

DIGITAL SINGLE MARKET – DIGITAL4EU

TELECOM ITALIA FIRST INPUT INTO THE DEBATE ON THE DSM STRATEGY

March 2015

Executive summary

Telecom Italia welcomes the initiative of the EU Commission and shares the view that the Digital Single Market is a priority target in order to boost innovation, growth and jobs across all sectors of the economy.

To unleash the full potential of the DSM, EU needs a new public policy which can provide the right incentives to maximize investments innovation and dynamism, at the same time better protecting consumers across the whole internet value chain.

The regulatory framework currently in place is clearly outdated and has proved to be unfit to create the best conditions for the needed high investments to flourish. It is therefore necessary to change course of action, envisaging a modern regulatory framework more focused on fostering investments and infrastructure developments than on mere price reductions.

The unsatisfactory performance of the ICT sector is also explained by market fragmentation which prevents EU industry consolidation and frustrates EU carriers from capturing the economies of scale and scope necessary to compete in the global market, bringing out more evident the need for a more favourable approach towards consolidation so as to foster the investments and therefore the competitiveness of the European industry.

Moreover a regulatory playing field is increasingly important in a market where network operators have open interconnected systems and are subject to strict consumer and data protection rules that do not equally apply to other market players (i.e. OTTs) who provide similar services. This situation contributes to a substantial value migration from European telecommunications operators to OTT players and device manufacturers which are mainly based outside Europe.

EU telecom operators, indeed, currently face a dual compliance regime (due to the coexistence of a horizontal legislation and a sector specific one), further complicated by national laws, supervision and enforcement.

Such a situation is both unfair from a business point of view and confusing for customers.

An overall assessment of both the horizontal Consumer Acquis and the Electronic Communications Regulatory Framework is therefore also required to ensure that the scope of the Consumer law will encompass all digital services, so that consumers are protected in an holistic way, while, in general, sector specific regulation should be avoided or at least maintained with a very limited scope.

Indeed, in the new converged scenario it is key that the same rules apply to all players offering functional equivalent services across the whole Internet value chain, to obtain the same level of protection and trust for consumers.

In other words, regulation should be proportionate and based on the service that is being offered, rather than on the party (Telco or OTT) offering the service.

Furthermore, consumer regulation should be in place irrespective of the funding model of the service, (money or free, *rectius* funded in exchange for customer data, which are today's Internet currency). It should also apply irrespective of the origin of the digital service providers, be they established in the EU or outside EU borders. In this regard the technology and neutral approach foreseen in the proposed GDPR should be applied also for the other horizontal regulation.

Telecom Italia agrees with the Commission that in the digital space, privacy and data security are particularly important to build trust and confidence and have a strong impact on the take up of the digital services and economy. In this field, we highlight that a forward looking regulation should properly balance the need for protection of the fundamental right to privacy and the need of not hampering innovation and big data or a data driven economy (e.g. through measures such as pseudonymisation and anonimisation, protecting data subjects' rights while enabling business to leverage the value of the data they process).

Indeed in the interest of both business and consumers, as a general principle, an even access to innovation should be granted, avoiding that only some players are free to innovate while others, due to strict regulations, miss opportunities for innovation.

Moreover, to grant the same level of protection and trust for consumers, the so called E-privacy Directive which provides specific rules for telecommunication operators but not to providers of Information Society Service should be repealed through the GDPR in order to avoid the distortions in the consumer protection persist possibly until 2020.

A strong and resilient internet is as well essential to trust and can be achieved by including in the proposed NIS Directive all critical digital Internet infrastructures and service platforms, so granting security throughout the entire Internet value chain.

In order to remove restrictions and drive innovation, the current copyright regulation needs to be updated to create harmonized rules at European level and to favour the diffusion of cross border services.

There is also a need for further modernisation and leveling of the playing field in the audiovisual Media Service market in order to guarantee fair competition amongst providers offering the same service.

1. Access and Connectivity

Completing the European digital single market is a priority target in order to boost innovation, growth and jobs across all sectors of the economy. To this end, the availability of an efficient and high quality broadband network is a fundamental precondition.

The EU has set ambitious targets through the Digital Agenda. In order to fully achieve them, however, a new set of policy measures is necessary and both private and public investment should substantially increase.

