Toyota Electrification Strategy in Europe
Today and Tomorrow

Automotive News Europe Congress
22nd May 2019
New vehicle zero emissions
Life cycle zero emissions (raw materials, parts & manufacturing, use, recycling)
Plant zero emissions
Minimizing and optimizing water usage
Establishing a re-cycling based society
Establishing a future society in harmony with nature
New Vehicle Emissions

By 2050, reduce new vehicle CO$_2$ emissions by 90% vs 2010
Toyota DNA: Environmental Leadership

Sustainable Mobility

- Energy Diversity
- CO₂ reduction
- Air Quality

Hybrid technology

- Gasoline, diesel
- Gaseous fuels
- Biofuels
- Synthetic fuels
- Electricity
- Hydrogen
"First the customer, then the dealers, then the manufacturer. This attitude is the best approach in winning the trust of customers and dealers and ultimately brings growth to the manufacturer."

Shotaro Kamiya (1898-1980)
President and Honorary Chairman
Toyota Motor Sales
Consistent Hybrid Growth in Europe

CURRENT MIX (Q1 2019):

- **Yaris**: 55%
- **RAV4**: 71%
- **Corolla H/B**: 81%
- **Toyota C-HR**: 89%
- **Lexus**: 71%

* includes RU, KZ and TRK (under TME responsibility)

>60% Mix* in Western Europe

480K Sales

46% Mix*
Hybrid expansion driven by model introductions...

- Prius
- Prius III
- Corolla
- Yaris
- RAV4
- C-HR
- Camry
- Corolla
- RAV4

Expansion driven by model introductions...
...linked to clear long-term Sales & Marketing Plans

TOYOTA 15 Plan
Become undisputed Hybrid Leader
150K Hybrid Sales/year
50% Hybrid Mix
In B&C Segments

Hybrid key Toyota differentiator to drive performance

- HV becomes mainstream
  3rd Prius
  2009
- Roll-out HV to core models
  Corolla HB
  Yaris
  2010-2012
- Strengthen product power
  Corolla WGN
  Yaris 2014
  Auris 2015
  2013-2015

TOYOTA 21 Plan
Customer-Centric Strategy
1M Sales
5% Market Share
50% Hybrid Mix

Increase Market coverage
Expansion to SUVs & more

- RAV4
- C-HR
- Corolla SDN
- CAMRY
  2015-2019
360° Approach in close collaboration with our Network

- ATL/BTL
- Transparent Test Drives
- Manage Customer Concerns
- Steering Mechanisms
- Value Chain & Service
- Salesmen training
- Showroom experience
- Web experience
Highlight tangible benefits

TANGIBLES

Fuel consumption

Low emissions

TCO (Total Cost of Ownership)

TANGIBLES

NUMBER OF TEST DRIVES

NUMBER OF KILOMETRES

% Zero Emissions (Time)

CUSTOMER RATING

Source: DRIVECO: Toyota Test Drives until 13th May 2019

>50% zero emissions driving*

Hybrids also provide many intangible benefits

TANGIBLES

- Fuel consumption
- Low emissions
- TCO (Total Cost of Ownership)

INTANGIBLES

- Responsive
- Intuitive
- Quiet

= Feelgood Driving

Source: AMCI Research
We wanted to share that “Feelgood Driving”…”

«New Yaris Hybrid. Silence the City»
Toyota Europe 2012

«Try my hybrid»
Toyota Norway 2015

«TRY-BRID»
Toyota UK Network 2016
...and shift to more emotional communication
Ensure a great Showroom experience...

- Visible Hybrid Area
- Best-looking Car
- Dedicated Sales Process
- Annual Health Check
- Unique Value Proposition
TCM: Great value proposition for customers & network

- Affordability for customers
- Customer centric: Pay per use
- Leverage high residual values
- High quality used cars for network
Hybrid differentiation strengthens Brand Premium

Source: Toyota Brand Scan Rolling 12-month
Hybrid Electric Vehicles support CO2 objectives

EU CO2 Evolution

- Toyota
- Industry
Future CO2 regulation to become stricter

95g CO₂ / km (2020)
81g CO₂ / km (2025)
59g CO₂ / km (2030)

- 15% vs 2020
- 37.5% vs 2020
There is not “one” electrification solution…

“There is no perfect technology”

Takeshi Uchiyamada
Toyota Chairman
Provide different solutions for different customer needs

- CO2 Regulation
- Taxation
- Access restrictions
- Infrastructure

Product is determined by customers x market

Need to offer variety of powertrains across our line-up
Customers will define the electrification they need

- **Affordable** (net of incentives)
- **Convenient** (Range & Infrastructure)
- Access to city centers
- Social responsibility
Different technologies for different parts of the market

- Electric motor
- Battery
- Inverter

Charger
Battery Electric Vehicles (BEVs)

Engine
Hybrid Electric Vehicles (HEVs)

Engine + Charger
Plug-in Hybrid Electric Vehicles (PHEVs)

Stack + H₂ tank
Fuel Cell Electric Vehicles (FCEVs)

BEV DOMAIN

FCEV DOMAIN

HEV/PHEV DOMAIN

VEHICLE SIZE

TRAVELLING DISTANCE
Hybrid remains optimal balance of customer needs

- Vehicle Range
- Access to Infrastructure
- Charge Time
- Vehicle Cost
- City Centre Access
Hybrid Cost & CO2 reduction to continue

Toyota HEVs affordable & convenient

Substantial reduction in costs

-75%

HEV SYSTEM COST

1st Gen Prius
(1997, EU 2000)

2nd Gen Prius
(2003)

3rd Gen Prius
(2009)

4th Gen Prius
(2015)
Toyota to give royalty-free access to hybrid-vehicle patents

TOKYO (Reuters) - Japan's Toyota Motor Corp will offer free access to its hybrid-vehicle patents through 2030, it said on Wednesday, seeking to expand use of the lesser-emission technology even as the global industry shifts toward fully electric cars.

“Executive Vice President Shigeki Terashi told Reuters the Japanese automaker intended to become a tier 2 supplier of hybrid systems and that it had already received more than enquiries from more than 50 companies.”
FCEVs are free from range anxiety and charging time issues
FC system: huge potential for cost reduction

Fuel cell system costs have been reduced significantly.

Further cost reduction efforts are ongoing.

-95%

Generation 1: Mirai - 95% reduction

2008 Prototype Model

Limited Sales

Market Entry

Widespread use
Expanding FCEVs via commercial applications
BEVs will grow, especially in high income areas
Toyota BEV Cooperation for affordability

Joint technology development contract

Outsourced development

Investment: 5%

DENSO

Investment: 5%

TOYOTA

Investment: 30%

Outsourced development

EV C.A. Spirit Corporation

Development of basic structural technologies for EVs covering a wide range of vehicle segments and types

Full-time engineers (transferred from each company)
Toyota BEV Cooperation for affordability

New joint venture with Panasonic

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<td>PRISMATIC Li⁺ SOLID STATE</td>
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From next year

BEV ROLLOUT IN EARNEST

ICE

HEV

PHEV

FCEV

BEV

Note: Scale is indicative
From 2025

ELECTRIFIED VERSION FOR EACH VEHICLE MODEL

ICE
BEV ROLLOUT IN EARNEST

HEV
PHEV
FCEV
BEV

Note: Scale is indicative
In 2030, 5.5M electrified vehicles sales, including 1M BEV & FCEV.

- HEV
- PHEV
- FCEV
- BEV

Note: Scale is indicative.
The right car, in the right place, at the right time

Environmental Leadership

Customer First

Technology Neutral