



European  
**G**lobal Navigation  
**S**atellite Systems  
**A**gency

# **GNSS application market opportunities**

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Ninth Meeting of the International Committee on GNSS – Prague 10 November 2014

# Agenda



Opportunities



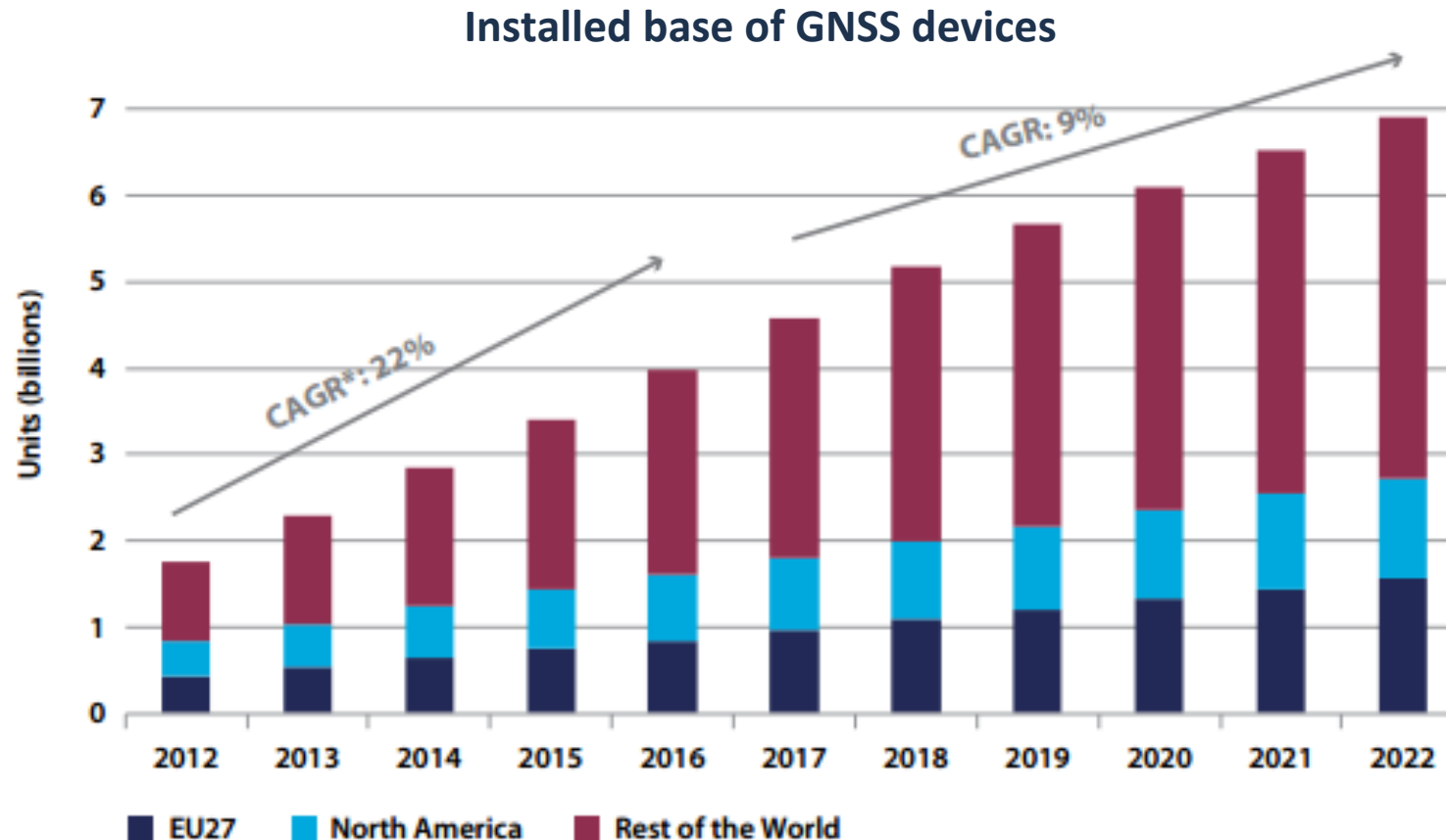
Our mission



Market development

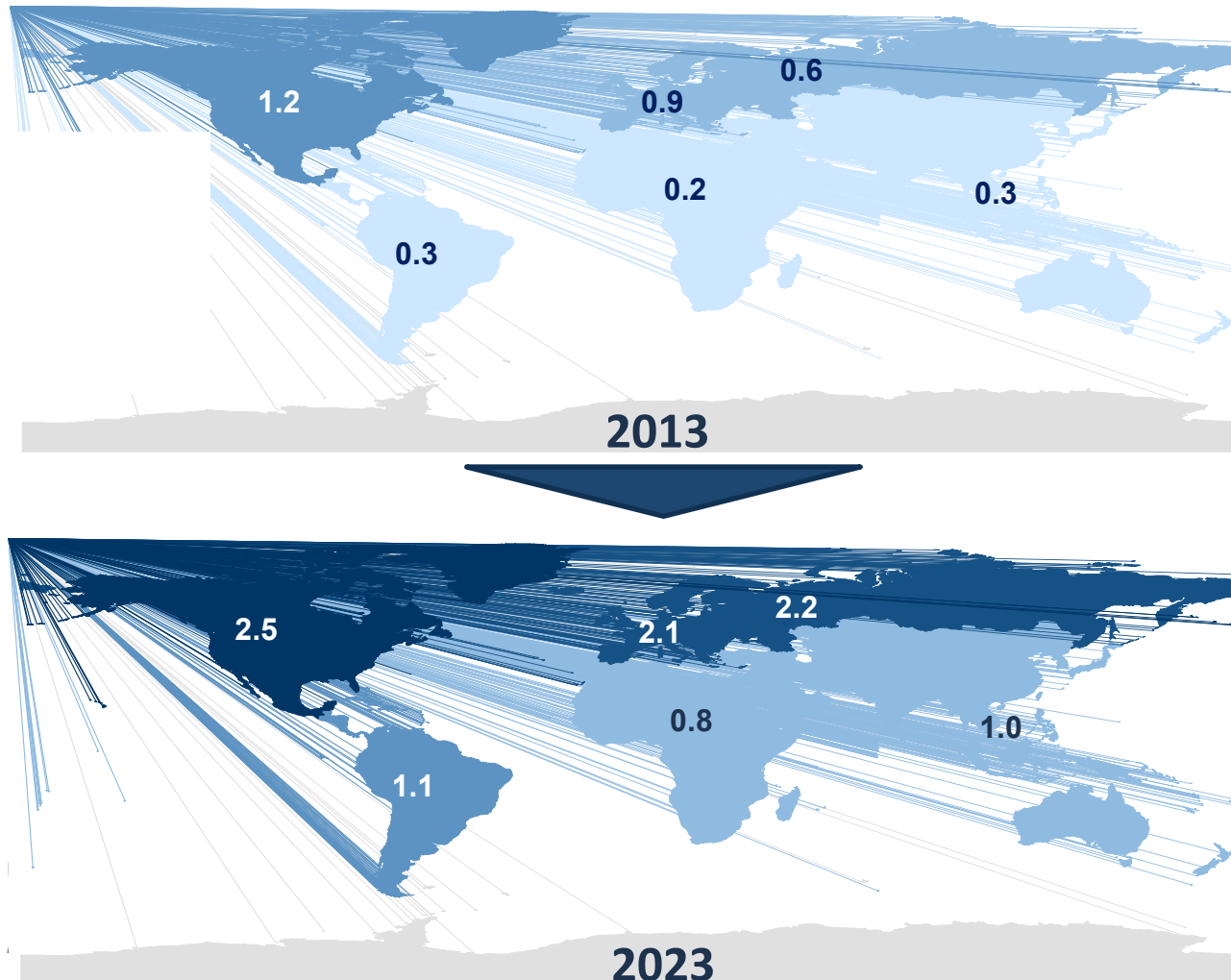


# A 7 bln GNSS devices market by 2022

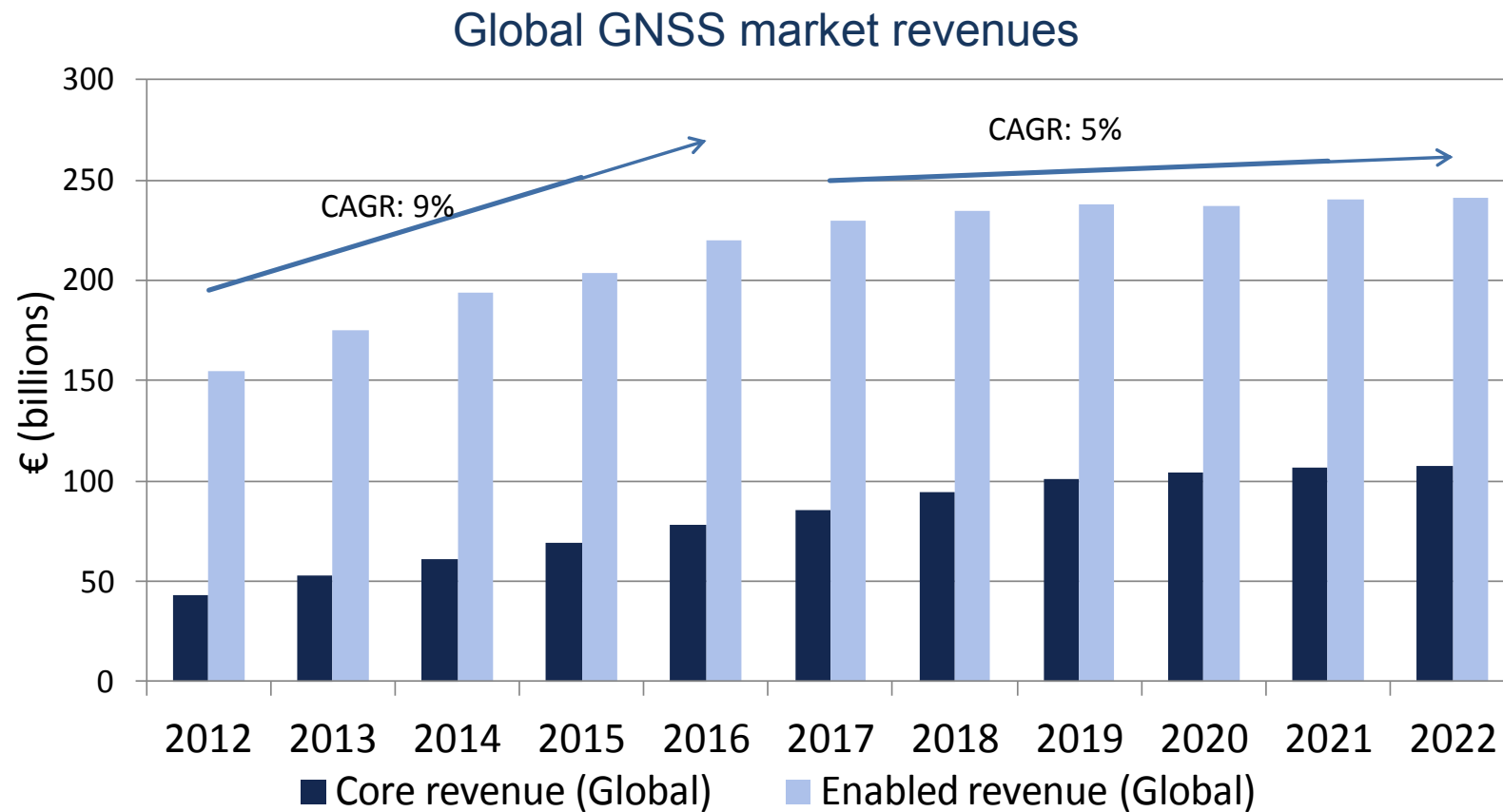


# Global market expected to grow everywhere...

GNSS devices per capita



# ...offering business opportunities to the GNSS industry



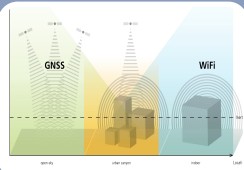
# Main overall market growth drivers



Increasing penetration of GNSS in different platforms and devices



More devices per person



More intensive use of GNSS devices



Disruptive new applications



Integration of GNSS with other technologies and sensors

# Innovative mass market solutions

Secure mobile payments



Indoor positioning



Smart cities



Augmented reality



Wearable devices



Autonomous car



# Growing specialised applications

## Environmental monitoring



## Space applications



## Network synchronization



## Crisis management





# Mass Market Drivers



## Road

- Increasing demand for telematics equipment, serving as a platform for innovative applications
- PNDs are becoming redundant with increasing use of smartphones and better affordability of In-Vehicle Systems (IVS)