A Boston Consulting Group study¹ has estimated that there will be an investment gap between €110 billion and €170 billion euros to reach the 2020 DAE targets. Yet, the digital Agenda targets achievement could bring up to €750 billion in GDP growth and as many as 5.5 million jobs by 2020².

Moreover, Europe lags behind the US in terms of investments in new network infrastructure. The above mentioned study shows that European investments in telecommunications infrastructures have declined by approximately 2% a year over the last five years, meaning that some €3.5 billion less was invested in 2012 than in 2008. In contrast, over the same period, infrastructure investments in comparable international markets have increased by about 2% a year. As a consequence of this investment gap, fibre access penetration in most developed Asian Countries and North America is up to 20 times higher than in Europe.

The European lag is even larger in terms of next-generation mobile networks coverage where countries such as South Korea boast an LTE penetration that is 35 times as much as the European one. Delays in the next-generation networks roll-out puts Europe at a competitive disadvantage compared to the rest of the World. Extra-European ICT and non ICT firms are reaping the benefits of fast performing wired and wireless networks which spur innovative behaviours and boost consumers' usage. This in turn generates stream of the revenues needed to make new investments sustainable.

To fill the gap it is therefore necessary to take appropriate measures to foster, on the one hand, the offer (i.e. the roll-out of Next Generation Networks and innovative services) and, on the other hand, the demand for high speed services.

Regulatory measures should create the best conditions for private investment to flourish. We believe that a comprehensive review of out-dated regulation is now strongly required. An ambitious reform of the telecom framework can favour both the achievement of the DAE targets as well as the realization of a Digital Single Market in Europe.

The regulatory framework was designed to enable the alternative operator to enter into the market and compete with the incumbent operator owner of the legacy copper network which was built in a monopolistic situation. The regulation allowed the competition to flourish and this brought more services at affordable prices for the consumers. Now the situation has changed. The technologic development and the consumers' needs call for the construction of new high speed access networks based on fibre optic technology. All the operators are called to invest in these new networks.

1 Reforming Europe's Telecoms Regulation to Enable the Digital Single Market – The Boston Consulting Group (July 2013)

Indeed the current regulatory framework does not sufficiently foster the operators to invest in the roll-out of new generation networks: the incumbent operator fears that its investments would be jeopardized by a too stringent regulation established after the construction of the network.

It is therefore necessary to change course of action, envisaging a regulatory framework more focused on fostering investments and infrastructure developments than on mere price reductions.

Since a too strict regulation hampers NGAN investments, the European Telecom Directives should be reviewed softening the regulatory burden on the SMP operators. For instance, the number of the regulated wholesale access products should be reduced also considering that the ladder of investment principle does not work for NGA networks. A softer margin squeeze test should be adopted for NGAN services to allow the SMP operator to have sufficient flexibility in fixing the prices of the retail offers and therefore to better compete with the alternative operators.

More stability in the access regulation should be established at national level since regulatory uncertainty hampers long term investments. In Italy the NRA has retroactively changed several decisions modifying prices and rules after court judgments. The retroactive modification of the regulated prices should be forbidden in all cases otherwise there will be never regulatory certainty. In the last years the European Commission has issued two Recommendations³ and one Directive⁴ to foster the high speed network roll-out. In particular the Recommendation on cost methodology and non-discrimination seeks to allow more price flexibility and regulatory certainty for the SMP operators. Whilst the Directive can help the network roll-out since it favours the network cost reduction, the Recommendations risk not reaching their objective. Indeed the Recommendations are not binding and the European Commission has no power to impose to the national authorities not to deviate from them. This has to be changed by giving more power to the European Commission on the NRA's decisions, so enhancing harmonization. Moreover, some aspects of the Recommendation on cost methodology and non-discrimination are critical and should be improved. The Recommendation asks for the implementation of the Equivalence of Input (EoI) in order to allow the lift of NGAN wholesale services price regulation for the SMP operator. Since the European experience has shown that EoI is very difficult and costly to implement, Equivalence of Output should be indicated as the best non-discrimination model to implement to obtain the wholesale price flexibility.

