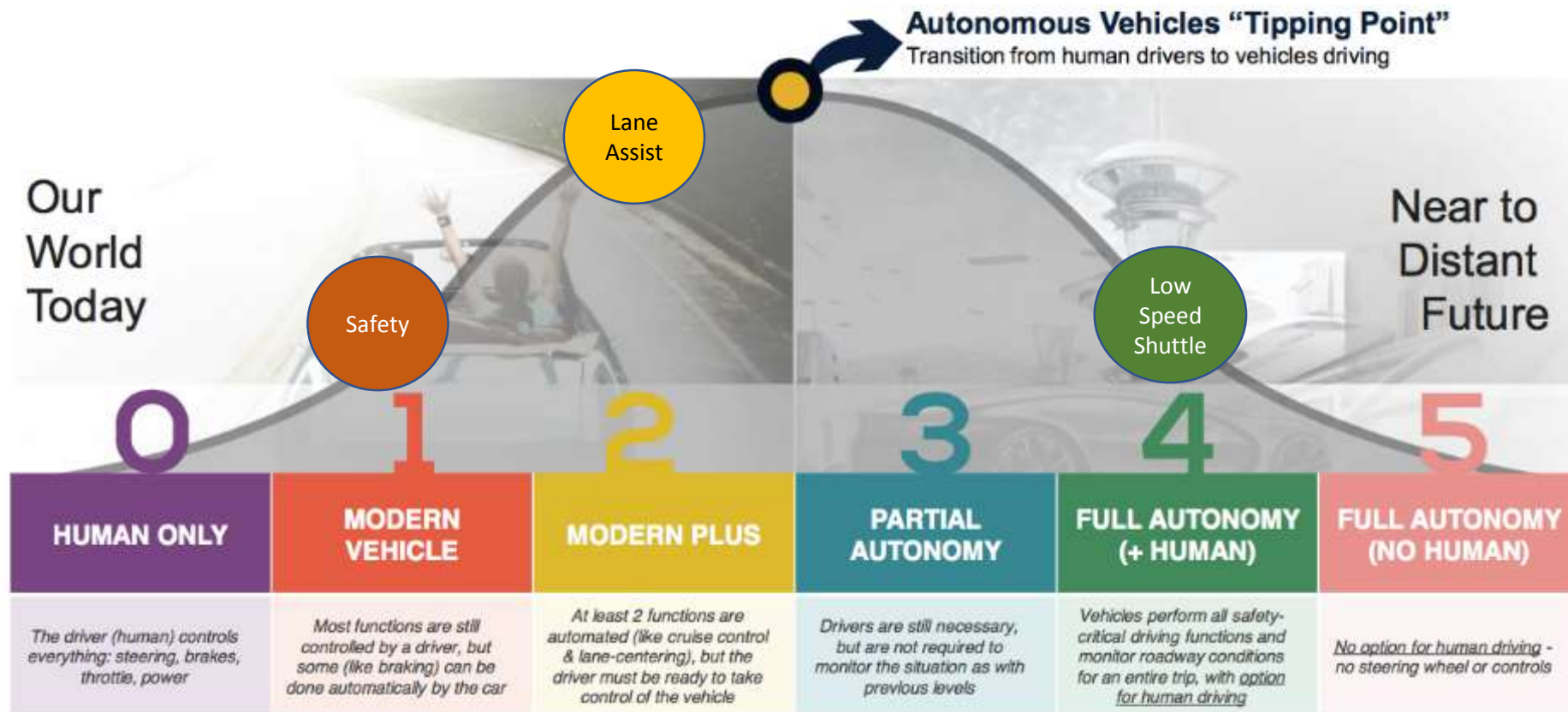


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Multiple References



Civaux
Contract to operate
6 veh Navya for EDF since
Apr.2016



Rouen
6 weeks pilot Dec.2016-
Jan2017
1 veh. Easymile



Rungis
2 months pilot Sept.2017-
Dec.2017
2 veh. Easymile
First demo on open road



