

Business communications, economic growth and the competitive challenge

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Management Summary

Since the liberalisation of electronic communications in Europe in the 1990s significant attention has been given to the impact of increased competition on the services and prices available to consumers and SMEs. Less focus has been made of the role that communications play in driving efficiency within larger businesses and the effects this may have on European productivity.

Whilst only approximately 2% of companies within the EU could be described as multi-site or multi-national corporations (MSC/MNC), they form a major component of the European economy, generating 60 million jobs, representing nearly half of business turnover and more than 50% of “value added” across the EU. Europe’s corporations also have an important role in maintaining Europe’s position within the global economy. UNCTAD, a division of the United Nations, found in a 2010 report that 46% of the world’s largest companies are based within the EU27 region.

Overview of MSC/MNC (2010)

Category	Total EU27	MSC/MNC	% of total
Number of enterprises	21.4 m	360,000	2%
Persons employed	138.9 m	60.0 m	43%
Turnover	21,600 bn Euro	11,500 bn Euro	53%
Value added	6,315 bn Euro	3,200 bn Euro	51%

Source: Eurostat, WIK calculations. Figures are for non-financial business economy.

Electronic communications are integral to the performance of companies of all sizes, and perform a key role in all aspects of the supply chain from internal communications and liaisons with suppliers through to interactions with consumers. Cloud computing and the Internet of things are just two examples of technological developments relying on electronic communications which could change the way businesses function. Communications is also important in realising the potential benefits of the single market.

Recent figures from the European Commission¹ suggest that total revenues for electronic communications in Europe were €327bn in 2010. Estimates based on data from EITO, indicate that communications services supplied to all kinds of businesses reached about €169 bn – more than 50% of total communications revenues. Out of this, the value of products and services supplied to MSC/MNC in 2010 is estimated at around €90 bn.

Although business communications to MSC/MNC make up a large part of the telecommunications market, it has commonly been assumed by policy-makers and regulators that larger business are well-informed and exert significant buyer power

¹ Digital Agenda scoreboard 2012

when purchasing communications services. As a result, relatively few studies have been conducted on large businesses' experience of communications services. However, the results of a 2009 end-user survey by the European Regulators Group² and an October 2011 survey of Spanish corporations by NRA CMT³ suggest that competition in this area could be less well-developed than might be expected.

In this report, conducted on behalf of the International Telecommunications User Group (INTUG) and the European Competitive Telecommunications Association (ECTA), an end-user survey and expert interviews with users and suppliers have been carried out together with desk research on the status of competition and regulation to better understand the demand and supply-side aspects of the business communications market and to assess competition problems and potential barriers to achieving a single market for communications to large corporations.

112 multi-site and multi-national businesses whose operations cover all countries of the EU27 zone responded to a survey, carried out with the support of INTUG. Key findings are that:

