



TRANSFORMATIVE IoT

Get Muving – convenient, green and flexible city mobility powered by Telefónica

INTRODUCTION

In a crowded city, shared electric transport is the smart and sustainable way to get around. Telefónica's intelligent platform Kite provides mobile connectivity to enable Muving, a scooter-sharing service which allows users to find and hire 70km-per-hour electric scooters via their mobile device. The real-time fleet management required to ensure scooters are available and fully functional is a task ideally suited to the ubiquity and reliability of Telefónica's mobile network.

MUVING

Muving's electric scooters provide a convenient alternative to traditional modes of urban transport, as well as tackling common challenges such as environmental and noise pollution – enabling much easier parking than cars, while guaranteeing zero CO2 emissions and zero noise. In its first year Muving allowed more than 185,000 customers across 12 Spanish cities to find electric scooters on demand, completely changing their experience of urban travel.

The Muving scooter comfortably sits up to two riders, comes with two helmets, and is easy to operate. Anyone over the age of 18 can download the Muving app for free on iOS and Android, upload a valid driver's license, enter their credit card information and reserve a trip – riders are then charged by the minute.



BACKGROUND

In order to accelerate progress in smart city transportation, entrepreneurs Rafael Contreras and Ivan Contreras – who between them have 25 years of experience in global technology ventures – founded Muving.

Muving's goal is to help people recognise that more sustainable and enjoyable experiences are possible in urban transport, by enabling them to make the most efficient possible use of integrated transportation networks.

"Muving's revolution is also about the freedom it offers," explains Ivan Contreras, Founder and CEO of Muving. "With Muving, the user only pays for the minutes they drive without the responsibility of vehicle ownership or maintenance while eliminating the pollution caused by gas-powered vehicles."

THE TELEFÓNICA KITE PLATFORM

The cellular connectivity that Muving is using on its scooters is the connectivity managed by Telefónica's Kite Platform. Kite Platform consists of a dedicated, globally deployed network infrastructure that is managed by a software hosted in the cloud, that can be accessed via web portal or API from anywhere in the world. It supports a wide portfolio of SIM cards to attend any need, offers end-to-end service, and can manage not only traditional cellular connectivity radio technology lines

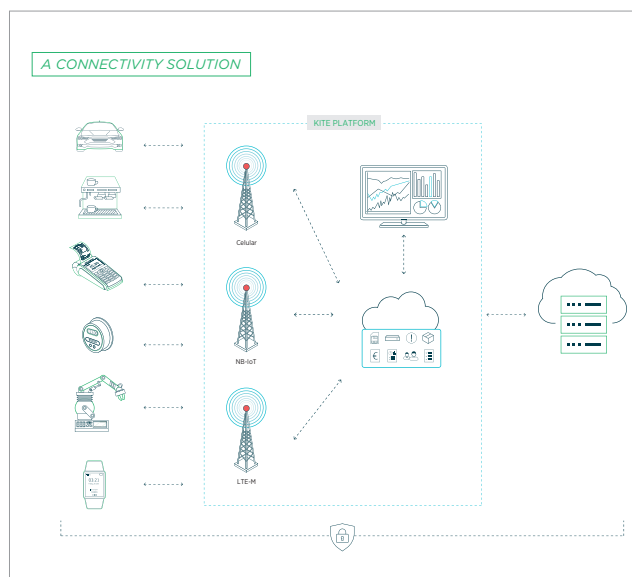
but also new ones like NB-IoT and LTE-M specifically designed for IoT.

