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#FSR MANIFESTO

An EU agenda for
the upcoming five
years of regulation of
infrastructures

COMS &
MEDIA

ENERGY

TRANSPORT

WATER

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Foreword

This Manifesto is the first systematic attempt of the Florence School of Regulation (FSR) to critically reflect upon the achievements of the 2nd Barroso Commission in the various network industries. We also endeavour to establish a realistic outlook onto the challenges that await the Juncker Commission in the various network industries in terms of regulatory policy.

This exercise builds on the experience of the Florence School of Regulation, which sees itself as a unique place where academic theory meets sectoral expertise, thanks to a practice-oriented research approach. As part of the Robert Schuman Centre for Advanced Studies at the European University Institute, the FSR has a long history of linking academic research with practical problems, leading to relevant regulatory policy dialogues and recommendations for the European Institutions.

On the basis of FSR's 10-year experience, four FSR Area Directors and Research Associates have been observing, analysing and making policy recommendations in the areas of energy, communications and media, transport and water regulation. The respective directors are Professor Jean-Michel Glachant, director of the FSR-Energy area and holder of the Loyola de Palacio Chair at the European University Institute; Professor Pier Luigi Parcu, director of the FSR-Communications and Media area and Director of the Centre for Media Pluralism and Freedom; Professor Matthias Finger, director of the FSR-Transport area and holder of the Swiss Post Chair in Management of Network Industries at Ecole Polytechnique Fédérale in Lausanne Switzerland; and Professor Stéphane Saussier, director of the FSR-Water area and Professor of Economics and Management at the Sorbonne Business School.

The critical assessment done in this Manifesto aims to: first, give, in every chapter, a systematic, consistent and comprehensive look at the results obtained and the challenges ahead in the different sectors; second, reflect upon these sectoral goals in the wider perspective of the network industries; and third, encourage a European-wide debate so as to engage a wider competent audience in the reflection upon the European Union's regulatory policies in the network industries for the upcoming legislative term.

Dear reader: it is up to you to judge whether we have delivered on our promise.

For the Florence School of Regulation:

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Introduction

At the State of the Union Conference (Florence, 7-8-9 May 2014) – the annual event organized by the European University Institute to reflect upon the European Union – José Manuel Durão Barroso defended his record as Commission President: in these times of change, he said, when the financial crisis evolved into an economic and social crisis, *business as usual* was no longer an option and some unprecedented measures had to be taken. He called on the new Commission to continue to serve the general European interest, as the European Union is more than a simple economic project. Rather, he recalled, the European Union is a profoundly political project, which has to be built on common policies implemented on a European scale.

To recall, the Barroso Commission – especially the 2nd Barroso Commission (2010-2014) – had developed a long term plan to modernize Europe's economies: the so-called “*Europe 2020 Strategy*” ([COM \(2010\) 2020](#)) with its aim to create “smart, sustainable and inclusive growth” within the European Union. These three priorities were designed to be mutually reinforcing: *smart growth* to develop an economy based on knowledge and innovation; *sustainable growth* to promote a more resource efficient, greener and more competitive economy; and *inclusive growth* to foster a high-employment economy delivering social and territorial cohesion.

Corresponding flagship initiatives reflecting these priorities were developed and implemented, also in the different sectors of the network industries, such as the Digital Agenda for Europe. At the end of the 2nd Barroso Commission, a 2014-2020 EU budget was dedicated to research, innovation and infrastructures as instruments to connect the European Union within and beyond its own borders in the energy, transport and electronic communications sectors.

The different network industries are the backbone of the European economy and, as such, they represent essential conditions for Europe's prosperity and global competitiveness, something which was increasingly recognized during the 2nd Barroso Commission. Their reform, by way of their de- and re-regulation over the past 20 years, was and still is considered to be central to achieving precisely this aim. However, energy, transport, communications and media and water, while following similar patterns of de- and re-regulation, are of course at different stages of the process and, as such, encounter different obstacles. More precisely, in the energy sector, the EU heads of State decided, in 2011, to create a single European energy market to be achieved by 2015. Similarly, in the transport sector it was reiterated in the 2011 White Paper to work towards a Single European Transport Area, supported by a Trans-European Transport Network policy, financed by a Connecting Europe Facility (infrastructure investments). In the electronic communications and media sector, the Commission has been trying to push more reforms to finally create a digital single market. And in the water sector, after a long period of stagnation, since the 2000 Water Framework Directive, a broad Concessions Directive was finally adopted in 2014... in which water was excluded!

While it is difficult to determine which of the network industries has been most successfully de- and re-regulated, it is possible to identify the main measures taken and achievements reached by the 2nd Barroso Commission as well as the main challenges remaining for the Juncker

Commission. This is what we will do in the following four sections of this Manifesto, covering the Energy, the Communications and Media, the Transport and the Water sectors.