In the last years the European debate about Telecoms regulation has been focusing on the Telecom Single Market Regulation (TSM) proposed by the Commission in September 2013 and amended by Parliament in April 2014. Since the beginning of the debate on the Commission proposal, the Industry has been stressing the necessity of additional measures to ensure Europe has a telecoms policy framework fit for the next ten years and a more comprehensive reform of the current regulatory framework, set by the 2009 Directives.

Also, a regulatory level playing field is increasingly important in a market where the boundaries between services currently categorized as Electronic Communication Services (ECS) and Information Society Services (ISS) are increasingly blurred; on the one end to ensure a fair competition between the providers of the services (independently from their nature) and, on the other hand, to assure a consistent level of consumer protection for similar services.

³Commission Recommendation of 20/09/2010 on regulated access to Next Generation Access Networks (NGA) and Commission Recommendation of 11/9/2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment.

⁴Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks

First of all, network operators have open interconnected systems and are subject to strict consumer and data protection rules that do not equally apply to other market players (i.e. OTT) who provide similar services. This situation contributes to a substantial value migration from European telecommunications operators to OTT players and device manufacturers which are mainly based outside Europe. It is necessary to ensure that a consistent set of rules applies to consumer and data protection, irrespective of the underlying technology, provider of the service and its establishment.

Secondly, when it comes to access, the fact that OTT digital platforms are increasingly becoming essential facilities for the provision of services and content over internet, *de facto* acting as gate-keepers, needs to be properly addressed in the new regulatory framework. The OTTs are generally vertically integrated since they own the digital platforms and also provide content and services in competition with other subjects. There is the risk that OTTs leverage their vertical integration and market power in the digital platform to obtain competition advantages in the downstream markets.

Thirdly, the heated debate on Net Neutrality, which is leading to the adoption at European level of new rules for Telco operators within the Telecom Single Market Regulation, doesn't take into account the effects of the increasing adoption of encryption techniques by the providers operating in the higher layers of the network (i.e. OTTs).

The revision of the scope of the current Framework Directive, aimed at including OTTs in a sort of "ecosystem regulatory framework", would ensure that all relevant players abide the same rules and would leave the possibility to identify relevant markets and empower the regulator to investigate and take actions.

A comprehensive review of the current European regulatory framework is necessary. Key goals include, among others: refocusing regulation on the investment agenda; ensuring that services are regulated equally irrespective of the undertaking providing them; reducing fragmentation in the EU's telecoms market by enhancing harmonisation.

The achievement of the DAE targets cannot be left exclusively to market forces and to private investor's initiatives. In Europe there are indeed several geographical areas whose demand and supply conditions (such as low population density or tough orography) make fast broadband investments unprofitable (the so-called market-failure areas). Unless private investments are complemented with welfare-enhancing public policies, digital infrastructures and services will develop in a "patchwork" ("here and there") and inhomogeneous manner both within and across Member States.

Therefore, to deliver the DAE targets and achieve a homogeneous development of the European ICT market, Member States will have to complement private initiatives with equally robust public measures and investments. Interventions requiring public resources may include but not limited to the following areas: deployment of NGN networks in market failure areas; implementing demand-side stimulus measure; public administration digitalization. Every Member States should determine the best mix of different initiatives according to the national circumstances and European fiscal policies should treat differently such public investments from other government expenses. In other words there is now the need to transform those principles into clear and concrete rules and guidelines that clarify how Member States may enhance their ICT investments without running the risk of infringing the European stability pact.

2. Trust and Confidence

We agree with the Commission that, in the digital space, trust and confidence are essential.

Consumers are increasingly concerned about their privacy and data security, which implies a lack of trust on the use of data by private business and public administrations and in turn leads to a negative impact on the take up of communication services and products.

The evidence also show that both consumers and businesses lack certainty on the way their rights and obligations are protected on line.

The EU needs therefore to address these concerns to enable the European digital economy to unleash its full potential.

To achieve such goal, it is key that the same privacy and consumer rules apply to all players offering functional equivalent services across the whole Internet value chain to obtain the same level of protection and trust for consumers.

In addition to the sectorial reform a modernization is needed for the general consumer protection legislation, which does not always cover Internet based services, based on new business models.

In other words regulation should be based on the service that is being offered, irrespective of the subjective qualification of the provider of the digital services or the way customers remunerate the service.