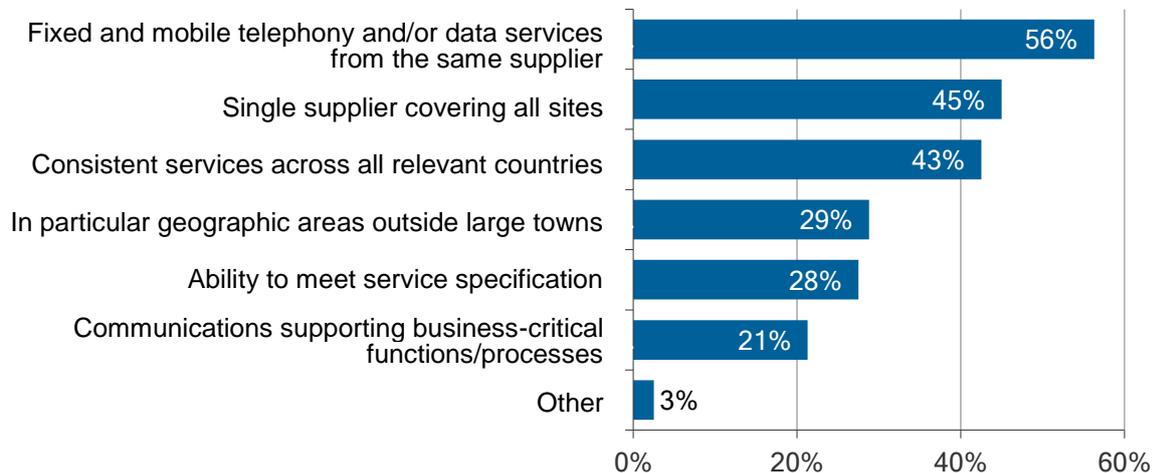
- Large companies are primarily interested in communications “services” rather than the technological elements which underpin them. Prime amongst these are Internet and mobile services. Companies seek service reliability, bandwidth and technical resilience, along with security and satisfying service level agreements.
- Business Communications Services (BCS) usually constitute a bundle of different products and solutions, ideally tailor-made for the company concerned.
- Business service users show an overall preference (69% of respondents) for using a “single supplier” covering a range of services to all relevant sites rather than separate suppliers for each site and/or service. Convenience was cited by 71% of respondents as an important consideration favouring a single supplier.
- Where companies preferred to use multiple suppliers, the preference was primarily due to value for money and need for resilience, or a preference for specialist suppliers for different services. Only 5% of respondents stated that they actively preferred to source contracts on a country-by-country rather than on a multi-national basis.
- End-users' choice of suppliers is often limited. Fewer than one in five respondents found that several suppliers were generally able to make a suitable offer. In 46% of cases, respondents claimed that it was rare to have more than 1 or 2 suppliers able to make a suitable offer.
- The most commonly cited problem by business end-users was inability to purchase fixed and mobile services from the same supplier. More than 40% of users also cited problems in finding a supplier that could cover all relevant sites or provide consistent services across all countries.

² ERG (2009).

³ CMT (2011).

- In practice, possibly due to difficulties in sourcing effective services from a single supplier (only 53% of those preferring a single supplier found that this was normally a practical option), many end-users used several suppliers in order to meet their requirements despite their preference for a single supplier.
- The complexity and tailored nature of business services means that switching provider can be costly and problematic. The technology officers interviewed suggested that there is a tendency to remain with their current supplier, unless a significant price differential is offered.

Difficulties in obtaining multiple fit-for-purpose offers covering any of the following aspects



Source: WIK Consult.

Interviews with four cross-border communications providers identified as major players in the report by Gartner on the “magic quadrant” of business communications service providers⁴ and two communications providers offering services to businesses on a nationwide basis, reveal the following characteristics about the supply of services to major businesses.

- The primary focus of business service provision is typically in the “value added” segment of the value chain. However, the availability of infrastructure to access sites is a key requirement in enabling service delivery and a major cost component in service delivery – constituting up to 40-50% of revenues.
- Whilst there are numerous operators offering services to multi-site and multi-national businesses, their geographic reach and service capabilities do not

⁴ Cf. Gartner (2012).

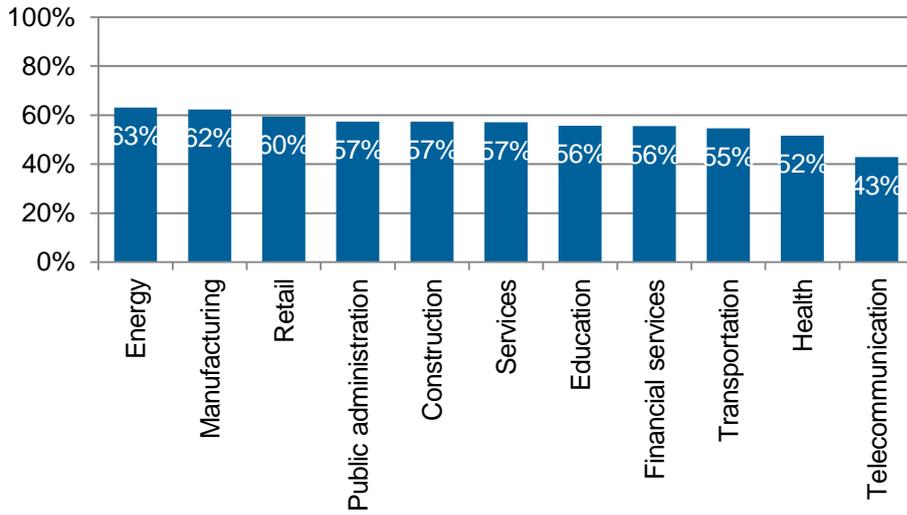
always overlap. This is also reflected in specific strengths and weaknesses highlighted in the Gartner report.

