

Digital transformation & the future of automotive industry

Celso Guiotoko

Renault Nissan, Alliance Global VP, IS/IT

2016, July 12th



DIGITAL TRANSFORMATION & THE FUTURE OF AUTOMOTIVE INDUSTRY

□ Introduction

- Digital and automotive market context**
- Automotive market evolution**
- IS/IT Digital Transformation**
- Renault Nissan IS/IT Digital initiatives**

ALLIANCE IS/IT ORGANIZATION



CFO



J Peter



Chairman
Renault-Nissan B.V.



Carlos Ghosn



EVP and CCO



T Bollere



Alliance Global VP
Global CIO
Renault-Nissan B.V.



Celso Guiotoko



**Nissan
Global IS/IT**



**Renault-Nissan
Technology and
Business Center in India
(RNTBCI)**



**Renault-Nissan Silicon
Valley Office**



**Renault-Nissan
Information Services**



**Renault
IS**



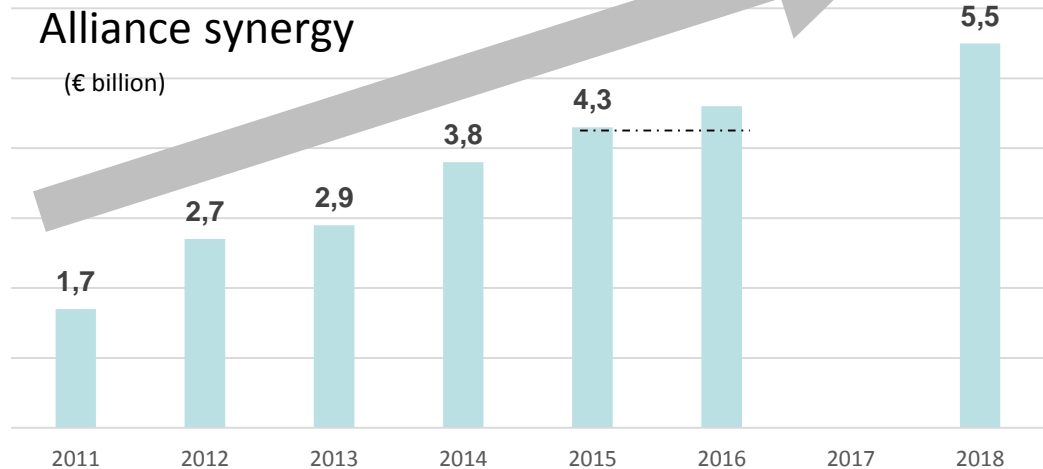
ALLIANCE RENAULT NISSAN

■ April 2014 : Converged 4 key functions

- Engineering
- Manufacturing & SCM
- Purchasing
- Human Resources

■ 2016 : Wave 2

- Quality & Sales Cost Management
- Connected Vehicle
- After-Sales
- Support Functions / services