Kite's functionalities include:

- ◆ real-time inventory of sim cards with deep detail at SIM level
- ◆ real-time management of usage and expenses for data, voice and SMS
- ◆ visual business, security, operations, pool usage and location dashboards to extract value from connectivity data information processing
- ◆ geolocation of sim cards
- ◆ remote diagnostics and troubleshooting tools
- ◆ alarms to control a wide set of changes over thresholds
- ◆ automatic notifications and actions
- ◆ two-factor user authentication
- ◆ audit logs
- ◆ reports
- ◆ tools for provisioning and monitoring
- ◆ private connectivity between the devices and the customer's systems or third-party clouds
- ◆ development accelerators in public clouds
- ◆ device management
- ◆ multi-connectivity management

“ Kite Platform allows our customers to improve their efficiency, integrating in an easy way the IoT connectivity management in their process and IT systems to react quickly to events and prevent from non necessary displacements, to generate savings and to strengthen their solutions in terms of security. Moreover, considering that it is an in-house developed solution, we are the owners of the platform roadmap and we can react in an agile way to our digital customers' changing requirements”

Eusebio Manzano, Global Product Manager for IoT Connectivity in Telefónica IoT & Big Data Tech.



SECURITY
It has capabilities and tools that help To prevent, detect, and correct situations that compromise the security of devices or connectivity.



END-TO-END APPLICATION
Facilitates the integration with vertical and sectorial solutions, as well as with the leading IoT platforms in the market, through APIs and toolkits. Kite Platform also eases the integration with Public Clouds through the Cloud Ready solution.



MANAGED CONNECTIVITY
It offers an extensive set of connectivity management features such as inventory and control of use and real-time expenses, alarms, reports...



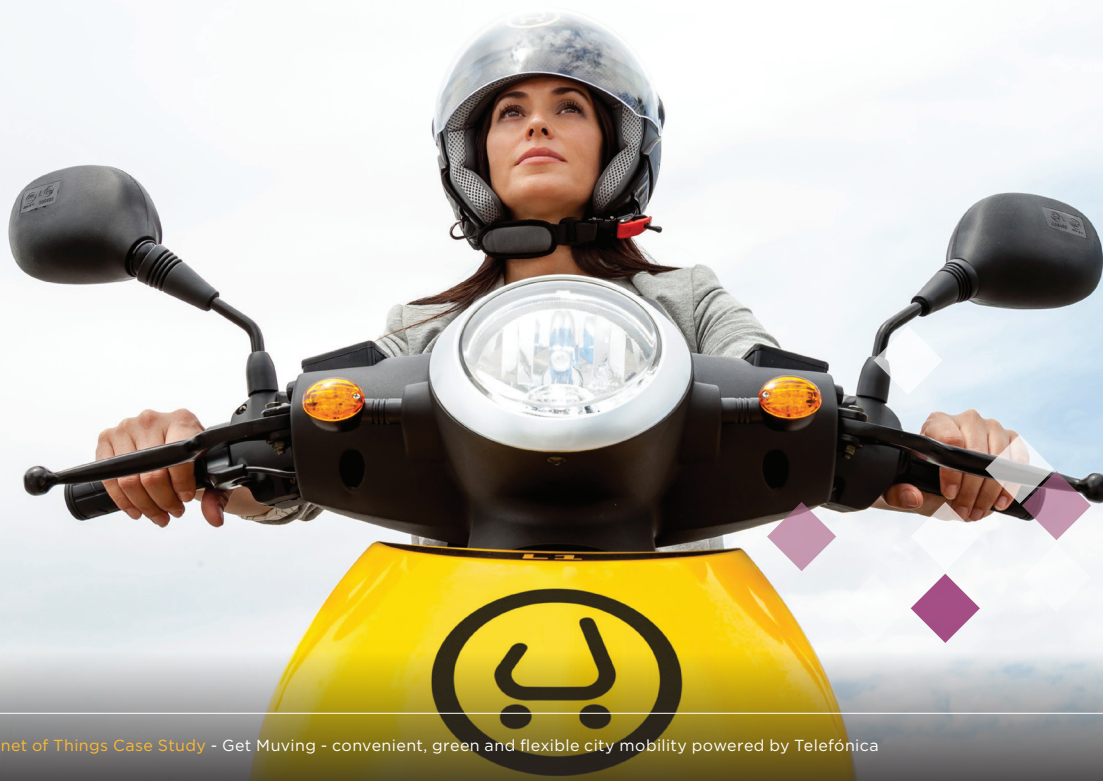
NETWORK TECHNOLOGIES
Integrates 2G, 3G, 4G / LTE cellular network technologies, as well as networks designed for IoT, such as, LTE-M, NB-IoT, or sigfox, and even industrial sensor networks such as industry ready.