- Due to the dispersed nature of many of the sites – requiring coverage nationwide and cross-border, specialist suppliers of business communications are only able to use their own infrastructure in a minority of cases. In countries where service providers did not benefit from vertical integration, more than 90% of business access lines were leased from third parties, with the majority of these (75%+) coming from national incumbents, although there was some geographic variation.
- The primary access methods used by the interviewed companies to reach customers are: leased lines, xDSL bitstream (wholesale broadband access) and wholesale Ethernet services. Whilst traditional interfaces are still extensively used, demand is shifting towards more modern Ethernet interfaces. Unbundled copper and fibre loops are also used in some cases for business connections especially by companies with a nationwide focus, but their use tends to be more limited amongst specialist providers of business communications to multi-national corporations because they lack the scale in specific regions for these access methods to be viable.
- Business communications providers consider the availability and quality of wholesale access to be fragmented within the EU. A key problem is variations in regulation applied by NRAs in different jurisdictions.
- The decision of business communications providers on whether or not to bid for contracts is influenced by the proportion of sites in different areas (e.g. rural areas) or countries. The greater the proportion of sites in areas or countries where infrastructure inputs are not available on reasonable terms, the less likely they are to consider a bid viable.

Due to the fragmented nature of the retail market in which several players compete for different customers with varying requirements across Europe, it is not possible to assess specific retail market shares in the provision of cross-border business communications. However, in the few cases where national regulators have assessed retail markets for business provision in their national jurisdictions, the market shares of incumbents have been higher than might be anticipated, and often higher than market shares obtained by national incumbents in the provision of broadband services for consumers and SMEs.

A survey conducted by AMA in Germany suggests that Deutsche Telekom benefits from market shares of above 50% in every business user segment except telecommunications. CMT, the Spanish NRA, made similar findings concerning the market position of Telefónica. As shown in the chart below, Telefónica's market power was found to increase for companies with a larger number of sites.