DIGITAL TRANSFORMATION & THE FUTURE OF AUTOMOTIVE INDUSTRY

□ Introduction

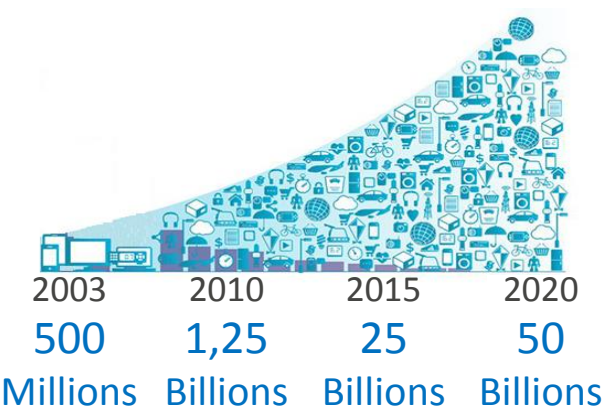
□ Digital and automotive market context

□ Automotive market evolution

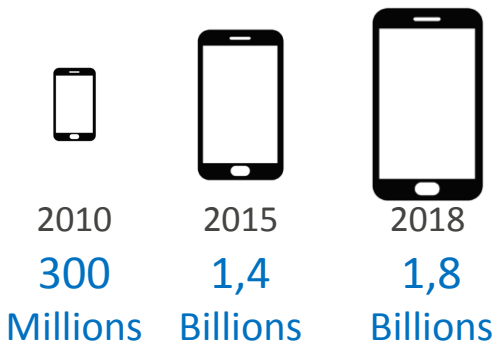
□ IS/IT Digital Transformation

□ Renault Nissan IS/IT Digital initiatives

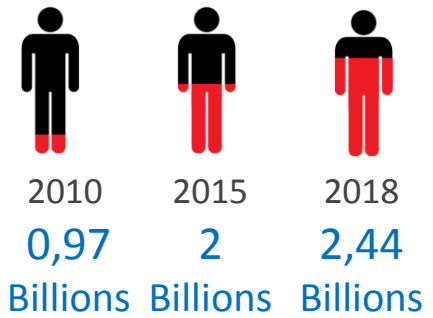
Internet Of Things



Smartphones



Social Network



of consumers engaged in social networks



CUSTOMERS ARE DIGITAL



**The customer is
in command**



**Service level expectation
has risen even higher**



**Speed & Transparency
through community**



**Unique seamless
customer journey**



DIGITAL TRANSFORMATION & THE FUTURE OF AUTOMOTIVE INDUSTRY

- Introduction**
- Digital and automotive market context**
- Automotive market evolution**
- IS/IT Digital Transformation**
- Renault Nissan IS/IT Digital initiatives**

@ DIGITAL SCOPE & OPPORTUNITIES

Strategic Moves



- New vehicle: Create direct link with consumer
- Parts: Business development

Digitize Core business



- Launch initiatives to increase efficiency
- Accelerate initiatives delivery
- Leverage data asset