Let us mention that the Juncker Commission has already started with some very interesting actions concerning the different network industries. Indeed, significant funds for European infrastructure development (Investment Plan for Europe) have been allocated, mobilizing an additional 315 billion € for infrastructure investments. Also very promising is the proposed cross-institutional approach addressing some of the most important cross-sectorial challenges (e.g., Vice Presidencies for climate action and energy, as well as for the digital single market). One must also mention the Juncker Commission's special attention paid to the issue of fighting red tape and reducing over-regulation with the creation of a corresponding Commissioner, the Vice Presidency for better regulation.

Yet, many challenges remain in all the European infrastructure sectors. The most dramatic ones are probably in the energy sector, where Europe is facing profound choices when pursuing, or not, the single European energy market in light of nationalistic tendencies fuelled by concerns over (national) security of supply and national industrial policies. The challenges in the electronic communications and media sector are no less daunting, considering the tremendous impact of the Internet, which has revolutionised market dynamics and business models. And in the transport sector, the creation of a single European transport area clearly faces the challenge of inter-modality, which is ultimately the challenge of creating a level playing field between the different transport modes for the mobility market to properly function. But the true challenge for the Commission will be to make use of de- and re-regulation in the different network industries in the interest of the European citizens and users in terms of accessibility to, affordability and quality of the all these fundamental infrastructure services.

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Chapter 1: Energy

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No EU policy can be perfect - it will inevitably be a compromise between a good cause and a due cause. However, we are now at a critical turning point, as several pillars of former Barroso's EU energy policy have already collapsed, prompting an update or an entire overhaul.

The collapse of key energy policy pillars of Barroso's decade:

1. The world has cheaper and more abundant fossil fuels than expected.
2. The EU internal Market conceived for gas-fuelled plants competition (CCGTs) has to deal with a fierce RES subsidised push.
3. The EU Green Revolution (to push us as world R&D and leading manufacturer of a decade-long green growth) is gone.
4. Carbon pricing originated in the EU and was adopted to some degree here and there but ceased to offer any incentive to change the EU vis-à-vis GHG emissions.

The EU Supply Security is lower than at the fall of the Soviet Union, or before the Bush-Blair invasion in Iraq; and the EU has to address it by itself.

Then what are the key components that can put EU energy policy back on track toward reaching our 2020-2030 goals? The following policy brief offers a new vision of the energy policy for our new Commission from an independent, academic point of view.

For me, there are five key questions for the renewal of our EU energy policy:

1. The Internal Electricity Market: *A European crisis with any European remedy?*
2. The Internal Gas Market: *A last mile needed for achievement, but a mile too far?*
3. 28 national ways from 20-20-20 to 2030: *Could it lead the EU somewhere?*
4. Energy Policy Governance: *Is there any appropriate new framework for a new EU energy policy?*
5. External Energy Security and Policy: *At least some Energy Union – or only Energy disunion?*

1. The Internal Electricity Market: a European crisis with any European remedy?

Our internal electricity market is in a crisis because global demand is low due to the EU economic and financial crisis, and because “residual demand” for non- renewable generation is further depressed by the RES push.

The resulting wholesale power price stays very low, at an unsustainable level, impeding any market- based investment.

To recover from this crisis at the wholesale level, we see two alternative options: a “mini”, and a “maxi”.

Mini option for Wholesale: “very few market fixes” and “decommissioning redundant gas plants”

We might then look at just a few improvements within the existing EU market design: as the opening of a “really reflexive market for flexibility” on the short term horizon, (with a view to achieving a “real time” and ”balancing” reshuffle).

This limited intervention would co-exist alongside the closure (from x% to 100%) of currently redundant plants – notably the CCGTs.

Maxi option for Wholesale: does a “long term market based equilibrium” exist for power system investment and operation?

We could embark upon a “New Power Market Deal”, along the lines that today might be termed the “2025 horizon”: a new market design that the EU should target, to achieve a sustainable 2020-2030 power market, capable of efficiently integrating massive renewables (both at investment and operational stage), and delivering a thorough decarbonisation system, on a market basis.

The “DG Competition – Eurelectric” idea that the average costs of investing and operating the renewables will, in the future, eventually meet the average wholesale energy market price (incl. carbon price), is only an assumption; the veracity of which no academic has yet succeeded in demonstrating.

Notably, the problem mostly comes from the “competitive hydraulics” of continuously injecting more energy with “near to zero marginal costs”, in a market relying on its marginal costs to price the delivered energy.

If we do not believe in a “zero marginal cost miracle”, we would have to look at creating a new market structure, attracting entrepreneurs to “power investment and operation” via long term competitive supply contracts.

RES and the other technologies will have to compete to win an ex-ante guarantee of demand and minimum revenue, with consistently priced carbon (either from a carbon market or a carbon “price guarantee”).

Of course, this long term reshuffle could be based on, or combined with, the “reliability option” in short term markets, as seen before.

To make the framework of such long term contracting truly credible for new investors, the grid system operators might have to offer guaranteed access to the grids (or, a financial guarantee of the grid access costs), in a “Financial Transmission Rights”-like market.

