

Policy Paper

Cable Europe Position Paper on IP connectivity needs and broadband targets beyond 2020

22 September 2015

Cable Europe welcomes the Commission's efforts to facilitate broadband connectivity in EU along the line of the Digital Agenda targets. These efforts should be made to support any technology capable of delivering high speed broadband be it wireline or wireless.

Cable Europe is convinced that broadband targets set by 2020 are ambitious, though proportionate and achievable. While demand and actual speeds offered will exceed those targets in many areas due to market driven developments anyway, no further binding targets are needed beyond 2020. The real challenge will be to develop broadband demand from both the public and private sectors. It is the attractiveness and availability of the services using a broadband connection that will be key for future broadband connectivity in Europe. Networks development will follow, with cable at the forefront.

INVESTMENT IN HIGH-SPEED BROADBAND

Cable is one of several fibre based technologies that is capable of delivering ultra-fast broadband services. Over the past decade cable operators made substantial investments in modernising their networks, upgrading electronic equipment and adding more optical fibre into the coax infrastructure capable of providing very fast broadband services. Most of European cable networks are now fully upgraded to DOCSIS 3.0. This allows speeds of well above 100 Mbps download. Some of our members are offering 250Mbps and even 500Mbps. The next innovation is arriving with DOCSIS 3.1, a technology that will support speeds starting at 1Gbps (when fully implemented it will achieve 10 Gbps downstream and 2 Gbps upstream). The commercial launch of DOCSIS 3.1 modems is around the corner.

We strongly believe that fibre-based technologies like Hybrid-Fibre-Coax networks (cable), Fibre-copper networks (FTTC), fibre to the home (FTTH), mobile and satellite all have a role to play in furnishing Europe with competing broadband infrastructures in Europe.

Moreover, the question of investment in Europe, particularly in the field of technology and the needed infrastructures, comes up on a regular basis. **Where businesses see future value, they will invest as a means of competing with other providers.** One can be sure that **competition increases the level and performance of connection gradually.** Where businesses do not see a commercial incentive for investment on a standalone basis, public support can, in the appropriate circumstances, be deployed as a remedy to ensure that crucial infrastructures are rolled out across Europe as uniformly as possible. When public

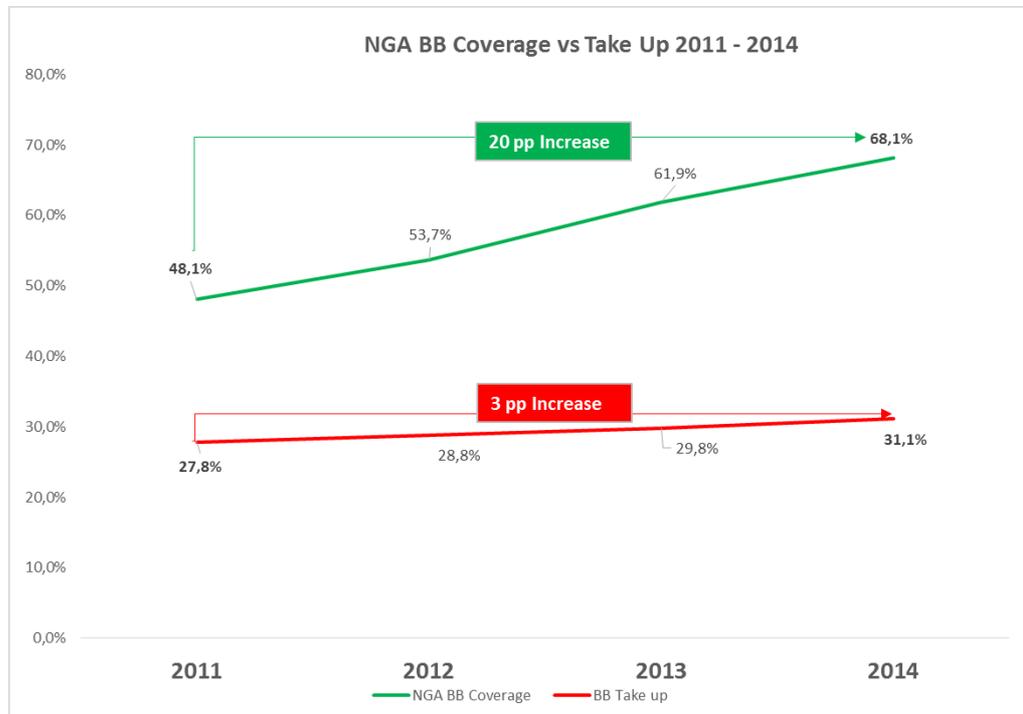


money is allocated to broadband infrastructures it is essential that those infrastructures (i) are in areas where even in a longer horizon no sufficient commercial initiative could be expected and (ii) are fully sustainable for ultra-fast broadband in the future without requiring again a new round of public funding.

BROADBAND TARGETS BY 2020 AND BEYOND

Cable Europe believes that the broadband objectives set by 2020 are feasible and still the right ones. For coverage, the **target is sufficiently sound in order to stay ahead of market demand** without being unachievable. Cable Europe members have already met this target, with speeds of at least 30 Mbit/s available across their entire footprint. The number of households upgraded in 2020 to at least 30 Mbps is estimated at 118 million (58% of total EU households). The number of households upgraded to at least 100 Mbps is estimated at 112 million (55% of total EU households)¹. In the UK, for example, Virgin Media is expanding its network to reach 60% of predominantly urban or suburban areas and there are also plans to double their current top speeds of 152Mbps.