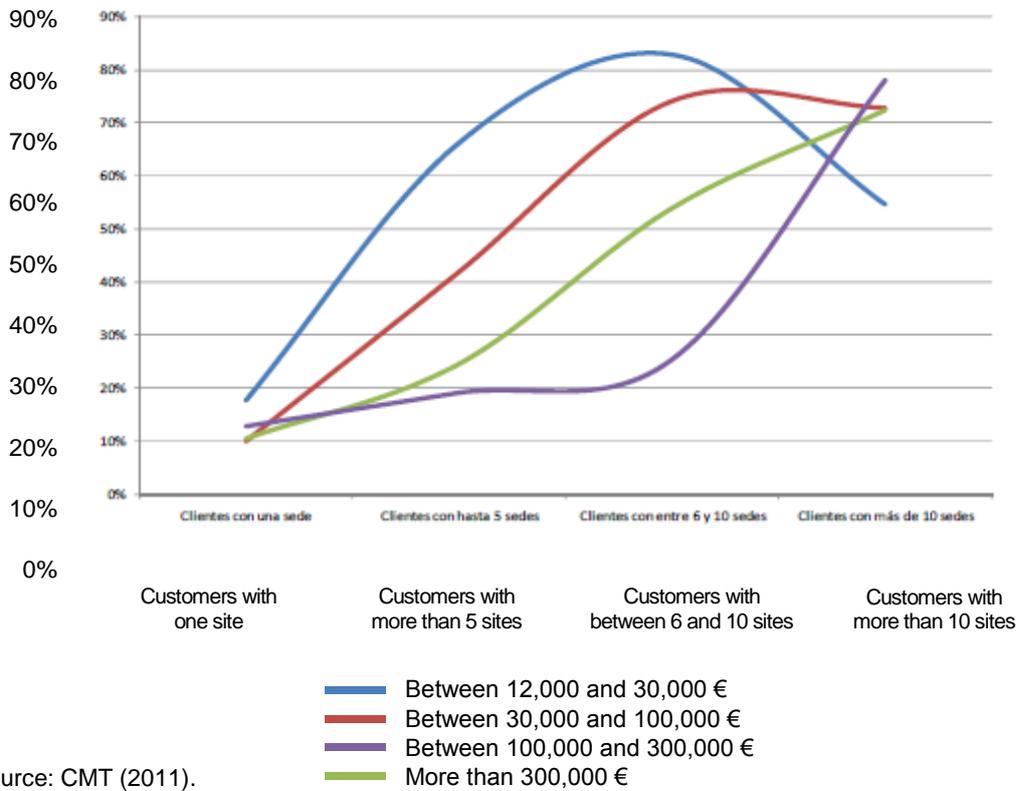
Market share of Deutsche Telekom



Source: AMA (2012).



Telefónica's market share depending on number of customer sites and company size



Source: CMT (2011).

In a recent study by OPTA⁵, KPN was found to have 55-60% of the retail market for “business network services”.

Whilst not all NRAs have conducted a segmented analysis, and mobile business services are not covered in detail by this report, it appears that national incumbents may also have a strong position in the provision of mobile services to businesses. In Norway, an obligation on the dominant mobile operator to provide MVNO services was specifically justified in part on the basis of its relative strength in business services.

High retail market shares in business communications are supported by high market shares in the underlying inputs used to serve businesses. In most countries incumbents have been found to have >70% market share in terminating segments of leased lines (market 6 in the EC Recommendation on Relevant markets).

Whilst regulation is typically mandated on terminating segments of leased lines, there are significant variations in the scope of the defined markets and in the remedies applied in different countries. In several countries, regulation is limited to lines below a given speed, for example 155Mbit/s in Germany and Austria and 2Mbit/s in Romania, Czech Republic and Hungary, whilst elsewhere speed caps are very high (1Gbit/s in UK) or not present. In Austria, the market was also geographically segmented such that 12 municipalities were excluded from the scope of regulation, whilst elsewhere geographic segmentation is limited (e.g. in the UK to certain districts of London) or not present. Cost-orientation is applied in most cases, but in France price controls are not applicable above 10Mbit/s, whilst in other countries such as Spain and Portugal wholesale Ethernet services (WES) are not subject to cost-orientation. As traffic is migrating from traditional interfaces towards wholesale Ethernet services, the lack of cost-orientation on WES is likely to have an increasing impact on competition in business communications.

There is also a mixed picture in relation to wholesale broadband access, typically mandated in the context of market 5 of the EC Recommendation on relevant markets. When analysing market definitions and assessing significant market power, most regulators do not differentiate in the market analysis between WBA used for residential and business purposes. As a result, some NRAs such as those in the UK, Portugal and Poland have removed or relaxed regulation in certain regions on the basis of competitive pressure from LLU and cable. Meanwhile others, including NRAs in Austria and the Netherlands, have concluded that LLU and cable do not apply significant competitive pressure in the business segment and have therefore distinguished the business provision of WBA from residential provision. Some, but not all countries have

⁵ Cf. consultations by OPTA regarding FTTO (<http://www.opta.nl/nl/actueel/alle-publicaties/publicatie/?id=3650>) and WBA/leased lines (<http://www.opta.nl/nl/actueel/alle-publicaties/publicatie/?id=3651>)

applied specific business grade SLAs and KPIs. Several countries have excluded FTTC and/or FTTH from the scope of the market definition or remedies for wholesale broadband access whilst in Spain, speeds above 30Mbit/s are not regulated. As NGA networks are rolled out by SMP operators, this exclusion may disproportionately affect businesses which may demand the higher capacities offered via FTTx.

A summary of regulatory approaches to key wholesale products used for business service provision based on summaries provided by the European Commission in the context of the article 7 regulatory review process is shown below.