At the retail level we also see two options, being a “mini”, and a “maxi”

Mini option for Retail: “No Regret” for a retail innovation wave based on an EU minimal level playing field

No “smart retail” revolution is easily predictable. However why can’t the energy domain for households be next? Even if this revolution was too slow to become “today’s mass market game changer”, why should the existing millions of “prosumer households” (already conquered by PV self-generation) not be seen as big enough to start building a new retail universe as active and interactive as the power wholesale universe?

A rational, and yet prudent, EU policy should therefore look at creating a certain “minimal retail level playing field”, avoiding too much EU fragmentation into local proprietary sub-systems.

We might consider EU compatible standards of operation; a forward- looking cyber- security policy (with police mirroring our EU Air Traffic Control).

And, of course, we need minimum EU unbundling requirements, to give sufficiently open access to data, to devices, to alternative processes, offers and decision- making powers.

Maxi option for Retail: a “Golden Bridge” to a European retail innovation wave

Instead of being mainly passive and overlooking brave, private initiatives with a minimal interference of existing retail barriers, the EU could embark on a comprehensive retail overhaul, of the same scale and ambition as the wholesale power market uptake in the second and third EU energy Packages.

There is a real rationale for such an ambitious approach. The current EU market and regulatory frameworks have been mainly conceived for:

1. Opening a wholesale market to the power plants which are connected to the transmission grids.
2. Accessing multiple countries’ markets through cross-border rules embedded in ENTSOs network codes.

As a due consequence of this “wholesale + transmission” design priority, all of the “micro institutions” needed for reflexive retail (prosumers, demand response, “smart homes”, and their interactivity with distributions grids) have not been placed at the core of the EU system, or even taken into account.

The EU may establish a full and comprehensive EU “smart retail and distribution grids package”.

This “package” could address the full EU harmonisation of standards of operation for distribution grids, ITC networks and retail markets:

1. A harmonisation of retail services, pricing processes and formulas.
2. An integration of retail and wholesale market designs, of transmission and distribution grid codes.
3. A seamless functioning of all countries’ retail markets as a single EU retail market; a coherent grid- planning horizon.
4. A cooperative investment methodology dialogue between ENTSO.E, and a kind of ENDSO.E yet to be established.

Without a doubt, this agenda is very ambitious, but not much more than our third energy package already approved in 2009, after being deemed both unnecessary and unfeasible in 2004- 2005.

2. The Internal Gas Market: a last mile needed for achievement, but a mile too far?

The EU internal gas market is confronted with price and volume shocks coming from opposite directions.

1. The US shale gas price, which is two to three times inferior to our internal wholesale market price, while the Russian-Ukrainian conflict threatening the gas transit from East to West.
2. Do easy or relatively effective remedies exist that can mitigate these tensions? Or are there none?

Once again, we are left with two options: one mini (“a last mile?”) and one maxi (“ten thousand miles more?”)

Mini option for gas: the EU internal market is good, but cannot reverse the international gas price or freeze the Russian-Ukrainian conflict

The fact that the EU is facing a gas price shock coming from the West, and a volume shortage threat coming from the East, does not necessarily imply an easy implementation of efficient measures to address both concerns.

If the EU cannot control its gas supply price (by any possible unilateral action), the only achievable and robust guarantee, to minimise the average gas price risk, is to allow any gas that is “a bit cheaper” or “from a new origin” to easily enter the market and be distributed everywhere welcome within the EU, even if only for a short term gain, or as an option against a worse future.

Hence, our main task is to achieve and refine our EU internal gas market. Thanks to the gas demand crisis, the wholesale prices have already significantly converged in most of the EU (from the UK and the Netherlands to Germany and Austria, via France and Italy).

We only need to consolidate our fuzzy, underlying EU gas target model to make sure that alternative gas flows will always be able to cross any border, at any time, when any gas arbitrage opportunity arises. *To make this a reality, is only a “last mile” concern with only a few “grid access”, “capacity allocation”, “balancing regimes” or sometimes “market coupling” dimensions.*

It doesn't say that all EU stakeholders will always applaud this “last mile” ride.

Maxi option for gas: ten thousand miles more to secure our gas supply?

The former “mini option gas” is flawed if it is illusory to believe that free wholesale market pricing will simply lessen a “big Eastern gas volume shock”. Markets cannot always easily deal with exceptional ruptures, which have yet to be incorporated in any workable action plan. Panic and irrational behaviour are then more likely to prevail. The EU internal market is to be complemented by a public intervention plan.

If we want to prepare for a gas “volume earthquake”, it will necessarily imply public actions and public interventions. But these have to be discussed and made compatible, one with the other, as with the foundations of our EU gas system before the convulsion of the earthquake.

We need to obviate the risk that incompatible local or national public plans, at different levels and in different zones, would rapidly make the global situation far worse, or entirely unmanageable.

A measure of security is already provided for under the existing EU gas security regulation. We do hope that this has already been – or is on the verge of being – implemented via cooperation among the relevant public decision makers.