The internet economy has indeed completely changed the traditional eco-system of the communications sector. In the past, each service was offered on specialized (and sometimes competing) networks that were interconnected with each other. Today IP technology makes possible to exploit the communications network to provide an increasing number of services provided by subjects which are generally other than telecommunication operators. Hence, European citizens have the possibility to enjoy all types of services thanks to their broadband connections to the internet; this has significantly affected consumption patterns insofar as end-users can rely on OTTs for all services offered, except for the local broadband connection in itself, for which a network is necessary. Since OTTs can compete with Telcos in communication services provisioning (i.e. voice or messaging) and, conversely, Telcos can compete with OTTs in other digital services provisioning (i.e. music, video, etc.).

In such a scenario the EU Telecommunication Regulatory Framework in place contains numerous consumer protection measures that are applicable only to operators offering electronic communication services or networks, and therefore, exclude OTTs (such as rules regarding maximum duration of contracts; transparency; termination/withdrawal rights; bill shock; calling line identification and automatic call forwarding; dispute resolution). On the other hand, OTTs are only subject to the general obligations contained in the horizontal legislation, i.e. the Consumer Rights Directive 2011/83/EC, the Directive 2005/29/EC on Unfair Commercial Practice and Directive 2000/31/EC on E-Commerce.

Moreover, the offering of their services for “free” (where the counter performance by the customer is the provision of personal data) may not even be subject to such rules, since for example, the Consumer Rights Directive defines ‘service contract’ as *“any contract other than a sales contract under which the trader supplies or undertakes to supply a service to the consumer and the consumer pays or undertakes to pay the price thereof”*. Internet based services are often offered “for free” to customers being remunerated, for example, through the monetization of customers’ profiles to advertisers (data as a currency).

In order to ensure an equivalent level of consumer protection, a modernization is therefore also needed for the general consumer protection legislation: whereas possible and proportionate, rules should be applied neutrally to all digital services and the provision of services for free should not disregard the basic consumer protection rules such as transparency, withdraw/termination, dispute resolution, etc.

Another important issue is the proper and effective enforcement of consumer protection rules. In this field we point out, in particular, the risk of legal uncertainty stemming from the overlapping, for the telecom sector, of a double layer of regulation.

Unleashing the potential of the digital commerce cannot leave aside a strong recommendation to eliminate all silos and give consumers and businesses the confidence that, when purchasing online, their rights and obligations are clear and consistently protected, irrespective of the provider or the way the services is remunerated (money or data).

An overall assessment is needed of the current definitions both in the horizontal Consumer Acquis and in the Electronic Communications Regulatory Framework to ensure that the scope of the European Consumer law will encompass all digital services regardless of the provider and the way by which they are provided to the customers (for free or not).

In general, sector specific regulation should be avoided or, at least, maintained with a very limited scope (i.e. only for those services subjected to Universal Service Obligations).

The definition of digital content should be as inclusive as possible and should encompass also all the services provided through the internet, included search engines and communication services.

Regulation should also apply irrespective of the country of the origin of the digital service providers, be they established in the EU or outside EU borders. In this regard, the technology and geographical neutral approach foreseen in the proposed GDPR should be applied also for the other horizontal legislation.

Indeed, notwithstanding some critical provisions in the proposed GDPR, introducing unwarranted burdens and costs, we support the initiative in particular to the extent it provides harmonisation throughout Europe and makes the high EU data protection standards also applicable to actors based outside the EU (such as US companies, currently subject to more lenient US data protection legislation) if they process personal data of subjects residing in the Union, so building a regulatory level playing field.

Privacy is fundamental to building trust and confidence in the uptake and use of new digital services by Europe's citizens. It is important that consumers are able to enjoy consistent privacy experiences, irrespective of the technologies, infrastructure, business models and data flow involved. Europe needs to address the current patchwork of regulation, which compromises the effective and consistent protection of consumers across the digital value chain.

The review of the EU Data Protection legal framework, currently underway, provides an opportunity to address this situation. In this context, we would urge the repealing of the ePrivacy Directive through or contextually with the GDPR in order to avoid that existing distortions in the consumer privacy protection persist possibly until 2020. Consistency in law will make it easier for business to meet users' privacy interests and reinforce consumer trust across the whole digital value chain.

