



Satellite Broadband for European Regions
CIP-ICT PSP Call 6

WP2 Deliverable 4

*Early report on Satellite Broadband as an option
for regions; including non-technological
roadblocks and potential for demand aggregation*

*Nima Azarmgin
Manager Institutional Relation, SES*



European Commission
Information Society and Media

www.project-saber.eu

Objectives of Deliverable 4

- *Initial review of techno-economic analysis highlighting risks of relying on terrestrial technologies only to meet the DAE targets of achieving 100% broadband coverage*
- *Initial review of satellite-based broadband service offers, capabilities (e.g. peak speed and performance), service models and tariffing relative to terrestrial broadband options with satellite industry players and other broadband providers*
- *Initial review of non-technological roadblocks and obstacles towards satellite communication deployment at both a European and wider International level.*
- *Initial review of demand aggregation schemes in Europe and Internationally.*
- *Initial review of market and policy documents such as the Guide on Broadband Investment Models, Guidelines for State Aid Rules in Deployment of Broadband Networks and ESOA's contribution to this, ESA's Broadband Mediterranean Study (BB-MED) (forthcoming) and other industry partner reports.*



1. Initial review of the techno-economic analysis



Main outcome

- Broadband penetration is far below the EU targets, mainly due the economic sustainability of existing technologies by population density at target ARPU

(Ex. UK : according to Gigaclear, it will take at least a decade to build broadband networks serving 500,000 properties. France: to cover the 5 last percents (140,000 households out of a 28 Mio total in France) would cost €7 billion, i.e. an average 5,000€ per household)

- Bandwidth aggregation strategies to merge different access technologies in order to deliver and exploit opportunities for consumption.

- Satellites will become an ever-increasing integral part of such an infrastructure mix delivering higher speed broadband services.

User Type	Speed of connection	Monthly bandwidth	Symmetry required	Latency susceptibility	ADSL	Mobile	Satellite
Large Industrial	High to Very High	Very High	Yes	Medium to High			(✓)
SME	High	High	Some	Low	(✓)		(✓)
Home Worker	Medium	Medium to High	No	Low	✓		✓
Rural	Low	Medium	No	Low	✓	✓	✓
Casual	Low	Medium	No	Low	✓	✓	✓
HD streamer	Medium to High	High	No	Low	✓		✓
Gamer	Medium	High	No	High	✓		

Dynamic competitive analysis table of satellite BB offer across SABER Regions

Content:

- A dynamic database with approximately 250 broadband retail offers (rows) and up to 10 parameters (columns) such as e.g peak speeds, included monthly data volume, retail service and CPE pricing or minimum contract period commitment.
- Countries : UK/Ireland, Germany, Austria, Switzerland, France, Italy, Poland, Romania, Slovenia, Hungary, Cyprus, Greece, Sweden, Norway and Spain
- Service providers of the satellite-based broadband solutions from main satellite
- Operators: Avanti, Eutelsat, Hispasat, Hellas-Sat and SES + resellers

Some striking outcome:

- France, Germany and also UK, present the most attractive and affordable offering
- Eutelsat and SES have the most competitive offering in the European consumer market while Avanti, Hellas-Sat and Hispasat pricing remains quite high.
- In the European market, Internet broadband via satellite starts from EUR 18 for a SLA consisting of peak speed 2 Mbit/s and 2Gbytes of monthly data volume included.
- The launch of service in Ka-band is driving the prices down while increasing the speeds fostering the affordability, the attractiveness to the end-user and the service uptake.
- Satellite remains key to provide fast and cheap broadband access to the last 5% of European households which are out of the reach of terrestrial networks.

2. Initial review of non-technological roadblocks and obstacles towards satellite broadband deployment

Main outcome and recommendations

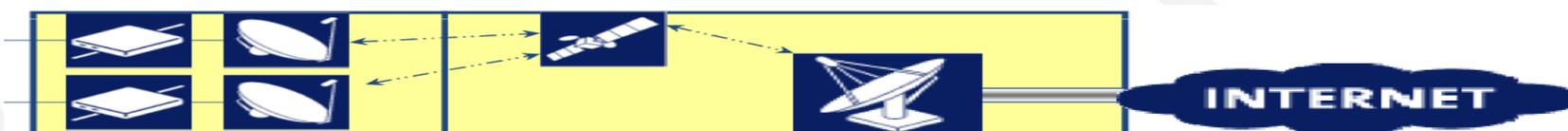
- The main obstacles to satellite broadband deployment identified in public broadband strategies are mostly originated by:
 - Lack of awareness at Public Administration level;
 - Inadequate / not technologically neutral treatment of satellites within rules and regulations, calls for tender (no level playing field with other technologies).