In addition to the already existing “EU security and solidarity” framework, it would be useful to create a common European monitoring system delivering a consistent follow-up of our actual global gas storage level and its variations, at some aggregate level (both EU and regional). This might be coupled with some “storage security weakness indices”, which may help to signal a transparent and predictable regulatory “warning guidance” to market players at times of tension or pre-emergency (for example, when storage levels measure “too” low in mid-August).

Looking now at transformations geared toward the long term, we might also think about a new gas pipe investment regime where several TSOs could unite to build a few security enhancing “Gas International Entry Pipes” or commercially non-viable “Default LNG Terminals”.

This maxi option inevitably opens many new doors to public intervention (as emergency plans, monitoring tools, weakness signalling, or joint investment in security infrastructures), that will partly change the way our internal gas market is run. But, this should not compromise or jeopardise what is already working well or, at least, not so badly, in the EU market. In that sense, our maxi option is not maximalist, but rather minimalist, while still being “at the margins of the existing” policy.

Our EU internal gas market is an excellent tool. We may try to supplement it, only where and when socially plausible, and necessary. Security and solidarity are not enemies of the internal market if we prepare our emergency and solidarity plans as appropriately and orderly as we can.

3. 28 national ways from 20-20-20 to 2030: could it lead the EU somewhere?

The incoming Commission will start by following the path opened by “Barroso II” last autumn: 28 national ways to EU 2030.

The Council has already sent a warning, before the summer, not to jump from the existing “20-20-20” policy to a “30-30-30”-like step. And on 23-24 October 2014, the Council reached a minimal energy targets deal with roughly half of the Member States, from which the EU will have to build a common “Paris 2015 International Conference” strategy.

In this uncharted territory, uncertainty abounds. But, does it matter so much vis-à-vis the rest of the world?

Any retreat from our “glorious 20-20-20 revolution” of Berlin 2007 would, of course, be easier or safer, vis-à-vis the “EU 2050 community”, if we were guaranteed an honourable and reliable position, until 2050, not only from our perspective as Europeans, but also from a reasonable global viewpoint.

Hence, we are fortunate that such a legitimate “2050 policy programme safeguard” is provided by the recent report from Nicolas Stern and Felipe Calderon, issued before the UN Climate Summit in New York (“Better Growth, Better Climate: The New Climate Economy Report”, 2014).

Once again, as we head toward 2030, we are confronted with two paths, a consistent “mini” option (“Disarmament”) and a strong “maxi” option (“Two to tango”).

Mini option for 2030: disarmament in an EU aligned with globally recommended practice?

Assume that we keep both our carbon market and our internal “dual fuel” (gas/power) market working within a 2030 Greenhouse Gas (GHG) binding constraint. What else are Stern and Calderon suggesting as reasonable tools to contribute to a robust world trajectory, towards an ultimate 2050 goal?

Stern and Calderon suggest the following:

1. *They propose the phasing out of fossil fuel subsidies (about 25 billion euro in the EU, in 2012).* It is surprising that this has not yet been seriously discussed by our brave EU. May we also assume that it would cover the many cases where the full price of the non-renewable energy mix consumed is not actually paid by the consumers, because of a regulated energy tariff deficit?
2. *They suggest phasing out the usage of coal.* It is remarkable, that our European “Energy Transition leader” (Germany) has not yet started this process, while continuing to generate half of its power with coal. Certainly “phasing out coal” faster would imply consuming more gas, as a “bridge” (remember that the former German bridge to decarbonisation, before Fukushima, was nuclear). But, if decarbonising is our ultimate target, decarbonising is also the best way to go... Gas cannot be undermined once the process of discontinuing the use of coal begins to take effect, which may be as soon as tomorrow, or not far beyond that (perhaps by late 2015; after the Paris conference). Gas is, of course, expensive in the EU – decarbonisation comes at a cost. But, it would not be too great a shock, if the EU carbon price operated as a reward for decarbonisation, and not simply as just a number.
3. *They propose the creation of financial instruments, which favour investments in low carbon projects.* This might also call for European public authorities to ensure all kinds of low carbon efforts are rewarded, not simply wind and PV projects. It should include any kind of energy efficiency projects recycling economies or demand side management; and even innovative and interactive EU apps to “smarten” our behaviour and devices. Equity, loans, awards, guarantees or any “smart” form of renewed “Public Private Partnerships” contracting should be pulled or pushed into competition with the present monopoly of RES feed-in financing. Of course, the bulk of the money collected through the auctioning of allowances could be re-injected there.
4. *They recommend the tripling of research and development expenses in low carbon technologies.* Some of the potential financing channels have just been suggested; as equity, loans, awards, guarantees; any smart form of renewed “Public Private Partnerships” contracting and “allowances auctioning” mobilisation.

Maxi option for 2030: two to tango- Target or not; all of the EU Member States cannot ignore Energy Efficiency

What greater changes could be feasibly applied today or tomorrow by the 13 to 15 Member States that were more progressive at the 23-24th October Council?

Commissioner Oettinger, the German government and Juncker have already suggested “a binding EU efficiency target”. And Germany is preparing its “Efficiency National Action Plan” (from financing investments to pushing electrical cars).

Yes, it might make sense for many different reasons (along with many others as yet unknown).