## Location Based Services

- Growing diversity and volume of mobile applications
- Implementation of GNSS in devices traditionally unrelated to location such as cameras, watches



# Regulated Market Drivers

- Growing interest in GNSS as a complementary technology for safety related functions
- GNSS is becoming a standard feature in non-safety applications such as passenger information

## Rail



## Maritime



- Multi-constellation GNSS receivers at the centre of the proposed IMO\* e-navigation concept
- COSPAS-SARSAT enhancing the infrastructure with GNSS to reduce reaction time in emergency response

- Increasing usage of GNSS navigation, particularly for Performance Based Navigation (PBN)
- GNSS enabled Emergency Locator Transmitters (ELTs) are also being introduced more in aviation.

## Aviation



# High Precision Market Drivers

## Agriculture



- Increased use of precision agriculture in developed countries, in larger farms and mostly for crop production
- Uptake of GNSS precision agriculture in less industrialised regions set to accelerate, supported by consolidation of farms
- Adoption of applications combining Earth observation and GNSS

- Growth in surveying depends on economic conditions with cadastral and construction applications being the largest ones
- New users in environmental and engineering disciplines, together with mapping communities, are fostering the use of geo-information

## Surveying



# Agenda



Opportunities



Our Mission



Market development





# Our mission

**To support European Union objectives and achieve the highest return on European GNSS investment, in terms of benefits to users and economic growth, by:**

- Designing and enabling services that fully respond to user needs, while continuously improving the European GNSS services and Infrastructure
- Managing the provision of quality services that ensure user satisfaction in the most cost-efficient manner
- Engaging market stakeholders to develop innovative and effective applications, value-added services and user technology
- Ensuring that European GNSS services and operations are thoroughly secure, safe and accessible



# Agenda



Opportunities



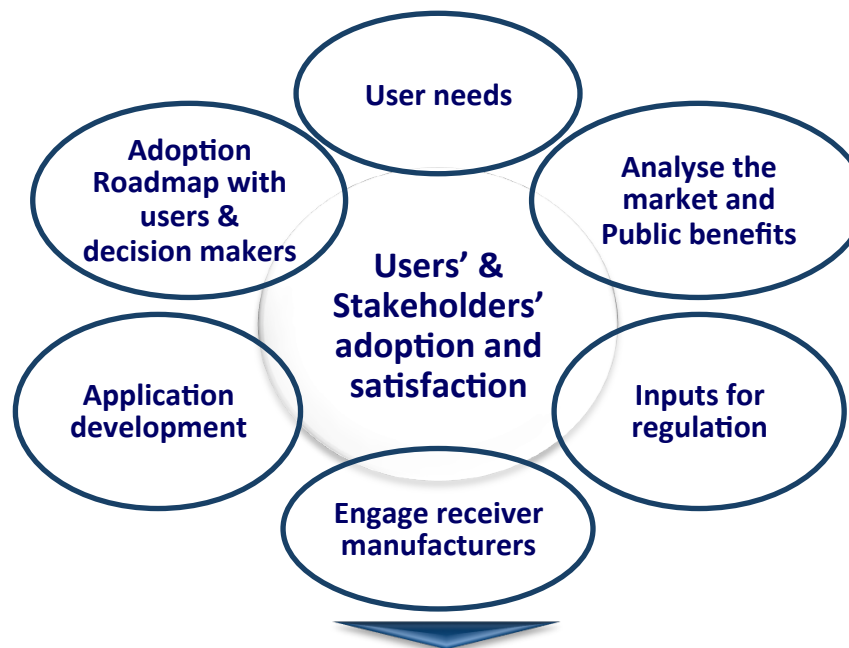
Our mission



Market development



# Fostering market adoption and user satisfaction





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**THANK YOU**

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