

LOCATION MATTERS FOR EUROPE

LOCATION-BASED SERVICES ARE BY FAR THE LARGEST USER OF SATELLITE NAVIGATION SERVICES. AS EUROPEANS CONTINUE TO DEPEND ON APPS FOR NAVIGATION, PERSONAL TRACKING, EMERGENCY CALLING, GAMING, ADVERTISING, SOCIAL INTERACTION AND MORE, THEIR USE WILL ONLY INCREASE, REPORT DONNA REAY AND CRISTINA COMUNIAN

The most recent edition of the GSA's *European GNSS Market Report* delves into the use of location-based services in different applications. It presents the results of analysis of more than 300 receiver and chipset models available on the global market in 2015. According to the report, almost three billion applications rely on positioning information. As the market for smartphones is expected to grow by 6.2% each year until 2023, this number can only grow.

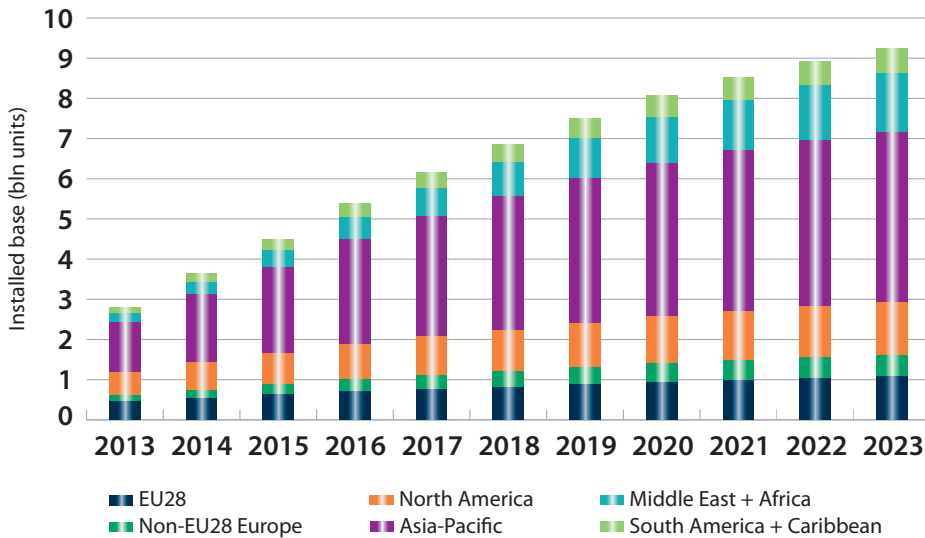
Out of all the programmes and applications available on your smartphone, GNSS continues to be the main source of location information outdoors. According to the report, 70% of all mobile phones worldwide will have GNSS capability by 2020, with other consumer devices set to follow.

While smartphones and tablets are the main devices supporting GNSS, many other devices, including digital cameras, portable computers, tracking devices and fitness gear, also take advantage of GNSS

applications. As a navigation application, GNSS positioning supports both pedestrian and road navigation, with route planning and turn-by-turn instructions, as well as enabling smartphone users to become map creators.

Companies can also improve productivity by using GNSS mobile workforce management and tracking solutions. As a geo marketing and advertising tool, GNSS combines consumer preferences and positioning data to provide personalised offers to potential customers and create market opportunities for retailers.

GNSS, in combination with network-based methods, is a strong safety and emergency tool as it can provide accurate emergency caller location. When integrated with entertainment devices, GNSS enables performance monitoring for sport applications, positioning and virtual information for gaming and augmented reality apps, and friend locators and shared information for social networking sites.



A trend towards multi-constellation

The trend of integrating multiple GNSS constellations into smartphone chipsets started in 2011 with the emergence of the first GPS/GLONASS devices. The high penetration of GLONASS was supported by the announcement of a 25% tax on mobile phones imported to Russia that do not have such a capability. More recently, smartphones employing the European Galileo system and the Chinese BeiDou have also entered the market.

Multi-constellation GNSS chipsets are implemented in high-end devices. In 2014, there were 3.1 billion GNSS enabled handsets and there will be an estimated 5.2 billion in 2017. The proliferation of wearable devices will further accelerate this trend. It is expected that more than 14 million unit shipments of these devices will occur by 2023.

More than 60% of all available receivers now support, at minimum, two constellations, with Galileo support present in almost 40% of receivers. More than 20% support all four constellations – showing that multi-constellation is fast becoming a standard feature in GNSS user equipment.

An addiction to apps

On average, users download about 70 apps per device; downloads of apps that rely on positioning data will hit 7.5 billion by 2019. In addition, mobile operators and application developers are showing a growing interest in using location data as an enabler for numerous enterprise, consumer and public safety services. Location data can support various forms of

fraud management and secure authentication services. Operators can also leverage location data for advertising and analytic applications.

Creating jobs

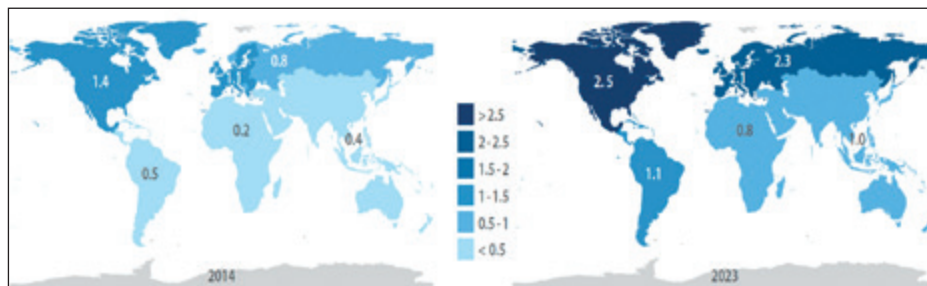
Of course, smartphone and app users aren't the only ones who benefit from GNSS location services. Data volume growth also means job growth. In Europe, the GNSS market supports more than 50,000 jobs in the downstream industry, along with 3,000 in the upstream. In addition, 6% of European GDP depends on GNSS. As the GNSS market is expected to grow by 8.3% per year until 2019, these figures can only increase.

European players in the location-based services market are strong in applications development. In 2013, the European "App Economy" generated €17.5 billion in revenue and employed 1.8 million people. By 2018, it is forecaste to contribute €63 billion to the EU economy and employ 4.8 million people.

In addition, EU policy measures on roaming tariffs are fostering the usage of smartphones and apps beyond national borders. Price reductions of more than 80% since 2007 resulted in a 630% increase in the roaming market.

An unprecedented opportunity

Overall, GNSS presents an unprecedented business opportunity for Europe. With the volume of global data doubling every two years, we are living in exciting times – and as part of this reality, location information matters now more than ever.



GNSS devices per capita: 2014 and 2013

GNSS MARKET REPORT

ISSUE 4

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GNSS PRESENTS AN UNPRECEDENTED BUSINESS OPPORTUNITY FOR EUROPE

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