Also a strong and resilient internet is essential to trust. We welcome the initiative to strengthen cybersecurity and trust in EU but stresses the need of a global approach granting security throughout the entire Internet value chain. It is therefore important that the NIS Directive include all critical digital internet infrastructure and service platforms.

2.1. E-commerce and Intermediaries liability

Electronic commerce can play a fundamental role in the EU growth and needs to be fostered throughout Europe. It is therefore necessary to increase consumer trust and confidence in the use of electronic commerce specifically through the application of the consumers' protection rules to all service providers, regardless of their place of establishment and their nature, and the harmonisation of the European consumers' protection framework throughout Europe. Similarly, it is fundamental to guarantee increased and harmonised security and safety in the use of electronic payments.

Differently, the rules on intermediaries liability provided for in the ecommerce Directive do not require any modification, since they strike the right balance among different interests also in the current digital context, i.e. they allow to punish violations occurring online while guaranteeing the freedom of speech, the right to privacy and the right to conduct business, taking into account the different nature, role and capacities of intermediaries. Moreover, the Court of Justice intervened over the years to clarify fundamental aspects of these rules, such as their application to network operators (the mere conduit principle) or to passive and active hosting providers. All these provisions have contributed to the balanced development of the digital market and the respect of each player's role.

Hence, any initiative in this field must avoid that ISP and network operators are obliged to carry out a general ex ante monitoring activity on the content distributed over the networks and to replace the role of the judicial authority in the definition and assessment of the legality of a specific conduct online.

In addition to the above rules, specific enforcement provisions complete the relevant framework, guaranteeing right-holders the ability to effectively protect their rights through the request of injunctions and the consequent adoption of appropriate legal measures by the competent authority (administrative or judicial). Concerning in particular the possibility to develop further Notice & Action (N&A) mechanisms aimed at requiring intermediaries to cooperate with the legal authorities in the pursuing of violations, it has to be reminded that i) there is no one-fit-all solution, since illegal activities occurring online are substantially different in nature and in the social and economic value, and different public authorities can be competent; ii) specific measures are already provided for or are under discussion at national level for the fight against child pornography, terrorism and copyright (by way of example, Italian NRA issued a specific N&A mechanism for the fight against the copyright violations); iii) network operators, and Telecom Italia in particular, rigorously cooperate with the competent authorities to support the fight against any illegal activity online; iv) intermediaries roles are substantially different and the consequent "action" required by the authority must be consistent with each player' role.

Any specific initiative on N&A should privilege a voluntary system and ensure the establishment of a consistent and balanced framework.

3. Removing Restrictions

A European Digital Single Market for contents could be a strong push towards achieving the objectives set by the European Digital Agenda. Meeting the needs of citizens to access content in a timely and widespread manner is an important incentive for electronic communication operators to undertake investments in next-generation networks. Therefore, it is essential that the supply and demand for digital content are

supported, overcoming restrictions related to the legacy of the analogic world, and also taking into due account the strong changes occurred in recent years as a result of the digitization of content.

The European Commission has already announced that the copyright revision will be one of its priorities for the next months, so as to make the regulatory framework more suited to the challenges of the digital world. Among these challenges, there is the global dimension of the Internet and of the platforms for content distribution, which can provide users with access to digital content wherever are located, even beyond the borders of their own country.

It is Telecom Italia's opinion that the technological developments and the evolution of consumers' habits and needs, require a reflection on the opportunity to overcome the current limiting configuration related to "geo-blocking" systems as well as the prohibition of "cross-border portability" of services.

Efforts have to be made to simplify the whole scheme of licences granting and service providing across borders. National laws should be harmonised so as to favour the diffusion of multi-territorial licences thus ensuring copyright protection, but also fostering the development of innovative pan-European services that wouldn't otherwise be commercially viable.

Holding multi-territorial licenses is, however, a necessary but not sufficient condition to provide cross border services. Among the main restrictions, not directly related to copyright's issues, are those connected to security, privacy, consumer protection and taxation. The distribution of some types of digital contents (e.g. music, books) requires the adoption of security measures which differ across European countries. To comply with security rules, major technical investments in platforms are often required.

On privacy issues, the national laws differ across EU thus making it difficult to make an offer compatible with all the different requirements.

As for consumer protection, the distance sale of digital content is treated differently across the EU.

Taxation on digital goods, today inhomogeneous, should also be made consistent across EU.

