- Company Presentation
  - About Ford Otosan
  - Plants
  - Products
- We are aware of...
- Ford Otosan’s Digital Journey
About Ford Otosan
KEY PLAYER IN FORD MOTOR COMPANY UNIVERSE

Robust sales performance

- Highest commercial vehicle market share of Ford in Europe
- Among Ford’s top 3 markets in Europe (Britain, Turkey, Hungary, Ireland, Romania)

Leading manufacturing hub

- Lead manufacturing plant of Ford Transit globally
- Single source of Ford Transit Custom & Tourneo Custom
- Single source of Ford Transit Courier & Tourneo Courier
- One of the two production centers globally for Ford Cargo heavy trucks

Engineering and R&D power

- Global hub for Cargo heavy trucks and related powertrains
- Global support for Light Commercial Vehicle Development
- Global support for Diesel Powertrain Engineering
LOCATIONS

- Sancaktepe Parts Distribution Center (1998)
- İnönü Plant (1982)
- Sancaktepe Engineering Center (2015)
- Yeniköy Plant: Courier (2014)

Map showing locations:
- Istanbul
- Sea of Marmara
- Getizle
- Kocaeli Plant
- İnönü Plant

COMMERCIAL VEHICLE PORTFOLIO
ECOTORQ ENGINE FAMILY

- Available in **9L 330PS** and **13 L 420 to 480PS**
- Environmentally Friendly **Euro 6 Emission Levels**
- Turbocharger with **Variable-Geometry**
- **2500 bar Common-Rail** Fuel Injection System
- **Specially Coated** Pistons
- **Smart Charging** Alternator
THE NEWEST & WIDEST PORTFOLIO IN THE INDUSTRY
We are aware of...
WE ARE AWARE OF...

The global trends

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<th>T1</th>
<th>CHANGING DEMOGRAPHICS</th>
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<td>INCREASING PHILANTHROPY</td>
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WE ARE AWARE OF...

The technology trends

Source: Frank Diana, Tata Consultancy Services
WE ARE AWARE OF...

The trends affecting automotive

Information and communication technologies which bring new applications and new business models are adopted into our lives faster and faster.
The trends affecting automotive:

Urbanization and population changes

- Population increase from 7 billion now, to 9 to 11 billion in 2050
- Urban population increase %70 to %90 population to live in cities by 2030
- Urban mobility to increase x2.6 from now to 2030
- Aging population and increase of dependency ratio

WE ARE AWARE OF...

The trends affecting automotive:

Sustainability, safety and health issues raising up

Source: phys.org

http://www.hindustantimes.com
WE ARE AWARE OF...

The trends affecting automotive:

"OEMs and dealers need to offer new consumer services"

"That kid - the one in the back of the SUV with the iPad - is the automotive industry's worst enemy."  
(Bloomberg)

"...the fear of OEMs is that a car will become a smartphone on wheels, with cars built around their entertainment value rather than their hardware value."  
P. Felden, IBM

Source: Çukuryılmaz, Digital Transformation and Data Protection in Automotive Industry
WE ARE AWARE OF...

The trends affecting automotive:

Gen Y and Gen Z replace baby boomers and Gen X.

• 2 billions of post 1993 born Gen Z dictates future consuming patterns
• New life style, new consumer behaviors
• Always online. Digital is the new normal for Gen Y and Gen Z.
• Automobile is not a symbol of statue anymore but just an appliance
• Mobility and connectivity are key important. Mobility as a service (MaaS), less ownership, more option, more connection (multimode), more “sharing”
• Priorities: cost, fuel efficiency, technology, customer experience
• Walking, riding a bike, public transportation, sharing or hiring a car is preferred when a car is needed.
• 1 shared car is equivalent to 32 purchased cars. Still 80% of Gen Y plan to buy a car in next 5 years.