La Rochelle
Dec. 2014 / Apr.2015

Rotterdam
10-years contract to
operate 6 veh.
2GetThere



Montreal
Parc Olympique June 2017



Issy les M.
6 weeks pilot
March.2017-Apr. 2017
1 veh. Easymile

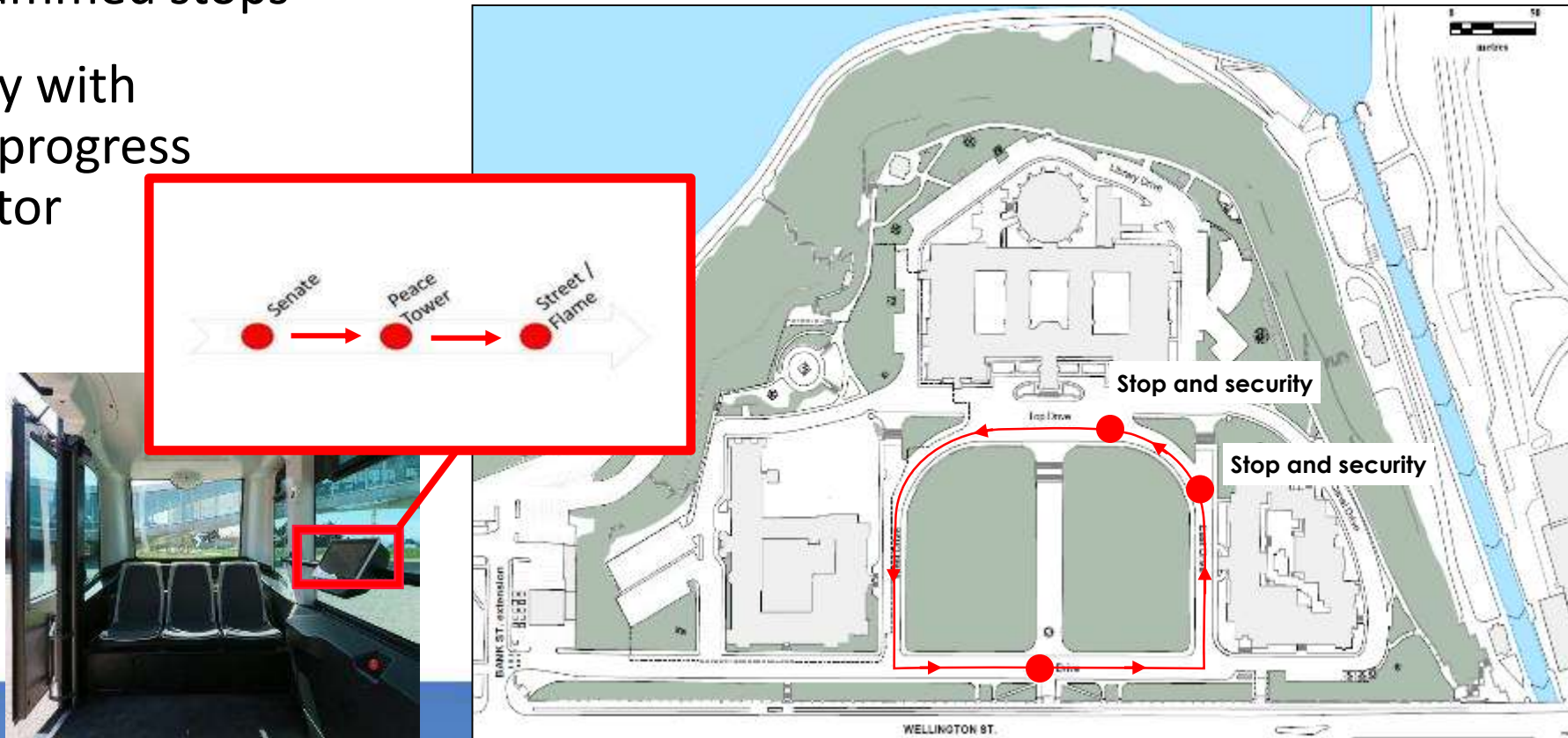


Darwin
Darwin Marina – since Jan. 2017



3 Different modes – Metro mode

- Programmed stops
- Display with route progress indicator



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3 Different modes – Elevator mode

- Stops are programmed, but will stop only if needed/requested
- Display with route progress indicator
- Application base