It is also important to harmonize copyright exception. For instance, browsing and caching should be included in the mandatory copyright exception for temporary acts of reproduction, as they don't amount to reproduction or distribution of the work. In other words, as long as browsing and caching are not meant to give users the full benefit of a copyrighted content or a substantial portion of it (e.g. viewing film trailers), they shouldn't be subject to the authorization of the right holders.

The review of the current copyright framework is necessary to create harmonized rules at European level and to favour the diffusion of cross-border services.

Telecom Italia deems also necessary that the Audio Visual Media Services Directive will be applied to all audio-visual service providers, regardless of the service provider's position in the value chain, its prior regulatory status, or its location. Indeed, in order to ensure a level playing field between audio-visual services and remove restrictions to effective competition, it is necessary that providers of the same services are subject to the same rules.

Also the country-of-origin principle, which is one of the key elements of discussion with reference to the current AVMS Directive, should continue to be applied except in those cases where its strict application brings to unfair results. In particular, the application of the country of origin principle should not produce a

situation where the AVMSD does not apply to providers who do not come under the jurisdiction of a Member State and does thereby not cover content delivered over the internet from countries outside of the EU.

There is a need to create a level playing field in the Audiovisual Media Service market in order to guarantee fair competition among providers offering the same service.

4. Digital Economy

It is now proven that competitive dynamics based only on strong price competition (as in the last years) have not allowed for sufficient investments in Next Generation Networks across Europe to keep up with the current fast Broadband standards available in the United States and in Asia.

The TLC sector is an investment and innovation-intensive industry, where increased concentration usually generates improved capacity of investment and thus faster networks and better quality and breadth of services. Telecom Italia believes that consolidation has become key for operators to have sufficient resources to invest in the development of new networks and to ensure quality and innovation for customers.

Nonetheless, the main precedents regarding national consolidation (Austria, Ireland and Germany) show that the Commission is not willing to allow MNOs to reduce from 4 to 3 unless substantial commitments are offered to pave the way to the entrance of new players. These commitments are usually triggered by the results of economic analysis focused on alleged short-term price implications and not taking into account the dynamic efficiencies which, in the medium-long run, could lead to increased investments.

Recent studies⁵ have, however, shown that: i) there is no positive correlation between mergers reducing MNOs from 4 to 3 and price increases (considering the increased usage); ii) mergers between MNOs create dynamic efficiencies which are potentially able to boost and speed up investments in new technologies and networks.

We wish then that, consistently with the objective of a single market, the European competition authority will take up a more favourable approach towards consolidation so as to foster the investments and therefore the competitiveness of the European industry.

The Commission should work on adapting the tools employed in the merger review to consider the resources needed to invest in the TLC market. In particular, the financial analysis carried out to assess the impact of mergers should adopt a more dynamic and holistic approach which focuses less on the static short-term analysis of pricing trends and more on the ability of the merged entity to make additional investments (i.e. dynamic efficiencies).

Over the last years, Europe has launched many programmes to boost entrepreneurship and the creation of start-ups, such as “Start-up Europe”, aimed at strengthening the business environment for web and ICT entrepreneurs and the “Entrepreneurship 2020 Action Plan”. However, despite the effort to regain a competitive edge in the ICT field, the best success stories in the digital market continue to take place mainly in the US.

⁵ Frontier Economics (2014), “European mobile network operator mergers”

However, the modest performance and low effectiveness of European Start-up programmes are not attributable to their shortage. Indeed the density (i.e. number of start-up programmes on a per capita basis) of European programmes is comparable to the US.

The reasons of the poor performance are thus to be sought elsewhere: 1) the scale of European start-up programmes is undersized; 2) Europe lacks sector-specific and pan European start-up programmes; 3) the fragmentation of the European market hinders the emergence of digital champions; 4) Europe lacks euro-entrepreneurships initiatives (i.e. Start-up roll-outs are usually confined to national borders); 5) Europe is just playing a coordinating role among many national initiatives.

The European Union currently finances hundreds of start-up programmes across Europe. To enhance economies of scale and efficiency there is a need to rationalise and focus on a lesser number of programmes. Europe has to allocate resources to few excellence programmes.