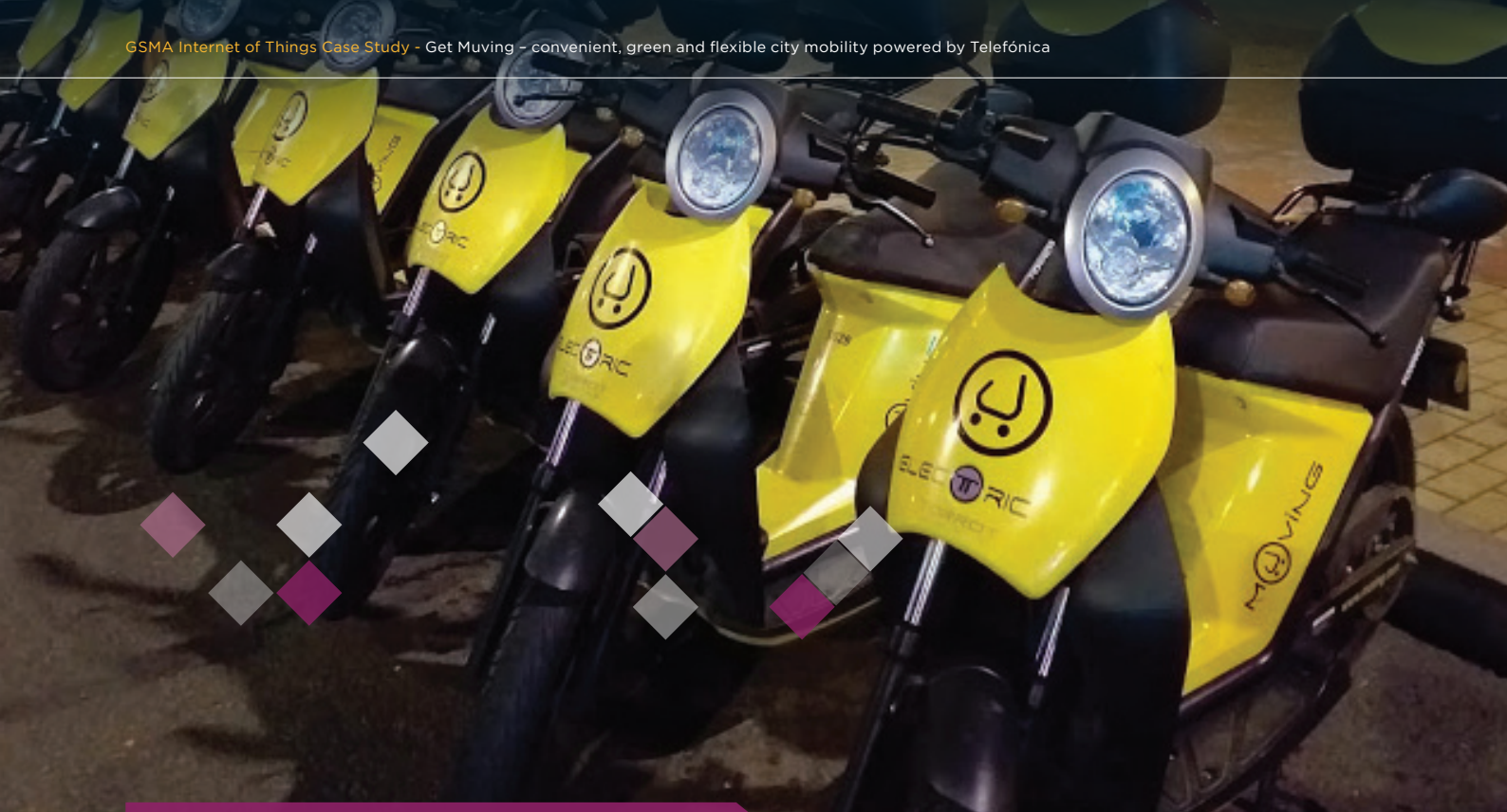


DEVICES
Customers have access to a bundle including communication hardware from leading device manufacturers through our Things Ready offering. Kite Platform performs essential management of the communication devices, such as restarting them or downloading the firmware.