A coalition of the willing Member States to beef up EU Energy Efficiency?

1. *Voluntarily binding national efficiency target could be a balm for the wounds of the RES fans (the RES-pushing orphans).* Today in the EU, reducing the consumption of energy has the same appeal as reducing carbon, more security of supply, more investments, more “white” jobs and more technology innovation as “green” RES had seven years ago. It is certain, that the UK example of a two decade “housing demand boom”, also brings an irresistible flavour to any public policy promoting growth and employment, complementing energy consumers’ choice.
2. *It could open a consistent framework to work together, at EU level, toward more demanding norms of product energy performance or the recycling of used products.* We might proceed to mobilise our designers, engineers, manufacturers, etc. in the building of a new set of “advanced” products and by-products. We might even reopen the question of the actual energy and recycling performances of our car industry (and other durable goods).
3. *This could also help create a growing business of intermediaries managing the sub-contracting of energy efficiency and recycling performance delivery,* with professionals investing and participating in the conception, installation, operation and maintenance of more energy, and recycling efficient sub-systems for buildings, malls, housing, plants, universities, hospitals, military camps, etc.
4. *That said, there is a taste for a “white” second wave of our first “green revolution”, that could also be worrying.* Notably, who would finance the large deployment of energy and recycling efficiency? The consumers? By paying more, when buying the products or the new homes, or refurbishing the existing ones? Would the public authorities be the only ones accountable? If the voluntarily binding national targets are not too high, the public sector can itself commit to reaching them. But how would it finance this? With more taxes and duties, or with a greater public debt? Instead, or in addition, do we expect the private intermediaries and many new “public-private partnerships” to solely undertake the deployment of this “white” efficiency boom? Might a massive wave of EU borrowing - led by the European investment bank - be one of the solutions? This is more or less suggested, by Juncker, with his proposal to boost EU growth through an investment pyramidal scheme of €300 billion. If financing is in sight, we shall also have to avoid poorly conceived “long term efficiency contracts” locking the products and energy users into distorted arrangements, which are too favourable to the service providers (as seen in many RES feed-in over-shooting). Any “maxi” way to 2030, via voluntary binding national efficiency targets, would need a substantial clarification of its likely business models.

4. Energy Policy Governance: is there any appropriate new framework for a new EU energy policy?

As predicted since November 2013, the major novelty of the EU energy policy is the absence of binding targets for each Member State, for both RES and Energy Efficiency (EE). We should therefore expect a wide variety of the policy directions and tools (including shale gas drilling) of the EU countries. And, the entire set of possible interactions between the only binding common tool at EU level (carbon pricing mechanism) and the various countries' trajectories (for RES and EE) is, a priori, very large.

It should not matter too much, if we were to assume that only our common markets (one for carbon and two others for the “dual fuels”) would act as key interaction platforms among Member States. The existing Commission's “market weaponry” made of (“Internal Energy Market”) + (“Competition Policy, hence State Aid”) + (“Centralised Carbon Market”) can, of course, act as a credible governance structure for a European market-based path to 2030: hence the visible alliance of DG Comp-Eurelectric at the end of the year 2013.

However it should matter, if we were willing the EU to reach some particular “focal points”, chosen as safe milestones on a preferred EU 2030-2050 trajectory. *The existing Commission's “market based arsenal” cannot promise to reach any pre-defined EU entry gate to the last bridge, 2030-2050.*

We then proceed to once again investigate two options that can do sensibly better: a mini and a maxi.

Mini option for Governance: basically a market-based policy framework completed by the same EU governance set coming from the 3d Package, but more comprehensive and more responsive?

Since 1990, the EU has been impressive in its continual effort to work at implementing the Single Act, in the gas and the power sector.

Perhaps all that is required is to position mature renewable energy sources within a common EU upgraded market framework [opening a relatively coherent, equitable EU platform for RES investment and operation, including reliability options; harmonising “enough” capacity mechanisms, long term contracting of carbon pricing options, and of security of demand; etc.], and paving the way to demand response and retail activation of the prosumers.

We should then be able to do it on the same institutional grounds as what the EU has done for energy since 1996 (= Internal Market + State Aid).

At the top of its market-based framework, the EU may need some particular add-ons to better deal with the task of together reconciling the differences of 28 “independent” climate responsive countries. Add-ons could be:

1. The coupling of DG Energy and DG Climate in the Juncker Commission, if real cooperation between the two were to develop (which is certainly not guaranteed...).
2. The Directorate “Energy Policy” (within the Energy area) could become the key expert, or a preeminent “opinion leader” influencing the migration. It is already opening its own “2030-2050 Forum” to keep a forward-looking/ progressive EU debate open, in addition to Florence, Madrid, London Fora, already dealing with a host of alternative views and proposals for the existing internal market.
3. Both the ENTSOs, and ACER-CEER may open a responsive and structured analysis, at an EU and regional level, to decipher in rolling five-year “2025 forward- looking” assessment plans (for example, expanding their already existing regional TYNDPs), where the current market and network interactions (including the planned and likely investments) might lead us.
4. Cooperation between TSOs for electricity might be made “institutional”, and take the form of “de-facto” Regional Transmission Operators-E (both for operation and planning) or of ISOs with a split between Transmission owning and Operation of the system.
5. Power Market Operators might be gently pushed or pulled into one or another kind of “European Network of Market Operators-E”.
6. The national authorities (the Member States governments too) should be pulled to strongly participate with proposals and best practices (as ½ of MS are actually “2030 demanding”), and be strongly integrated in the new 2030- 2050 EU Forum.
7. Last, but not least, it is key to open real “regional fields” for testing and experimenting (remember how the Market Coupling success between the “Pentalateral countries” paved the way to the EU power target model). Is it possible to build a few clubs of a few “pioneering MS” willing to play a leading role in better European integration for a better common energy policy? Can parts of the EU not participate in the Nordic game (where the deepening of regional integration is always fuelled from within, by one of the countries involved in this voluntary League)? Can we incorporate more consciously and more openly certain national and regional initiatives into the dynamics of a European-oriented 2030-2050 debate? Should we get more from the North-Sea or the Continental-Visegrad initiatives?

Maxi option for Governance: let’s be brave. Only an Energy Union could make it

The weakest point of the above ‘mini option’ is to pretend to reach for a demanding energy target, on a preferred trajectory to 2050, while using only the traditional EU arsenal for market harmonisation and integration.

Not many, but some in the Europeanised elite also think that countries’

NRAs (with their ACER) and countries’ TSOs (with their ENTSOs) are not homogeneous enough and bold enough to make the necessary leap. This is why - if the EU really wants to deal with demanding energy trajectories - the EU might have to build a “consistent enough” and “persistent enough” energy governance.

Its framework should not be any more of a gamble, “each semester”, to find out if the Council (or the Florence & the Madrid, the London & the Berlin Fora) will back the governance needs of the 28 chariot convoy until 2030.

Maxi option for governance: a market-based governance + Third Package institutions won't make it – only an “Energy Union” could. *Hence, we actually need an “Energy Union” to make our 2030 to 2050 journey perfectly work* - a common institution having the legitimacy and powers to deal with the continuous ‘Europeanisation’ of a demanding EU energy policy trajectory. This is reasonably obvious. But, what is not so obvious is how to get there.

We may see, both behind us and ahead of us, that the severity of the EU financial crisis didn't give our Central Bank a free hand in the management of the crisis. The Council - and the inter-governmental deals - continuously intervened or vetoed; co-intervened or co-vetoed.

To go to an Energy Union as a common institution for our energy policy, we will need the Council to open the fray and disarm for the common good of EU energy. How do you get to that? It seems that a greater Europeanisation of our energy mix, and of our many alternative sustainable energy trajectories, is not as appealing today, across Member States.

It is exactly what the Council was unable to swallow last year in 2013, as this year 2013, in the redefinition of the EU 2030 strategy.

Nevertheless, could any “Energy Union” rescue us? Even if not by magic, it could be the balm to our wounds:

1. A “common house” to put all of our existing renewable sources together, in an open internal energy market, revamped for massive renewables.
2. A planning office and an investment fund to upgrade our energy storages, grids and IT infrastructures, to strengthen our common energy reliability, our common renewables market, and our coming “Internet of Things”, which will inevitably revolutionise the way households manage their homes, their domestic devices, their heating and their energy bills.
3. There may also be a framework for better common gas and power security, and more generally, a common energy security policy overseas.

Might today's “EU energy security” emergency work better at institutionalising an EU common energy house?

Indeed, something might be coming from this front, because most of the EU feels the threat of a foreign heating emergency. But, we do not see how this heating security threat could open an institutional path to 2030-2050, except through a “Binding Efficiency Target”, which has already been refused by the Council, as a promised reduction of dependency on imports.

So to sum up this “maxi” 2030 governance issue: Yes, an “Energy Union” could provide a more favourable trajectory toward 2030-2050; even if, prior to 2030, our common “day to day” policy mainly relied on market interactions.

However, up until 2030, the “Energy Dis-Union” seems more likely, than the Union. And the dilemma of “28 drivers on a single path” could keep running for the entire duration of Juncker Commission.

5. External Energy Security and Policy: at least some Energy Union – or only energy disunion?

The presumably weak state of our common 2030 trajectory will not necessarily spoil the outcome of the EU external energy security policy.

The key question here is slightly different: are these security issues increasing mainly, or solely, at the MS level or, are they also mounting at an EU level?

As it seems to be both yes and no, we are faced with a ‘mini’, as well as a ‘mini+’ and a ‘maxi’ option.

Mini option for External energy affairs - keep our nerves and make only a few amendments to the internal market

The EU energy policy has not yet been conceived, and does not have to deal with a fully-fledged energy security vis-à-vis international blockades, rogue states or terrorists threats.

It would be a strategic policy mistake to expect from our internal market, our energy industry, our energy assets investment and operation, as well as from our energy regulation and policy, something which can only come from some really bold “state action”. By nature, in this mini option, the big external shocks are primarily managed at governmental or inter-governmental level, and belong to Member States’ heads and machinery.

