Connectivity
smart cities and transportation
A TRUSTED NETWORK: Keeping the UK connected

O2 are fundamental to the infrastructure of UK PLC putting us right at the heart of digital Britain

**Public Sector**
Our network infrastructure supports over a third of all UK local councils. 1st operator to achieve CAS(T) Certification for mobile voice and data and awarded 'highly secure' on the data we hold.

**We are a trusted partner**
Our MVNO partners, including Tesco, Sky and Talk Talk, chose our network to underpin their customers' experience.

**The AA**
Our network enables the UK's largest breakdown service to keep connected with their customers 24/7.

**Ministry of Justice**
Our network enables over 1,500 monitor offender tags to operate 24/7.

**Emergency Services**
We provide mobile voice and data communications to over half of the UK police forces, 11 Ambulance services and 4 fire services.

**Transport for London**
Our network connects 8,500 London buses every 30 seconds.

**Network Rail**
Our network enables Network Rail to maintain 20k miles of track around the clock.

**UK Power Networks**
Our Network supports the UK Power Network in delivering electricity to 18 million people across London, the South East and East of England every single day.
### Types of Data

- **Macro**
- **Behavioural**
- **In Venue**

### Multiple Data Sources

- **Active**
- **Passive**
- **Apps**
- **Websites**
- **WiFi/GPS**
- **IoT**

---

**Our data**

- ~5-6 BILLION network events every day
- 24 / 7 / 365
- Available from 2014
Customer Profiling Capabilities

- **AGE BRACKET**: 40-45
- **HOME LOCATION**: SL6/MSOA
- **WORK LOCATION**: WC1/MSOA
- **SPEND POWER**: 80th percentile
- **LIFESTAGE**: Has Children
- **MOBILE**: iPhone 5S
- **REGULAR ROUTE**: Paddington train, M4
- **MEDIA**: Guardian, The Times, Daily Mail
- **WEBSITES & APPS**: Paddington train, M4
- **INTERESTS/HOBBIES**: Mercedes, BMW, Jaguar, Tesla
- **INTERESTS/HOBBIES**: Formula 1
Monitoring & Evaluation: Infrastructure & Development

- **PRE**: PREDICT the impact
- **POST**: ASSESS the impact

**Accessibility** TO and FROM the development

**Travel generated** and **modal split**

**Size of catchment area**

**Use** of the development/ type of demand

**Sustainability**: Trip rates & intensity of use

Make quicker and better decisions about how you serve citizens and drive local economic growth, especially in terms of transport, health, social care, housing, job creation and sustainability.

Smart Steps from O2 Cities & Regions key benefits

- **PRE**: PREDICT the impact
- **POST**: ASSESS the impact
Mobility as a Service

Quantify Demand & Frequency
Inform Service Launch
Monitor Mobility Pattern Change

Identify the market
Identify the demand

PEOPLE MOVEMENT AND TYPE
(HABITUAL, REGULAR, EXCEPTIONAL)

Points of Interest
Routes & Destinations
Frequency

PEOPLE PROFILES
smart city
effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens


No one likes a city that's too smart

Richard Sennett
What is a city?


Wikipedia. Large human settlement. Extensive systems for housing, transportation, utilities, land use and communication. Facilitate interaction.
What are cities for?
Social Structure of Cities

Social structure of cities

Tonnies: Gemeinschaft & Gesellschaft
Durkheim: Mechanical Solidarity & Organic Solidarity
Simmel: Urban experience
Jacobs: Passive surveillance
Hillier: movement economy & dual network
City Science

The generic city consists of two inter-related sub-networks:

1. Foreground network – small number of longer lines with route continuity e.g. Oxford Street
2. Background network – larger number of shorter lines with localised connections
Connections & opportunities

Source: Space Syntax Ltd
GATEway was a 3-year, £8m research and development project to understand and overcome the technical, legal and social challenges of implementing connected and automated vehicles in an urban environment.
Thank you