Market 5: wholesale broadband access

Country	Bitstream nationwide?	FTTx included?
AT	Yes - separate business market	Excludes FTTH
BE	Yes	Excludes FTTH
CZ	Yes - proposal for segmentation and deregulation on basis of cable + Wifi opposed by Cion	Proposal to limit or exclude FTTH remedies
DE	Yes in principle	Yes
DK	Yes	Yes
ES	Yes for ATM and IP technology, no for Ethernet technology.	Yes, but >30Mbit/s remedies excluded
FR	Yes	Excludes FTTH
HU	Yes	Yes
IE	Yes where rolled out	Yes FTTC (Curb/Cabinet) launch due Feb 2013
IT	Yes, for BS on copper; for BS on fibre, availability depends on TI NGA deployment plan	Yes, but TI RO for bitstream on fibre is still under evaluation by NRA
NL	Yes (business grade – distinct from low quality WBA)	Excludes FTTH
PL	Yes, but remedies geographically segmented (no cost orientation in major cities)	Yes (lack of FTTH cost-orientation challenged by Commission)
PT	Geographically segmented	Existing – no detailed NGA remedies. Proposal – yes, except for excluded areas
RO	No	No
SE	Yes (in theory)	Yes
UK	Markets geographically segmented (no SMP in significant proportion)	Yes

Source: WIK-Consult research.

Market 6: terminating segments of leased lines/wholesale Ethernet access

Country	Regulated PPCs available?	Cost orientation?
AT	Geographically segmented with major cities excluded and no regulation >155Mbit/s	
BE	Yes, awaiting BIPT decision following consultation	Yes
CZ	No regulation >2Mbit/s (3 criteria test not met)	No price control
DE	Yes, but no regulation >155Mbit/s	Yes
DK	Yes	Copper <2Mbit/s but not above
ES	Yes (but no lines >70km traditional interfaces or >35km Ethernet interfaces)	Copper traditional, retail minus for Ethernet
FR	Yes	No cost orientation >10Mbit/s
HU	No regulation >2Mbit/s (3 criteria test not met)	No price control
IE	Yes, but no regulation >155Mbit/s for trunk between certain listed cities.	Yes
IT	Terminating segment of leased lines are regulated (but lines to mobile operators excluded)	Yes, price cap (less stringent for WES and >155Mbit/s)
NL	Yes	Yes
PL	Yes	Yes
PT	Yes	Yes, but not WES (retail minus)
RO	No regulation >2Mbit/s (3 criteria test not met)	No
SE	Yes (proposed up to 30Mbit/s, DWDM unregulated)	Yes (where regulation applied)
UK	Yes (limited geographic segmentation), no remedies >1Gbit/s	Yes

Source: WIK-Consult research.

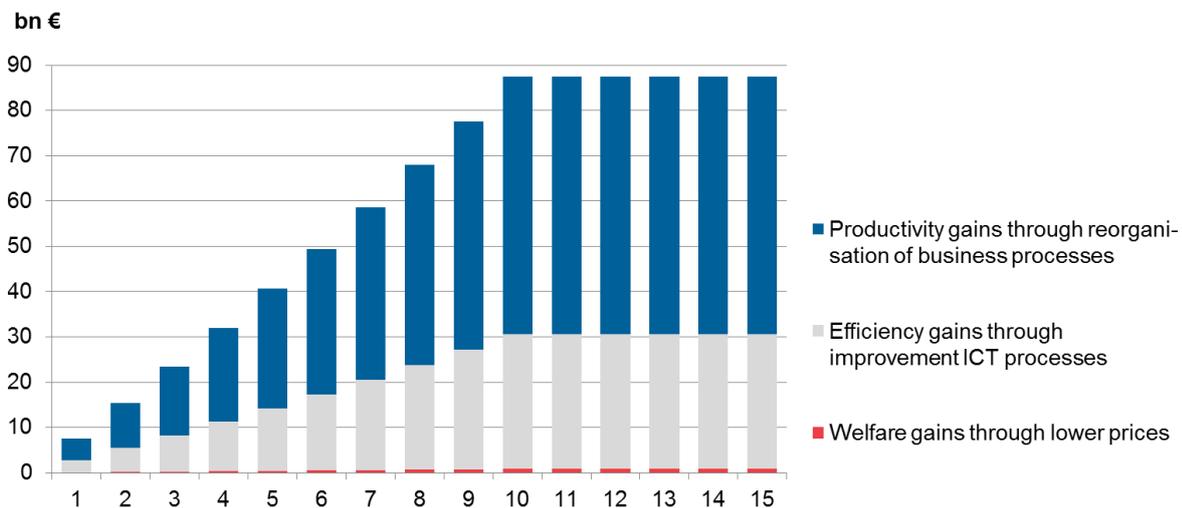
The results of the end-user survey and interviews with specialist suppliers of BCS provide compelling evidence that a cross-border retail market may exist for provision of bespoke communications to larger businesses. It seems that a significant proportion of business end-users (at least those characterised as MNC) may purchase services on a multi-national basis. Supply by specialised providers of business communications is similarly cross-border. Moreover, whilst some companies do prefer to buy different communications from different providers, only 5% of end-users using multiple suppliers said that they actively preferred sourcing services on a country-by-country basis rather than multi-nationally. Switching to individual products on a site by site or even national basis would not seem to be an attractive option to most business users and switching even to a single alternative provider is perceived as incurring considerable costs.