Of course, it could involve the Commission as the inter-governmental agent of the EU states; as well as others, like NATO etc.

In a mini option, our two greatest friends for our energy security are our two, intertwined “dual fuel” markets for power and gas.

It is because large continental energy markets reduce the operational size of the shocks that we receive, while enlarging the basins of “alternative available resources” responding to these shocks. *Being bigger and still responsive enough, we are simply more resilient to shocks.*

Of course, we also can do a bit better within our existing internal market framework - as we have already seen above, for gas:

1. It could be TSOs teaming up for building a few new “international” gas interconnections as gas pipes or LNG terminals.
2. It might cover a set of common monitoring tools, alarm indices, and regulatory triggers.

3. It could also be the creation of a more consistent EU framework for power security, with a new regulation inspired by the already existing gas regulation (with clearly pre-defined roles for market, planning, regulation and solidarity).

All of these are amendments which touch upon the EU market universe, but do not diminish it.

These alterations aim to improve it, while not undermining the good EU market world, which already works.

Mini option+ for external energy affairs

EU Markets won't make it by themselves, because of the scale of external problems, arising from our borders and affecting our internal markets.

The mini+ option does not contest that our internal energy market(s) work(s). It only points out that things do not work so well at the EU borders of our internal market.

The 'Europeanisation' of the borders of our internal market is not only unfinished; it is just beginning. Hence the saga of the Gas South Stream (and, before that, the North Stream) where many EU MS play their own national game with external energy providers, regardless of any cohesion or consistence with our common energy policy.

It is as if energy wasn't to be traded in the EU, within a common trade and investment regime, a common long term supply contracting order, and a common infrastructure and interconnection access framework

To be really and fully achieved, our internal market has to be realised not only "inside" the EU, but also at all of its borders. Hence, a lot of work has still to be done. This question could be addressed in different orders, and at a different pace and depth.

We nevertheless know that we have a lot of questions in this regard:

1. Foreign trade and investment regime
2. Supply contract framework
3. Infrastructure access and unbundling
4. Network and interconnections reliability and adequacy
5. Value added to our "security of supply" at EU level
6. Value added to our "energy sustainability" at EU level, etc
7. This questioning can go as far as "buying energy together abroad", as Commissioner Oettinger liked to say, and Polish leaders liked to repeat.
8. It can also simply start by clarifying what is our common house for trade rules and an investment regime, supply contracting, interconnection access, and infrastructure unbundling. If we were to advance further (which means, beyond the internal side of our internal market borders, as with Oettinger and the new Polish head of the Council, Tusk) the big issue we might have to confront is to start integrating our own "internal market" with our existing external "Energy Community". A Community which, in principle,

already extend our internal EU market... Could we think about reinforced integration tools as common grid codes? Extended TYNDPs? An articulated infrastructure package with PCIs and “connecting facility”? Amplified by a pro-active European Investment Bank? To end with co-ordinated security of supply regulations, solidarity and emergency action plans?

9. Another foreign area, awaiting hard road repairs, is our neighbourhood policy (let’s say from Morocco to Turkey). Two points are already in mind here:
 - a. The need to assess the actual infrastructure regime(s) that EU MS practise, with the countries belonging to our “Neighbourhood Belt”;
 - b. In the same vein to assess the actual “status quo” or the ramping implementations of article 9 of the 2009 Renewable Energy Directive (by any of our EU MS, with any of our neighbouring countries).

At the very least, we need to know the actual MS’s practice in relation to neighbouring countries, following a succession of grand proposals (such as the “Union for the Mediterranean”) and ambitious reports.

Maxi option for external energy affairs: an Energy Security Union for European Energy Foreign Affairs?

Refining or strengthening our internal market(s), at our borders, or a bit beyond them, will not critically improve our resistance to hard external energy pressures, and shocks... in today’s state of the world, with unprecedented disruptions and threats from our continental East – and neighbouring Middle- East - to our Southern shores.

Markets cannot tackle such threats. It is simply not their job. Only an Energy Union can deliver external energy security to the European Union. Will it ever come?

To significantly improve our EU energy security, in the present “state of the world”, is a “state affair”. We might expect our MS to react together, but we cannot be sure of this, and we cannot predict what kind of “inter-governmental” deal may follow, or what possible role there may be for the Commission. We also know that NATO already exists, and that, just after it was expected to somehow retire (at the end of 2013), it was resurrected (during the summer of 2014). But, what can it achieve? And, how will it determine EU energy security, infrastructure security or cyber security? These are all questions that need further investigation.

The only thing that we really know, is that having an EU with its own “Energy Union” already working within its borders, would also give a credible background to a policy aimed at “securing the energy surroundings” with key neighbours. But we are still so far from it. What did we achieve this past decade with Ukraine, or Turkey or Azerbaijan?

Chapter 2: Communications and Media

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1. Communications and media regulation: where do we stand?