ANALYTICS
Extracts value from connectivity data to display it in visual panels that make it easier for customers to make decisions.





The Telefónica Kite Platform delivers much more than connectivity. It allows client data to be communicated in a secure, scalable and efficient manner. Through the management of that data a wide set of new customer innovative product and services can be implemented. In the case of Moving, this means enabling real-time information on scooter availability, as well as charging status and mechanical condition, and ensuring local authorities are provided with data on pollution and congestion levels, allowing them to identify and work around such issues in good time.

CONNECTIONS



Currently managing almost
25m IoT cellular lines

COUNTRIES



Currently managing IoT
Sims in over 150 countries

CUSTOMERS



Serving more than 10,000
enterprise customers

TYPES OF DATA SOURCES



Collects, manages and uses a number of data sources related to the SIM and cellular line lifecycle like :

- ◆ SIM status
- ◆ Network Events
- ◆ Access Technology
- ◆ Traffic and Data Consumption
- ◆ Voice, SMS, USSD and other services access
- ◆ IMEI used, IMEI swapping
- ◆ Device management features for reset, firmware update, etc.
- ◆ Location (cell ID)

ANALYTICS



Kite offers direct access to dashboards with:

- ◆ Business and commercial info: number of deployed lines & their status, accumulated expense, etc.
- ◆ Operation information: Network used, APN usage, connection rejections, etc.
- ◆ Security: IMEI swapping, User Agent detection, Alarms / actions
- ◆ Pool management: shared data pool management and control
- ◆ Heatmaps: Detailed location of active SIMs

About the GSMA



The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators and nearly 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

For more information, please visit the GSMA corporate website at www.gsma.com.

Follow the GSMA on Twitter: [@GSMA](https://twitter.com/GSMA).

About GSMA Internet of Things

GSMA Internet of Things is an initiative to help operators add value and accelerate the delivery of new connected devices and services in the IoT. This is to be achieved by industry collaboration, appropriate regulation, optimising networks as well as developing key enablers to support the growth of the IoT in the longer term.

Our vision is to enable the IoT, a world in which consumers and businesses enjoy rich new services, connected by an intelligent and secure mobile network.

www.gsma.com/iot

About Telefónica



Telefónica is a company that is aware of the new challenges posed by today's society. This is why we offer the means to facilitate communication between people, providing them with the most secure and state of the art technology in order for them to live better, and for them to achieve whatever they resolve. An innovative and attentive spirit with an immense technological potential that multiplies the ability to choose of its more than 356 million clients. Telefónica operate in 14 countries and has a presence in 24, with an average of 120,138 professionals.

www.telefonica.com

About Telefónica Tech



Telefónica Tech is a recently created holding, where some of the most promising digital services offered by Telefónica are integrated: Cloud, Cybersecurity and IOT&BigData&Blockchain. The objective of **Telefónica Tech** is to bring together these digital businesses with a high growth potential and with which it seeks to accompany its customers in their complete digital transformation.

Specifically Telefónica Tech IoT-Big Data is one the independent companies within this holding and it is where Telefónica's former global capabilities on IOT, BigData/AI and Blockchain are merged with a global scope and view: To bring customer companies the value of business insights built on top of information gathered from connected assets and other data sources combined in the smartest and most effective way, including enhanced transparency thanks to blockchain. Telefónica entered Blockchain at 2016 setting a Competence Center as part of its innovation and research Unit (Telefónica R&D), the largest private R&D centre in Spain as regards activity and resources and is one of the most active company in Europe in terms of European research projects in the ICT sector. Today Telefónica is a relevant player globally in the Blockchain ecosystem, being founder member of Alastria (the Spanish blockchain Consortia), participating of Hyperledger Technical Steering Committee or as Chair at ETSI ISG PDL.

<https://www.telefonica.com/en/web/press-office/-/telefonica-approves-a-5-point-plan-that-will-mark-a-new-era-for-the-company>

<https://www.moving.com/en/>