Interviews with business service providers suggest that their derived wholesale demand is similarly cross-border. However, perhaps due to the fragmented nature of ownership of national infrastructure and different approaches taken by national regulators, supply at wholesale level tends to be national.

Achieving consistent and effective wholesale remedies for business communications across Europe could enable the emergence of a truly single market for business communications at the retail level in which providers could expand cross-border and compete with each other on an equivalent basis, independent of their ownership of infrastructure in particular countries. Attention to regulatory requirements in the business segment could have an even greater effect than those in residential markets because competition in business services is focused on “value added” and innovation, because business markets do not benefit from competitive constraints from cable and mobile, and also because – unlike consumer markets - inadequacies in one country have a knock-on effect in the provision of retail business communications services more widely.

Moreover, gains could be felt not only within the businesses concerned, but in the increased productivity resulting from improved internal processes. In order to assess the potential effect, WIK-Consult has quantified economic benefits following a modelling approach developed by Indepen in 2008.

Total economic benefits (not discounted) over a 15 year period



Source: WIK Consult.

Based on an updated evaluation and new research the total economic benefits due to effective ex ante regulation for wholesale services relevant to business communications could be quantified to NPVs of 112.49 bn Euro over the first five years, 413.98 bn Euro

over the first 10 years and 774.45 bn Euro over the complete observation period of 15 years, respectively. 65% of these benefits derive from productivity gains through reorganisation of business processes, another 34% are caused by efficiency gains through improved ICT processes and the remaining 1% comes from welfare gains through lower prices for BCS.

Recommendations

There has been a tendency for policy-makers to focus attention and set targets relating to residential communications services. In view of the absolute size and economic significance of electronic communications provided to businesses, policy-makers at EU and national level should revise this approach and also acknowledge the importance of achieving competitive markets for communications in the business segment. A key requirement in delivering this objective would be the consistent treatment of wholesale access for business service provision.

The current EU Framework for electronic communications makes provision in article 15(4) Framework Directive for the European Commission to adopt a Decision identifying trans-national markets which may be susceptible to ex ante regulation. In accordance with article 16 (5) Framework Directive, relevant NRAs should jointly analyse such markets and decide on the imposition of any regulatory obligations. In principle, such a provision would seem to be relevant to the problem identified in this case. However, whilst the retail market for bespoke communications to MSC/MNC may be characterised as cross-border, this market is not susceptible to ex ante regulation in itself, because regulation of upstream wholesale markets would be likely to render the market effectively competitive.

Meanwhile, due to the fragmented nature of provision of wholesale inputs for business services which results in different suppliers in different countries (although the competitive conditions are similar), it appears that the wholesale market/s which would be susceptible to ex ante regulation, could not be characterised as cross-border. As a result article 15(4)FWD appears not be applicable based on the current EU communication framework.

During the next revision of the Framework, one option could be for the European Commission to make proposals to amend the provisions such that they could issue a Decision requiring a co-ordinated approach amongst NRAs to market definitions and remedies in any case where the relevant retail market is cross-border and consistent application of wholesale remedies on SMP operators is needed to achieve effective competition. This would seem to be the ideal long-term solution in addressing national fragmentation which impacts the delivery of pan-European services.

