

**Project objective**

The project develops a parking pricing and road user charging system for urban use, using GNSS as the key enabler of the application

**Programme management**

European GNSS Agency (Funding Agency)

**Project partners**

TeleConsult Austria GmbH – lead (Austria)

Skymeter Ltd (United Kingdom)

CTAE – Aerospace Research and Technology Centre (Spain)

DKE Aerospace Swiss GmbH (Switzerland)

NavCert GmbH – Subcontractor (Germany)



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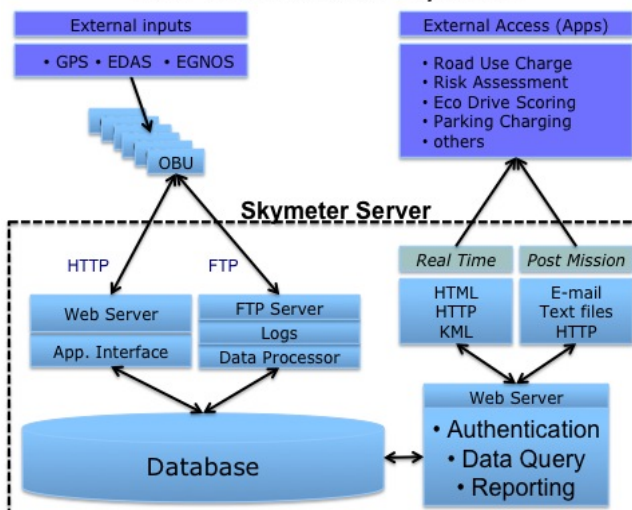
**GNSS-based metering for vehicle applications and value added road services (GNSSmeter)**

**GNSSmeter** develops a parking pricing and road user charging application system mainly for urban environment based on vehicle on-board technology that can be integrated rapidly into an existing market product presently offered by Skymeter Ltd. In the past, GPS was used as the primary positioning technology and was the key enabler of the application. Within **GNSSmeter**, the existing application / system concept is extended by integrating EGNOS/EDAS integrity and augmentation data to improve overall charging accuracy and integrity.



The solution incorporates augmentation data from EGNOS signal in space as well as EDAS data in a communication link. The metering calculation software of the OBU uses the GNSS (GPS / EGNOS) raw data forwarded by the PVT (Position, Velocity, Time) software for the patent protected metering calculation which is further used for road and parking pricing calculation. The scope of **GNSSmeter** mainly addresses the topics vehicle applications with high public utility such as road user charging and parking pricing and additionally can facilitate several vehicle value added services.

**The GNSSmeter System**



The project partner Skymeter Ltd guaranteed a customer related and straight forward development work of the new system and a rapid market penetration will follow. Skymeter already offers direct user access data from its proprietary GPS-based metering system.



The figure above shows a performance comparison of GPS stand-alone (red), GPS/EGNOS (blue), and GPS/EDAS (green) during the **GNSSmeter** road trials in Barcelona. The accuracy improvement indicated by EGNOS and EDAS can be seen clearly and thus, a significant benefit regarding metering and charging performance improvement is induced.