Data Driven Cities

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Atos at a glance
We are the global leader in secure and decarbonized digital.

Supported by the talent and diversity of 107,000 employees in 71 countries, we generate an annual revenue of €11 billion.

We offer our clients a range of market-leading digital solutions and products alongside consultancy services, digital security and decarbonization offerings.
In a nutshell

107,000 business technologists in 71 countries worldwide

#2 in managed security services worldwide

€11 bn revenue and €1 bn operating margin

c.€235 m R&D per annum

Worldwide IT Partner of the Olympic and Paralympic Games

85,000 new digital certifications

Global leader in cloud and digital workplace

14.9 tCO2/m€ revenue industry best-in-class
Where you can find us
107,000 business technologists in 71 countries

Benelux & The Nordics
5,000 employees

United Kingdom & Ireland
9,000 employees

France
12,000 employees

North America
10,500 employees

South America
2,500 employees

Germany
9,000 employees

Central & Eastern Europe
13,000 employees

Italy
1,500 employees

Iberia
5,500 employees

Asia Pacific
35,500 employees

Middle East & Africa
3,500 employees
Cities

Physical city
- infrastructures

Dynamic city
- traffic

Social city
- place to work, live and entertain

Fysiological city
- air quality, sound level, heat waves
a Data Driven City is able to sense and respond to its challenges using natural and artificial intelligence embedded in the city’s information systems.
Source: Liotine, Ramaprasad, Syn

a Data Driven City is able to share right time information with its citizens / visitors based on analysis of actual data to support daily decisions and enhance quality of life.
Source: Seubers, Albert
Citizen Centric

We are citizens
We are users
We make change possible

- Energy transition
- Transmodal shift

Together we keep the city..
- Healthy
- Economic viable
- Safe
- Liveable
Physical
Fysiological
Change is happening

Building functions are changing
- 24/7 economy
- joint use
- societal use

Importance of location is changing
- transport / logistics
- iconic recognition

Social aspects are changing
- Personal services

Physiological aspects are getting more important
- reflect / absorb sound
- influence air stream for cooling
- greening the city / water storage
Physiological

City climate, use of natural air stream
Sandra Lenzholzer (WUR)
Digital Twin – Urban Development Initiative

- Visualisation  – actual and new design
- Simulation  – impact analysis
  - Dynamic city
  - Physiological city
- Simulation  – social and safe city
- Research  – social and healthy city
Dynamic
Smart Mobility
Digital is revolutionizing mobility services

Driving real time efficiency across multi modal mobility

Before
During travel
After

Anticipate passenger & freight expectations and provide contextual services

CONNECTED PASSENGER & FREIGHT

CONNECTED VEHICLES
Car, Train, Ship, Truck, Bicycle, Scooter

INFRASTRUCTURE
Road, Rail, Station, Canals, Bike-lanes

Passenger & freight data
Vehicle data
Traffic data
Traffic data
Traffic data
Infrastructure data
Infrastructure data

Before
During travel
After

Citizen centric
Smart Mobility: Main Challenges

- Traffic Jam monitoring
- Decarbonization
- Alternative Transportation
## Smart Mobility
### Key drivers

<table>
<thead>
<tr>
<th>MULTIMODAL INFRASTRUCTURE</th>
<th>ACCESIBILITY OF SERVICES</th>
<th>DECARBONATION</th>
<th>TRAVEL SAFE</th>
<th>CITIZEN MINDSET</th>
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<tbody>
<tr>
<td>Share multimodal infrastructure of transportation</td>
<td>Develop accessibility of services</td>
<td>Support decarbonation of the territory to make the territory attractive</td>
<td>Ensure safe travel decreasing number of accidents</td>
<td>Change Citizen Mindset by incentivization to limit his CO2 consumption</td>
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Smart Mobility in the Urban Data Platform
Key Features and assets

Reliable & trusted Operations 24/7
- Right time architecture
- Hybrid cloud containerization
- Hosting strategy and scalability (cloud computing)
- High Availability based on secured open standard
- Security by design

Designed for Territories & Cities
- Mobility planning
- Infrastructure management ensuring continuity of services between urban and rural areas
- Leverage collective intelligence (citizens, enterprises, authorities) through networking and connectivity.
- Traffic guidance based on right time data analytics

Designed for Mobility
- Traveler Information System
- Mobility as a Service
- Shared Mobility Access
- c-ITS
- Fleet Management
19 Atos Technology Days 2021

- Environment monitoring
- Mobility services
- Mobility infrastructure
- c-ITS
- FALCON
- Urban Data Management
- Urban Strategy
- Security
- Edge
- Cloud
- DT powered AI
- Urban Design Simulation
- Traffic models
- Care
- Economy
- Education
- Safety
- Emissions
- Citizen well-being
- Mobility infrastructure
- Economy
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Social
• We are the Citizens..
• We need to change daily routines..

• We need information
  • When
  • Where
  • How

• Personalized but secure
  • Vulnerabilities
  • Alternatives
Standards
  NEN – Smart City
  OASC – MIM’s

Data models
  FIWARE Foundation

Share stories
  Interoperability
Thank you..