5. e-Society

Europe also needs to strengthen its ICT resources by primarily promoting the new ICT skills that allow working alongside with the smart new machines. Therefore, EU should promote the adoption of a comprehensive ICT Skills Strategy for building ICT skills for the Internet economy. Such a strategy can also substantially support the creation of new jobs opportunities.

Technological innovation has always had disruptive effects on the job market. But the jobless recovery that we are facing today has not only to do with the deepness of the current crisis but with most fundamental changes in the labour market that call not for a reduction of the overall demand for labour but for a shift to different kinds of jobs . These jobs require new skills that allow working alongside with the smart new machines.⁶

Moving from STEM (Science, Technology, Engineering and Mathematics) to STEAM (adding Arts to the mix) is the right direction to take to boost innovation. Furthermore, softer skills like leadership, team building and creativity are becoming increasingly important and are skills less likely to be automated and high in demand for today dynamic world. For this reason, governments should help this job market transition with an unprecedented effort in reforming and investing in education systems. The education system should be re-oriented from the industrial era focused on maths and reading to a broader set of personal and intellectual skills that would allow a better governing of the smart machines.

Indeed, there is a strong need for a massive improvement of ICT skills of the population at large. There is an increasing demand for ICT skills, especially in the ICT sector, finance/insurance, professional services and real state and the lack of ICT skills in the economy threatens growth and wellbeing.

The development of a comprehensive ICT Skills Strategy for building ICT skills for the Internet economy is necessary. A particular effort should be devoted to design and implement programs that combine ICT skills with entrepreneurship skills. EU, Governments, local employers, business leaders, schools and community organizations should partner at the local level to help deliver local solutions to skills and employment problems.

⁶ See Erik Brynjolfsson and Andrew McAfee (2014), "the Second Machine Age", MIT

6. Innovation & Research

Technological innovation is key to vigorously compete in both domestic and foreign markets. Indeed, it is widely acknowledged that technological innovation is the major determinant of competitiveness. In a nutshell, the higher the technological innovation in a given country is, the higher its international competitiveness and, hence, its prosperity in terms of economic growth.

A high rate of technological innovation is therefore essential for Europe in order to accelerate the rate of growth. In this context, the ICT industry represents an essential pillar. The majority of the most radical technological innovations are in fact conveyed by the ICT industry. It is therefore essential that the European Union develops and implements effective policies aiming at promoting innovation and competitiveness of the European ICT industry.

At the same time, we stress the importance of a forward looking regulation, balancing the need for protection of the fundamental right to privacy and the need of not hampering innovation (for example, through measures such as anonymization and pseudonymization which aim at protecting data subjects' rights while enabling businesses to leverage the value of the data they process).

As highlighted during the Digital4EU Stakeholder Forum by a representative of the Latvian presidency of the Council, if the EU is too prescriptive with new data protection rules, there is a risk that they will not facilitate big data or a data driven economy.

In the interest of both businesses and consumers, an even access to innovation should be granted, as a general principle, avoiding that only some players are free to innovate while others, due to strict regulations, miss opportunities for innovation.

As discussed above, in the current converged environment, the existence of a sector specific legislation (so called E-Privacy directive) providing data protection rules for telecommunications operators and not to providers of Information Society services offering functionally equivalent services, such as VoIP or messaging, is confusing for customers and not justifiable. From a business point of view, this means that telecoms operators face a dual compliance regime (the ePrivacy Directive and the Data Protection Directive), which is further complicated by national laws, supervision and enforcement. Such a scenario is not favourable to stimulate or facilitate innovation.

Telecom Italia fully supports the concept of the Open Internet and its central role as a platform for economic growth, innovation and social inclusion. The success of the Internet has, so far, been achieved with negligible regulatory oversight or intervention. Such a philosophy should continue to be at the heart of Europe's policy framework providing network operators and Internet service providers (ISPs) with the freedom and flexibility necessary to properly manage their networks, balanced by appropriate safeguards against blocking of legal content/services and anti-competitive discrimination. On the other hand, introducing strict Net Neutrality rules (pure Net Neutrality approach) should be considered carefully, since it directly impacts the developments of networks and services. It is an area that would be better addressed with a more flexible legislative tool than a regulation.

EU should aim to the setting of the general principle of an open and free network, without fixing strict binding rules that could hinder innovation and hamper the possibility for operators to introduce new services in the future.