Satellite broadband solutions, need to be better known in order to be fully exploited
(as observed in the DAE Scoreboard 2012)

Recurrent non-technological roadblocks

Most frequent are:

- Satellite **network architecture** not taken into account in the calls for Tender / State Aid Programmes



- Claims that **Open Access** is not guaranteed



- Bundling service objectives with **unnecessary infrastructure requirements** (e.g. restriction of technical solutions to “*construction*”)
- No respect of the **Technology Neutrality** principle (e.g. award criterion based on different number of points for different technologies)

Recommended solutions

- The consistent implementation of the principle of technology neutrality (level playing field between the various technologies).
- The inclusion of a mandatory ex-ante cost-benefit analysis of the various solutions for broadband connectivity.
- Proper consideration of the specificities of the satellite network architecture (e.g. no separation between backhaul and access).
- The recognition of satellite as existing infrastructure.
- The clear eligibility of the satellite access to public funding.

3. Preliminary requirements for early-stream regions



Rational

- Some Regions express urgent need of clear rules on how to tackle the remaining digital divide via satellite broadband (i.e. in white areas).
- The different reasons highlighted by the regions explaining the remaining broadband gap are:
 - Geomorphological situation (e.g mountainous areas)
 - Low density of population
 - Sparse demand and consequently
 - Lack of investments by the private sector in terrestrial technologies because of the absence of return on investment both in the short and long term.

Issues faced by early-stream regions when planning to deploy Satellite BB

- When planning an intervention for deploying satellite broadband in their white areas regions face a number of issues:
 - Reach the largest possible number of users and handle broadband subscriptions by using public support;
 - Have clear evidence of the households that will benefit from the scheme;
 - Support satellite broadband with public funds in the framework of national broadband policies and state aids;
 - Deal with complex administrative procedures, somehow maladjusted to the provision of satellite broadband;
 - Identify and encourage domestic consumers in remote areas to apply for grants and to deal with the administration of state aid

4. Initial review of demand aggregation schemes in Europe and Internationally



Demand aggregation in a nutshell

- Demand Aggregation : Public strategy which consists of pooling the demand for telecommunications services in a region and/or a specific sector.
- Main stakes : achieve alignment of central and local policymakers and business demand for high-speed broadband services.
- Advantages of demand aggregation when applicable:
 - DA creates a consistent market from a sparse demand
 - DA allows public funding reductions
 - DA makes a more attractive market for investors and improve broadband deployment into rural areas

Examples of demand aggregation for satellite BB can be found in Australia, Northern America and will be further elaborated in **WP3**

Demand Aggregation and Satellite Broadband in the EU

-ESA-funded BB-Med project (a possible demand aggregation opportunity):

➤ *“The more that demand can be seeded and increased through support actions such as [...] aggregating demand, [...], the lower the central subsidies will be needed to boost coverage and take-up”.*

-EU broadband market specific features:

➤ *No centralized fund for Broadband that regions could use (unlike the USA or Australia), and the budget cuts of the CEF don't improve this situation;*

➤ *The identification of unconnected areas and Broadband technology choice rely on Member States;*

➤ *No central Authority managing satellite broadband measures e.g. deployment in Europe (unlike the USA or Australia) to fight against the Digital Divide;*

➤ *The market is likely not to be sufficient to reach significant economies of scale thanks to demand aggregation.*

-Solutions aggregated at a EU level to be implemented at a national or regional level

+

-Respect of the value chain:

➤ *Satellites are Pan-European infrastructures which are operated by European operators*

➤ *Ground segment is implemented at a local level by BB satellite resellers/service providers.*

Thank you ...

*... for your active participation
during the WS and your
valuable comments to the
deliverables !*