The trends affecting automotive:

Driven by urbanization and macroeconomics, global vehicle sales will continue to grow, although at a slower pace. Current and future annual global vehicle sales, millions:

- **2015**: 87 Urbanization and macroeconomic growth, 41 Less private vehicles, 23 New shared vehicles, 115 Private vehicles
- **2030**: 105

The automotive revenue pool will grow and diversify with new services, potentially becoming a ~USD 1.5 trillion market in 2030 USD billions:

- **Today**:
  - Traditional automotive revenues: Vehicle sales dominant
- **2030**:
  - New automotive revenues: Recurring revenues significantly increasing
  - ~6,700 Revenues (shared mobility, data connectivity)
  - 4,000 One-time vehicle sales
  - 1,200 Aftermarket
  - 720 30


New trends will have deep impact on revenue streams.
WE ARE AWARE OF...

The trends affecting automotive:

New technologies and business models

- Connected
- Autonomous
- Electric
- Shared
WE ARE AWARE OF...

The trends affecting automotive:

Ford Otosan’s Digital Journey
Ford Otosan Digital Strategy

Ford Otosan has established a "Digital workplace" with employees working in innovative offices, remotely from home or mobile, supported by digital tools.

Ford Otosan gets awarded additional manufacturing contracts from Ford due to the high manufacturing efficiency driven by data-based efficiency and quality programs and automation.

There is automated real-time end-to-end data flow along the supply chain.

All data and knowledge is centrally available and leveraged with analytics capabilities.

Ford Otosan captures new development contracts from Ford and externals because of high efficiency in its PD organization.

Forecasting is based on big data analytics.

Dealerships are fully digitized with digital sales tools and direct link to the Otosan CRM.

Ford Otosan uses big data analytics to understand customer needs and offer customized products.

Ford Otosan is running the largest fleet of connected trucks in Turkey with profitable fast growing business providing services to truck owners and ecosystem partners.

Ecosystem partners (e.g., insurance)
A Connected Digital Business

- Connected Employee
- Connected Customer/Dealer
- Connected Supplier
- Connected Manufacturing
- Connected Vehicle

Optimization Growth Distruption

FORD OTOSAN DIGITAL STRATEGY
Innovation
Digital, interactive, transparent platform (web and app-based) with gamification, open to all employees.

> 3x increase in number of ideas compared to legacy system.
Systematic, Continuous Program for **Corporate Entrepreneurship**: Enabler For Processing Business Model Innovations Outside The Framework Of Daily Operation
Employees encouraged to submit their business model ideas in line with Ford’s Smart Mobility vision
2-week off-site intensive bootcamp for multi-disciplinary «internal start-ups»:
Customer insight, initial value proposition and MVP testing (with external mentoring from VC managers)
Objective: Initiate Systematic Engagement With Ecosystem Partners For Innovation In 2017
Smart Manufacturing
SMART MANUFACTURING DEPLOYMENT PLAN

Awareness, benchmark, investigation

Define and align the vision, the strategies, the resources

Organizational re-structuring

Lean Manufacturing: gap analysis, refinement, excellence

Increase of the general automation level

Interaction with consultants, tech companies and suppliers

Discovery of the pain points and bottleneck analysis

Top notch technologies: Radar check, research and prototype implementations

IT infrastructure: systems, hardware and software

Implementation of technology focusing to the pain points

Digest, control verify and restart the cycle
DIGITAL JOURNEY FROM DATA TO INNOVATION

Data Collection  Data Structuring  Information  Knowledge  Innovation

Everything is about data

Source: The Digital Transformation, Smart Manufacturing Industry 4.0, John Fleming
Collaborative Robots

Part loading process

Headlamp adjustment process

Engine oil filling process

Source: Ford Otosan Plant Innovation Meeting Presentation
SHOP FLOOR IMPLEMENTATIONS

3D Printing  Predictive sensors  Smart forklift

Source: Ford Otosan İnönü Plant Innovation Meeting Presentation
SHOP FLOOR IMPLEMENTATIONS

Digital Production – Virtual Build
SHOP FLOOR IMPLEMENTATIONS

Digital Production – Virtual Build
SHOP FLOOR IMPLEMENTATIONS

Digital Production – Virtual Build
Thank You