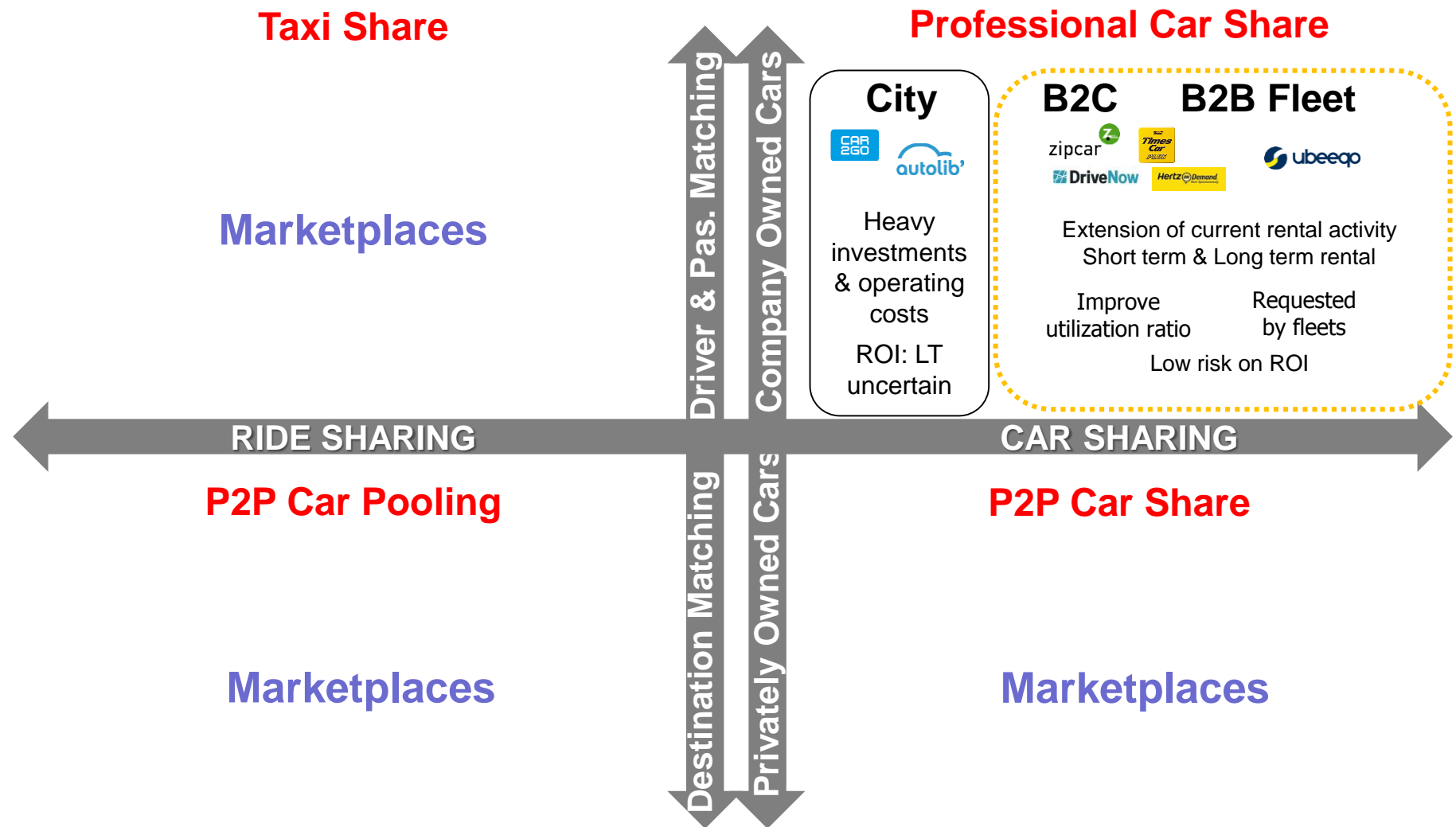
New Businesses



- Connected vehicle
- Mobility: investment play
- Autonomous vehicle: avoid disruption (Apple, Google)

CAR ON-DEMAND & SHARED MOBILITY :