In the meantime, the European Commission could consider interim solutions. These could include:

- **Relevant Market Recommendation:** In accompanying guidance to the review of the relevant market recommendation, the European Commission could usefully describe the retail market for bespoke business communications to larger businesses and identify this as a cross-border market. It could also acknowledge that demand for business service inputs may be cross-border and highlight in this context, that there may be merit in identifying a common approach to defining the relevant wholesale markets and defining remedies. This common approach would need to be elaborated either through a Commission Recommendation or guidance from BEREC. The European Commission could also consider undertaking regular assessments of end-user outcomes in the cross-border retail market for business communications in order to assess the functioning of this market.
- **Regulation on business communications:** Whilst regulation should normally be applied in accordance with market analysis principles under the EU Framework for electronic communications, there are precedents in which a directly applicable Regulation has been used in order to address perceived short term gaps in the Framework (e.g. the Local Loop Unbundling Regulation) or longer term market failures which are not easily addressed through ex ante regulation or competition law (the Roaming Regulation). Business services could be characterised as a short term problem affecting the single market, and requiring resolution ahead of the review of the telecommunications framework. However, this solution would require political consensus with the European Council and Parliament.

Defining a common approach

Benchmarking of regulatory conditions shows that there are widespread variations today in the treatment of wholesale access products used for business services. Meanwhile, the end-user survey and interviews in this report together with the analysis on economic impact appear to suggest that a more harmonised market definition and remedies for business access would be beneficial in meeting the demands of large corporations.

One key aspect would be to identify a common definition for the retail market for high-end business communications (i.e. distinct from single site SMEs) which could be applicable across Europe and potentially beyond. The scope of such a market would need to be further elaborated but could involve:

- bespoke bundles of fixed voice and data,
- multi-site/multi-national provision and/or contracts of a minimum value, and
- business-grade specification for example through premium SLAs and technical requirements.

It could be further considered whether mobile forms part of this market in light of user preferences and behaviour.

Concerning wholesale markets, the following principles could be considered, based on best practice amongst EU NRAs – that the wholesale market or markets for business access should

- be technologically neutral, but sensitive to the need for technologies to meet business-grade service specifications; this would suggest markets which encompass the most modern technologies including FTTC/VDSL and FTTH and interfaces such as Ethernet, but in general exclude technologies such as wireless and cable which do not provide the requisite service levels or resilience demanded by business users when compared with xDSL/FTTx technologies;
- not be delineated as regards speed, since speeds are often a function of rapidly evolving technologies rather than implying significant differences in underlying costs;
- encompass both symmetric and asymmetric bandwidth, because end-user and supplier demand exists for both – often in combination for different sites;
- enable the provision of business services without restriction including multiple VLANs in order to foster retail innovation.

Given the transnational dimension of the retail market and the existence of cross-border demand for business wholesale services, it is important that guidance should also be provided on the geographic scope of the wholesale market/s for business access, and in particular cases in which markets may be geographically segmented. In this regard one option would be to follow the logic of the NGA Recommendation para 22⁶, adapted to the business context. This would mean that in principle business access markets should be defined on a nationwide basis, unless there are specific business-dense regions in which there are several FTTx infrastructures in place and business-grade wholesale products are supplied to meet the demands of BCS providers

Key elements of a common approach to business remedies could include:

- Non-discrimination in provision of wholesale services for business. Wholesale products including those with more modern interfaces and/or with enhanced SLAs should be launched 6 months in advance of retail launch.
- Business-grade SLAs and associated KPIs by which the fulfilment of SLAs may be measured. Penalties for failure to meet SLAs should have deterrent effect.

⁶ NGA Recommendation para 22
<http://eur-lex.europa.eu/LexUriServ/%20LexUriServ.do?uri=OJ:L:2010:251:0035:0048:EN:PDF>

- Technical characteristics of wholesale broadband access which satisfy the needs of business providers and end-users such as low contention rates or uncontended products, capability to offer multiple VPNs.
- Connection points aggregating sufficient customers to be viable for business providers covering wide geographic areas.
- Requirement to meet reasonable demand from wholesale customers for enhanced services, whether or not the SMP operator plans to offer such services at retail level.