According to the Digital Agenda Scoreboard² key indicators published by the European Commission in June 2015, the overall NGA coverage also shows that the objectives are achievable and they are on good track. However, the take-up rate is advancing at a very slow pace:



Source: Digital Agenda Scoreboard key indicators

¹ Solon, *Broadband on Demand – Cable's 2020 Vision* - 2010

² <http://ec.europa.eu/digital-agenda/en/digital-agenda-scoreboard>



Setting additional binding targets beyond 2020 will be unnecessary though as the networks' investments and developments will be made according to the competitive demand. It is on this demand that efforts should be put. Moreover, setting meaningless high-speed targets and/or coverage requirements may divert the attention from the development of new innovative digital services which should be the primary driver for the take-up of high speed services.

Some members of the European Parliament believe the coverage targets should be more aggressive i.e. 1Gbps. We do not share this belief, since this would divert attention from the real issues at stake, namely getting broadband to all European households and businesses and animating demand for high broadband speeds. Some stakeholders also argue that the targets should have set coverage levels for "up- and download" symmetric speeds. There is *no evidence* that the market needs full symmetry of speeds (except maybe some specific clients /B2B connections). In any event, the notion of symmetry is slightly misleading. The key objective should be to ensure that end users have sufficient up and download speeds to satisfy their needs – that does not necessarily mean that speeds in each direction should be equal. We have conducted a research on this matter with Dialogic/TU Eindhoven in 2014³.

It is clear from the Digital Agenda Scoreboard that - **for the coverage target** - the main challenge is reaching out to the so-called white areas. There is potentially scope for commercial deployments to play a role in providing coverage to these areas, if barriers to private investment such as administrative restrictions/bureaucracy and regulatory uncertainty are addressed. In this case, we believe that **both fixed and wireless broadband technology have a valid role to play and that public intervention should not distort the optimal mix of technologies**. Where it is proven that the private investment case will not be sustainable, the State Aid Guidelines and the GBER will support public initiatives in these still and for the future white areas.

For take up, the largest uncertainty is around the **level of demand** and Member States are struggling for the set take-up target to be achieved by 2020. Cable operators have laid the foundation for this target with speeds of at least 100Mbit/s already available. Further, according to Solon, European cable operators expect to deliver, on average, over 150Mbit/s to new customers in 2016 (primarily marketed bandwidth) – a higher speed than that offered by most competing infrastructures. Over half of the existing customer base in 2016 is forecasted to subscribe to over 50Mbit/s, with 28% subscribing to speeds above 100Mbit/s. However, it is the attractiveness and availability of the services using a broadband connection that will of course be key now and beyond 2020. Today, a family does only need 80 Mbps speed network to allow Netflix access on 4 different screens! Would the arrival of new services like connected cars and the whole internet of things change the way Europe is connected? Yes, take-up level will probably rise because the demand level will be higher. One should trust the market will follow these developments closely without having broadband targets set.

³ Dialogic/TU Eindhoven, *Fast Forward : How the speed of the Internet will develop between now and 2020*, Commissioned by NLkabel & Cable Europe, June 2014



The Digital Agenda and the Digital Single Market strategy are constructed with this in mind and should focus on initiatives that drive demand from both the public and private sector.

POLICY ISSUES

Given the above, Cable Europe would list the following as key policy issues for Europe:

- 1. Maintain / confirm the current broadband coverage and penetration targets - Avoid setting new and disproportionate targets.**
- 2. Encourage broadband demand take up** from both public and private sectors. This will best pave the way for future gigabit services and the digital economy beyond 2020.
- 3. Encourage that a mix of technology** - both fixed and wireless - are rolled out to connect European citizens to High Speed Broadband.
- 4. Focus public money strictly to underserved areas only.** Make sure sufficient public consultation is held in advance to avoid crowding out private investments. Funding should only be possible as long as it does not result in overbuild of existing broadband networks and benefits networks that can be upgraded to ultra fast broadband without additional public funding in the future.
- 5. Remove barriers to private investment** in broadband networks such as bureaucratic planning and wayleave rules, disproportionate permit schemes and burdensome local authority street works restrictions.



ANNEX: Dialogic/TU Eindhoven, *Fast Forward : How the speed of the Internet will develop between now and 2020*, Commissioned by NLkabel & Cable Europe, June 2014

Dutch consultancy Dialogic and the Eindhoven University of Technology were commissioned by NLkabel and Cable Europe to carry out a study on how upload and download bandwidth will change between now and 2020.

The method developed in this study was applied to data on residential subscriptions in Western Europe. It predicted the compound annual growth rate (CAGR) of upstream and downstream traffic demand to be 44% and 40% respectively. While demand in 2013 was on average 15.3 Mbit/s downstream and 1.6 Mbit/s upstream, in 2020 demand is expected to increase to 165.4 Mbit/s downstream and 20.1 Mbit/s upstream. Large differences can be found between the types of services and the user groups. Power users, constituting 2% of the total users, will require 1,155 Mbit/s downstream and 315 Mbit/s upstream by 2020, whereas the laggards will only need 6.6 Mbit/s downstream and 0.8 Mbit/s upstream by that time.

Unsurprisingly, online video is a major driver of downstream traffic growth. Besides online video, traffic for consultative web browsing, overhead and peer-to-peer file sharing are also expected to require considerable traffic. The total downstream demand for 2020 is estimated at almost 8,000 Mbyte per day.

Regarding the upstream demand, the model shows that in addition to future revolutionary services, overhead traffic and peer-to-peer file sharing will continue to comprise the majority of the upload traffic. The estimated demand for daily upstream traffic in 2020 will average at just over 3,000 Mbyte per day.

It is important to recognize that residential broadband speed demand has a very diverse character. The amount of bandwidth required depends on the volume of the traffic to be transferred on a given day and the amount of time in which the majority of the transfers takes place. ISPs always provision more bandwidth to end-users than the minimum bandwidth required to transfer the daily traffic volume in a day.



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