WHERE ARE THE PLACES TO START TO SALE MOBILITY



ELECTRICAL VEHICULE

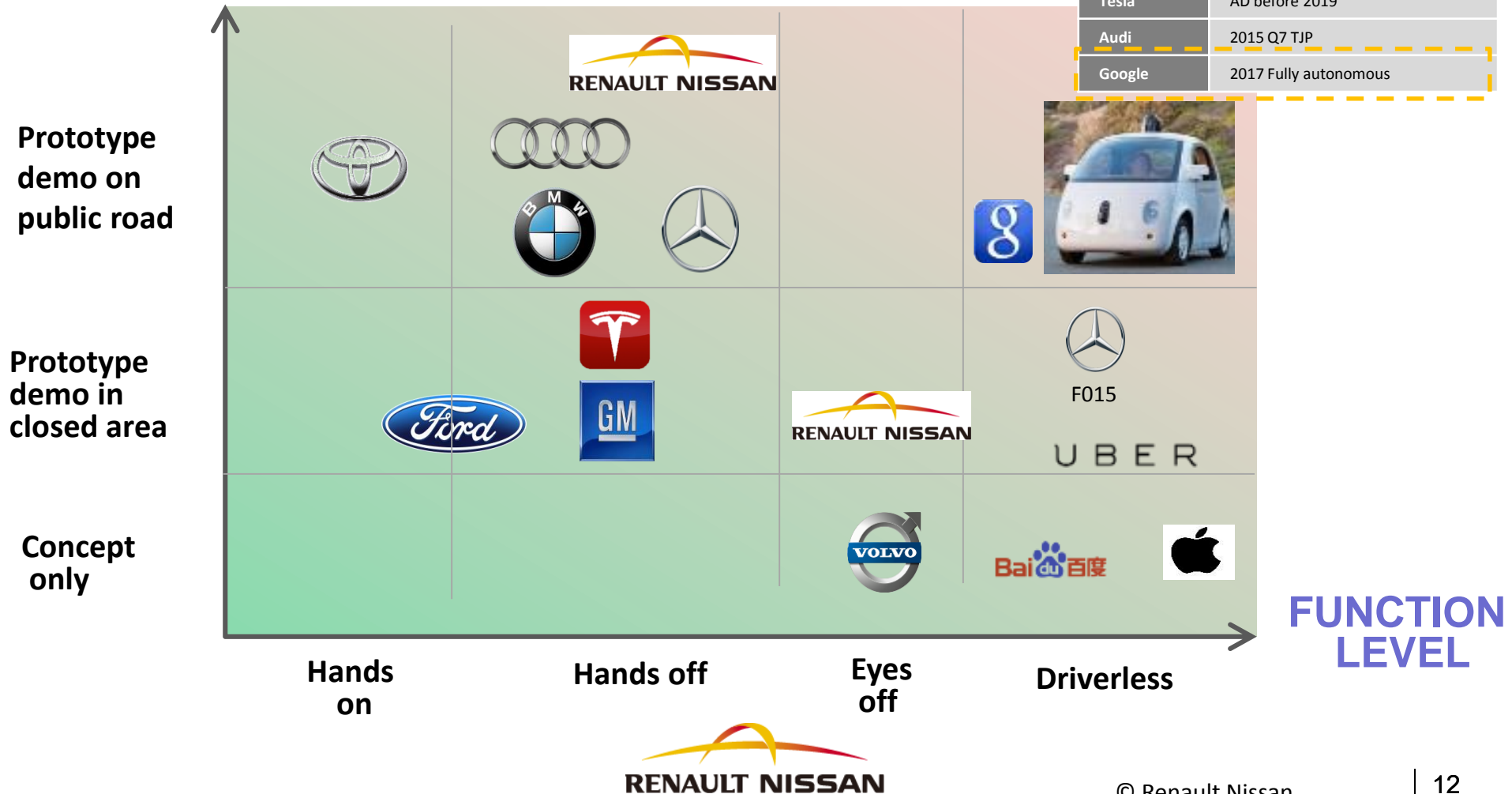


DRIVERLESS VEHICLES

TECHNOLOGY MATURITY

Official Announcements

Daimler	2025 Fully autonomous
Ford	2025 Fully autonomous
GM	2017 Super cruise
Tesla	AD before 2019
Audi	2015 Q7 TJP
Google	2017 Fully autonomous



TECHNOLOGY INNOVATION CONTINUES

■ Autonomous drive roadmap

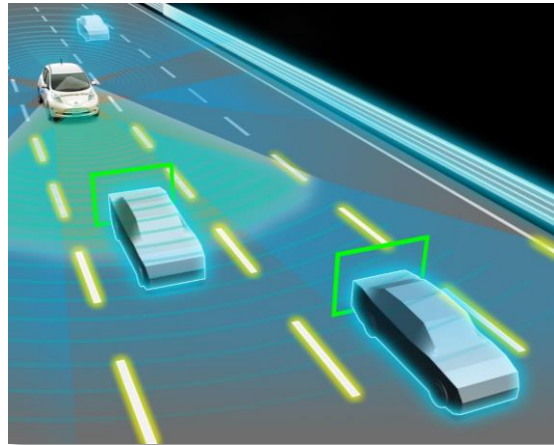
2016

- ✓ Traffic Jam
- ✓ Single Lane



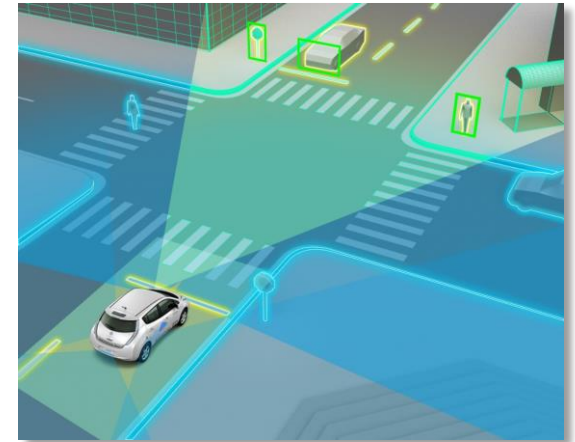
2018

- ✓ Highway
- ✓ Multi Lane



2020

- ✓ City
- ✓ Intersection





Video

Future of Alliance Production Way (5min30)

DIGITAL TRANSFORMATION & THE FUTURE OF AUTOMOTIVE INDUSTRY

- Introduction**
- Digital and automotive market context**
- Automotive market evolution**
- IS/IT Digital Transformation**
- Renault Nissan IS/IT Digital initiatives**