Example of a on-demand service to be operating during off-peak hours

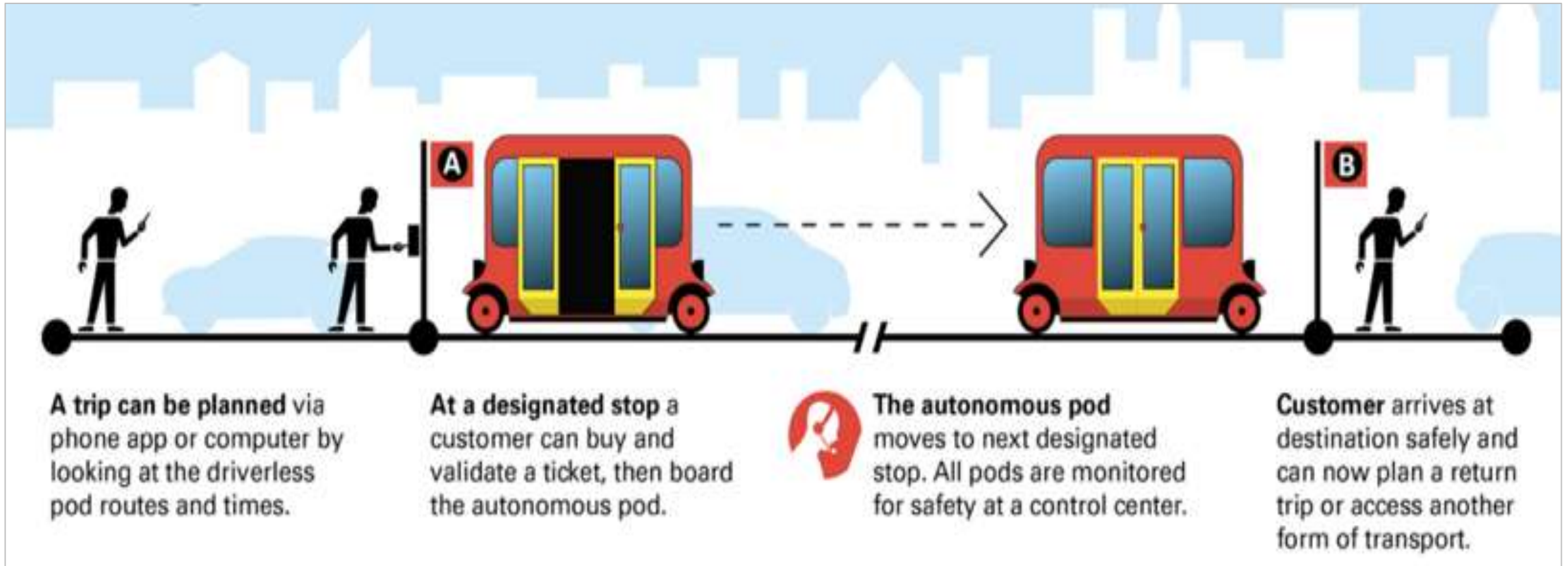


Above: Existing consumer AV application being tested in France pilot projects

Below: Existing HART Link App and Ticketing



3 Different modes – On-Demand

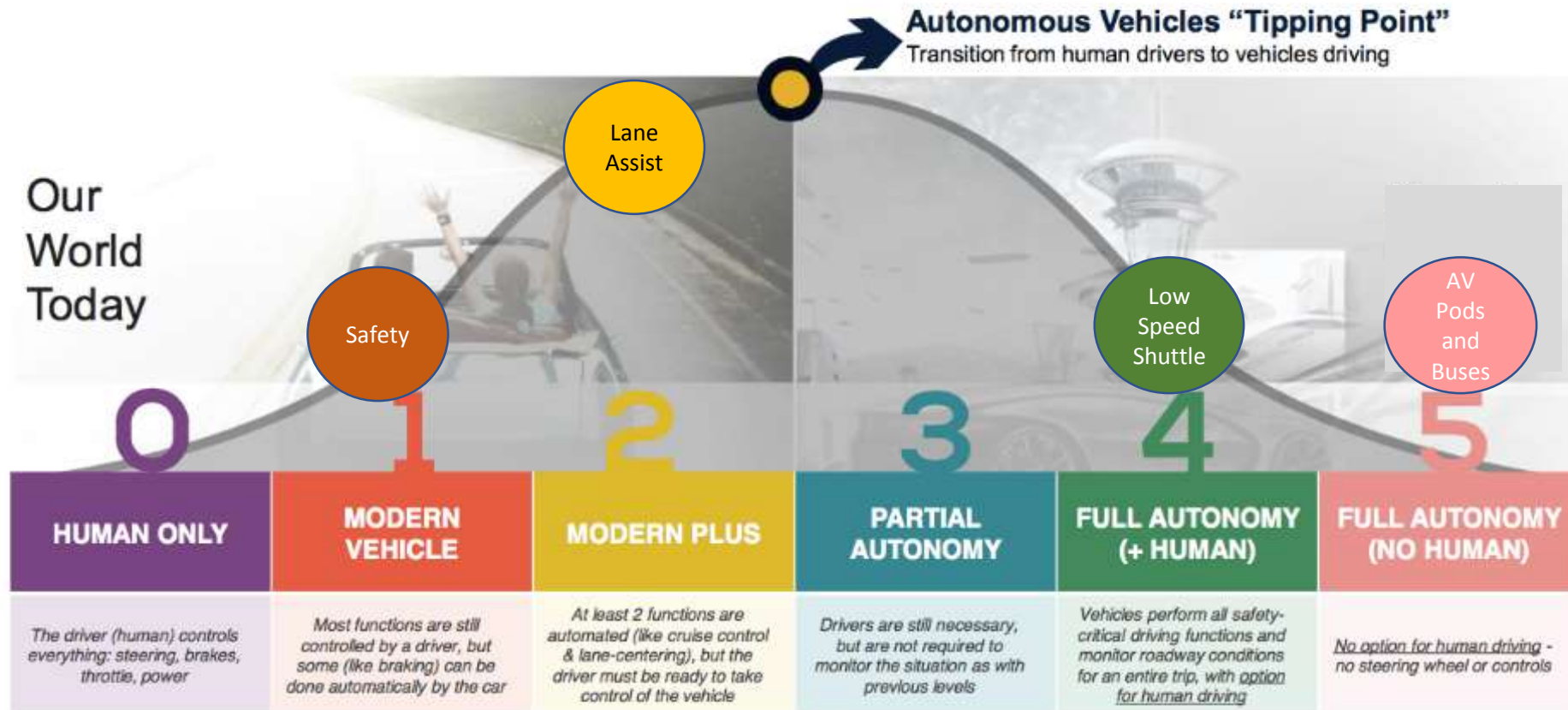


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AUTONOMOUS VEHICLE in Rouen



GRUPE RENAULT



- First Transportation on Demand (TOD) experimentation with AVs in Europe
- Official announcement 2017 Oct. 2nd
- 4 vehicles Renault ZOE + 1 shuttle
- 3 loops on open road, representing 10 km
- Complementary service to PT, allowing to finely serve the whole area so called « Les Madrillets »
- Exemplary partnership between public entities (Normandy Region, Rouen Métropole, Caisse des Dépôts) and private actors (Renault, Transdev, Matmut)



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AV Partners



3th – 4th automotive group in the world, ~10 millions vehicles and one of the leaders of EV.

- **Announced on 2017 February 27th**
- **Research partnership to jointly develop the Autonomous Transport System for fixed route and on-demand mobility services.**
- **Renault-Nissan to provide open vehicles to TD**

DELPHI

Innovation for the Real World

High-technology company, integrates safer, greener and more connected solutions for the automotive and transportation sectors. Headquartered in Gillingham, U.K.

- **Announced on 2017 June 7th 2017**
- **Commercial Partnership for Autonomous Transportation**
- **Delphi will integrate its driverless platform (CSLP)**