TECHNOLOGY MAKES THINGS POSSIBLE

Big Data/ Predictive analysis



Develop deep insights into supply chains and better forecasts

3D printing



Manufacture tailored products in smaller lots, more distributed/ closer to point of sale/use

Autonomous transportation



Intelligent, autonomous systems, e.g., self-driving vehicles, unmanned areal vehicles (UAVs)

Shift to the cloud



Highly scalable software-as-a-service apps with remote storage and processing power

Social, local, mobile



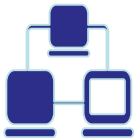
On-going engagement with customers and communities in a relevant and geo-contextual way

Ubiquitous connectivity



"Always-on" access to content and communication capabilities

Internet of things/ device interaction



Intelligently connect smart objects to link material and information flows

Advanced robotics



Autonomous, cooperating industrial robots with numerous integrated sensors

Augmented reality



Provide immersive experience in showroom

WHAT WE CAN EXPECT FROM DIGITALIZATION



Customer-experience focused



Data-driven



*Committed to end-to-end
process automation*



10x faster

*Accelerate business transformation
through digital*

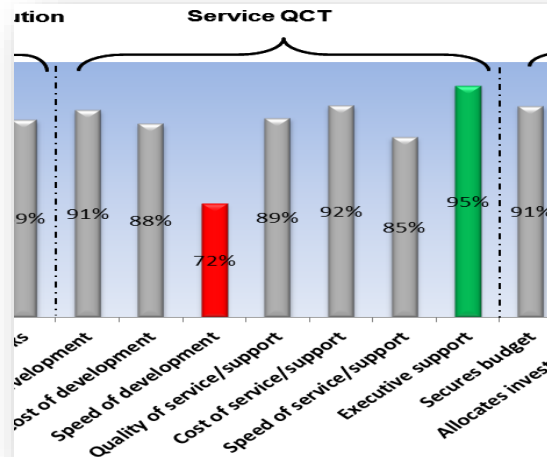
“SPEED OF DEVELOPMENT” THE CHALLENGE

Digital Transformation



**No Digital
Transformation
without a good
Time To Market**

Executive Survey Results



Since 2011, lowest satisfaction mark for « *quickness of delivery of IS developments* »

Hay Group Survey



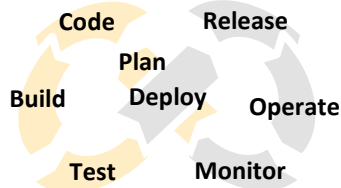
**Promote agility,
cooperation within
organizations**

Gafaa : A SOURCE OF INSPIRATION

FOR WHAT TO CHANGE IN IS/IT



Agile, ways of working (IS/IT & Business)



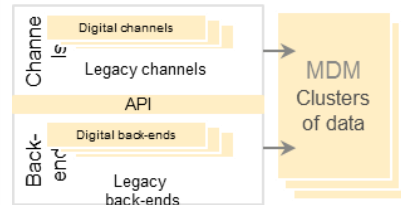
2 months for
major delivery



<1 day to deliver in
production



Simplified, data-centric, mobile 1st, cloud architecture



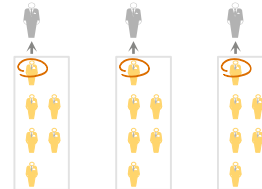
100% in Cloud



Power of data
(predict client
behaviors)



Digital-ready workforce



Teams re-skill on
their own



Talents
recruiting
as 1st priority



Renewed sourcing Partnerships & open innovation ecosystem



% of employee
worktime
dedicated for
innovation



Crowdsourcing



IS/IT Vision & Mission

❖ Vision : VITESSE

Value Innovation, Technology Simplification And Service Excellence

❖ Mission

QUALITY SERVICE WITH MEASURABLE BUSINESS VALUE

We are a service provider and therefore we need to have customer focus in everything we do. We need to delight our customers.

BUSINESS ALIGNMENT

Understand the business objectives of the company to maximize the benefits coming from the investments in IS and IT. Act and think as you are the owners of the business.