- **Transdev will integrate its Supervision (including its Universal Routing Engine and intelligent infrastructure) plus additional software modules dedicated to public transportation**



Global specialist in the design, manufacture and marketing of goods transport systems.

Today the LOHR Group has 1200 members of staff throughout the world.

- **Announced on 2017 August 2nd**
- **Commercial partnership**
- **Transdev + Lohr to develop a new Shared Autonomous Electric vehicle**



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Pulling It All Together – Babcock Ranch

- Goal: Environmentally sustainable livable community built on the principles of PACE
 - 18,000 acre planned community
 - 50,000 residents
 - 100% solar powered
 - Mixed use development
 - Autonomous Vehicle mobility system



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Pulling It All Together – Babcock Ranch

Integrated Mobility Systems, LLC

- Partnership between Transdev and Kitson and Partners
- Mobility management contract to plan and implement a total transportation network.
- Goal: Reduce car ownership through a shared ride AV network
- Create a sustainable environment

Mobility Management Ecosystem

AV Shuttles (within Ranch)

AV Pods (within Ranch)

MaaS connectivity (within and outside Ranch)

Merging traditional with untraditional forms of transport

Goods distribution

Our Journey

Shared Ride
Mobility

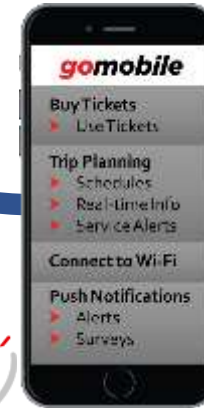
Abel

split



HART Hyper LINK

Customer



cityway
Simplifier la mobilité

whim
freedom of mobility.

Autonomous
Technology



PACE:
The New
Mobility

Urban
Development

SmartCitiesCouncil®
Livability
Workability
Sustainability

LACoMotion



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