GLOBAL THINKING

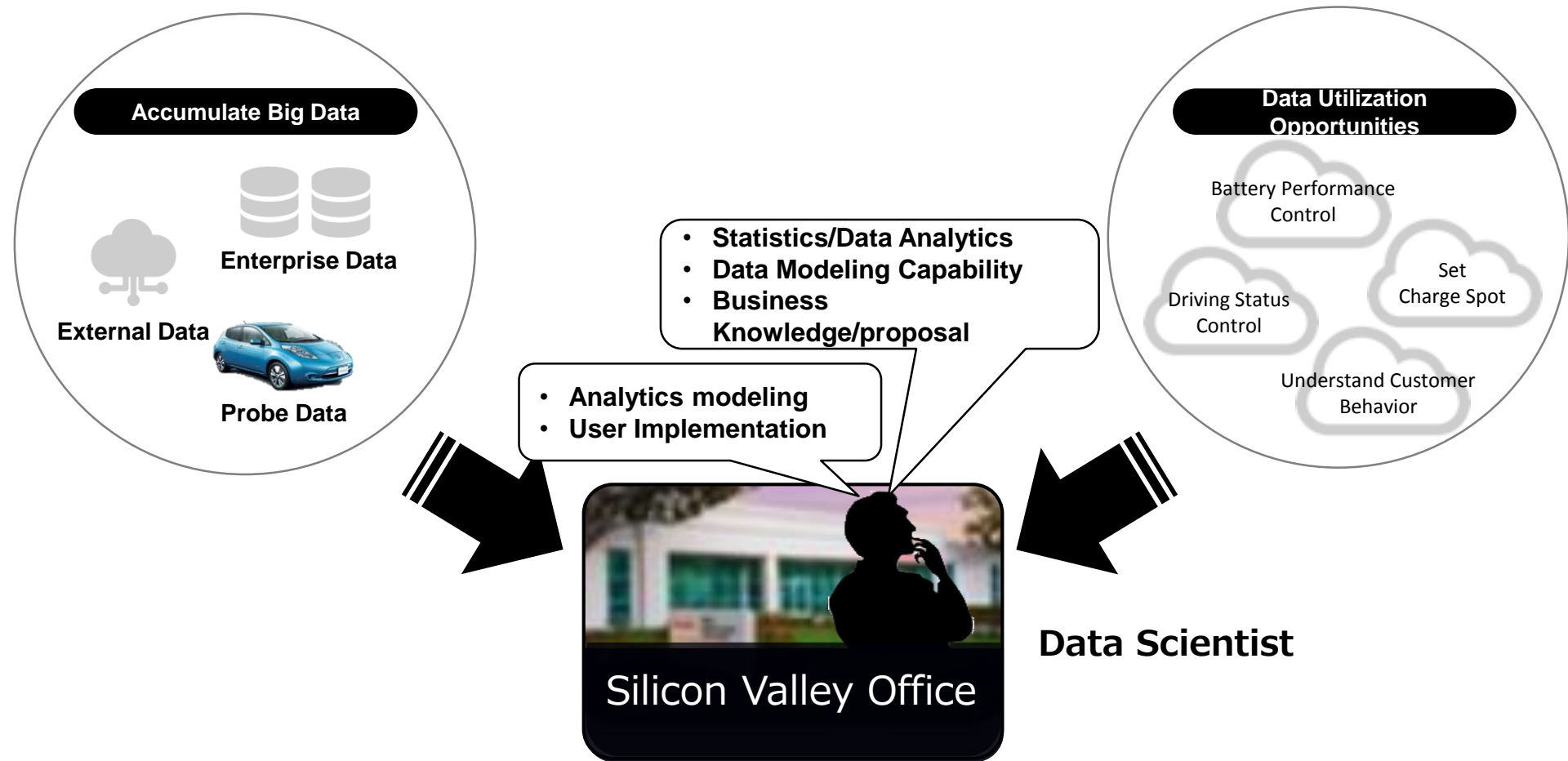
It is imperative for us to globalize our operation and the organization. Understand the benefits and the competitive advantages in being able to share the same values, goals, resources and solutions around the world.

9 PRINCIPLES

- 
- 1 Business Value**
All change effort is initiated by a business driver and generates demonstrable business value.
 - 2 Information asset**
Information is an asset
 - 3 Reduce Complexity**
Reduce integration complexity; maximize interoperability and information sharing.
 - 4 Independent of physical location**
Access to services and information is based on a role related access method and independent of physical location.
 - 5 Business Driven**
All IS/IT solutions must be business event driven.
 - 6 Change**
All IS/IT solutions must be designed to change.
 - 7 Reuse**
Reuse before buy before build.
 - 8 Competitive Advantage**
Assemble or Build for Competitive Advantage.
 - 9 Best Practice**
Adopt Best Practices and Industry-standards for competitive parity.

SILICON VALLEY OFFICE

Established Digital Innovation R&D office in Silicon Valley



DIGITAL TRANSFORMATION & THE FUTURE OF AUTOMOTIVE INDUSTRY

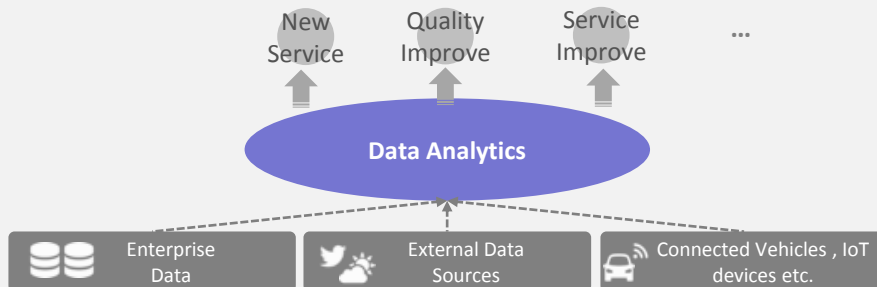
- Introduction**
- Digital and automotive market context**
- Automotive market evolution**
- IS/IT Digital Transformation**
- Renault Nissan IS/IT Digital initiatives**

KEY DIGITAL INITIATIVES

Establish 4 foundations for initiatives of Digital Strategy

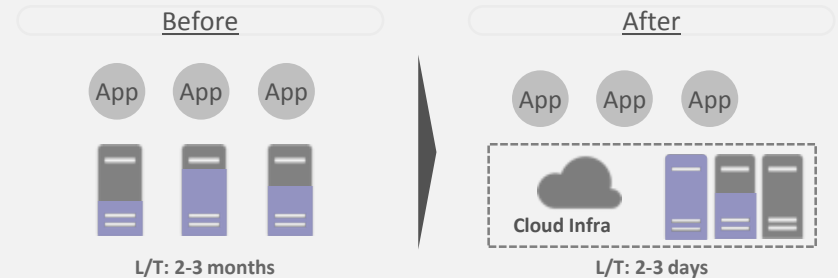
Big Data

- **Existing value chain optimization** (*Marketing, Quality, Digital Design..*)
- **New business value creation** (*Connected vehicle*)



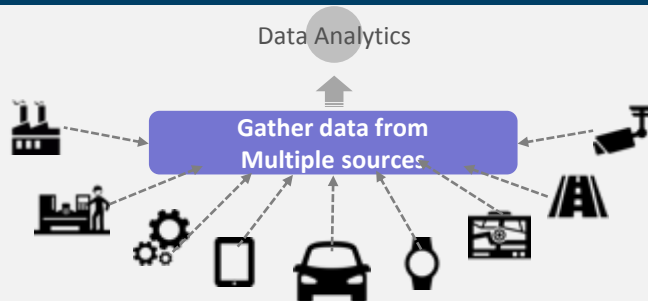
Cloud Infrastructure

- **Speed to market realization** (*on demand request*)
- **Elastic computing resource** (*non-limited capacity For big Data, and biz Expansions*)



Internet of Things (IoT)

- **Vehicle data integration** (*connected car data etc.*)
- **External (Environment etc.) data collection** (*Road side unit, wearable, etc.*)



Cyber security

- **Basic Security** (*Security Incident Response Team etc.*)
- **Advanced Security** (*Advanced endpoint control, cloud access broker, etc*)



Digital Platform

THANK YOU



Q & A



RENAULT NISSAN

© Renault Nissan

| 25