The liberalisation process of the 1980s and 1990s created a historical reshuffling of the European communications and media industry, from public monopoly to privatisation and competition. After the achievement of these goals, in the last ten years the sector has again faced new important and decisive changes not only relating to the regulatory/legislative intervention at European level, but also as a result of how the technological evolution has deeply affected the industry and, even more fundamentally, of the increasingly innovative and disruptive role played by the Internet on all the markets.

More specifically, in the last decade the European industry has faced a profound evolution in its regulatory assets as enshrined in the European regulatory framework, the so-called Telecoms Package of 2002 (revised and updated in 2009). First, the package has been fully applied across all member states; the number of relevant markets – those where, according to the European Commission, *ex-ante* regulation was (and still is) needed - were progressively reduced; independent National Regulatory Authorities (NRAs) for electronic communications and their coordination body (BEREC) started to play an increasingly crucial role; finally an updated Audio Visual Media Services Directive was adopted in 2007, notwithstanding the continuing debate on the very role and need for this type of media regulation at the European level.

When the liberalisation process started, a modern electronic communications regulation was introduced as a *transitory* instrument, with the final aim of being removed once the situation was mature enough to leave the market to competition forces. Indeed, we are now at the point in which it is worth analysing whether the time has come to limit *ex-ante* intervention only to the presence of the most evident market failures, and to go instead for *ex-post* control in all other cases. In other words, we should ask ourselves if the time is ripe for less regulation and more competition.

It must be added that the online dimension of businesses calls for a re-examination of traditional normative and regulatory instruments that may have become insufficient (or obsolete). Issues like privacy of information, copyright and data protection, just to give some examples, might require the strengthening of regulation at the European level. This exercise, however, needs to be inserted into a broader global dialogue regarding Internet governance worldwide.

Before analysing the situation as it is now and possible future policy and regulatory approaches that might be needed, we briefly summarize the main European regulatory measures introduced in the last ten years and their achievements.

As previously mentioned, the regulatory framework for electronic communications mainly aimed at strengthening competition, after the privatisation of States' monopolies and the liberalisation of the industry was set up in 2002. The package was composed of a Framework Directive and four specific Directives, respectively: the Authorisation Directive; the Access Directive; the Universal Service Directive and Privacy and the Electronic Communications Directive¹. This package was revised and updated in 2009, when it was amended and integrated with the Better Law-Making, the Citizens Rights and the BEREC Directives,² but was not fundamentally changed.

The extension of the market coverage of the package was thought of as a variable from its very inception. According to article 15 of the Framework Directive, the Commission shall adopt a Recommendation on relevant products and services markets (Relevant Markets

¹ Directive [2002/21/EC](#) of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive); Directive [2002/20/EC](#) of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive); Directive [2002/19/EC](#) of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive); Directive [2002/22/EC](#) of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive); Directive [2002/58/EC](#) of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications). To which the Decision No [676/2002/EC](#) of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community has been added.

² Directive [2009/140/EC](#) of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services; Directive [2009/136/EC](#) of the European Parliament and of the Council of 25 November 2009 amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws; Regulation (EC) No [1211/2009](#) of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Office.

Recommendation), where, in accordance with competition law, it shall identify those markets the characteristics of which justify *ex-ante* sector-specific regulatory intervention. The Commission shall regularly renew the Recommendation and indeed it has done so consistently: regulation started with 18 relevant markets in 2002, which were reduced to seven in 2007 and, according to the 2014 revision, only five markets now remain in the electronic communications sector that still need *ex-ante* regulation (Market 1: Wholesale call termination on individual public telephone networks provided at a fixed location; Market 2: Wholesale voice call termination on individual mobile networks; Market 3 a): Wholesale local access provided at a fixed location; Market 3 b) Wholesale central access provided at a fixed location for mass market products; Market 4: Wholesale high-quality access provided at a fixed location).³

Moreover, the Commission adopted a very strong policy stance with regard to the price of roaming for travelling European citizens. The approach of direct price intervention against roaming overcharges by national companies started in 2007, with the introduction of the capped maximum prices and has been pursued through several further reductions.

With regard to content carried over the electronic communications networks, this is mainly regulated by the 2007 Audiovisual Media Services Directive (revised in 2010)⁴, which introduced a regulatory and coordination process in the field among EU member states. In 2014 the European Commission (Decision 3 February 2014, C(2014)/462) decided to establish a new European Regulators Group for Audiovisual Media Services, that can be seen as a first step towards more centralised coordination between relevant National Regulatory Authorities also in this area. Moreover, in parallel with the regulatory intervention in the audiovisual sector, the Commission has promoted a regular policy debate on media freedom and pluralism. The High Level Group on Media Freedom and Pluralism, the EU Media Future Forum and the Centre for Media Pluralism and Media Freedom are all efforts to enhance and stimulate the European debate in such a delicate field.

At the end of 2013 the Commission advanced a new proposal for a Regulation on the Connected Continent⁵ in an effort to face the crisis in the sector and to keep up with rapid digital and technological developments in many other areas of the world. The proposal focuses on some

3 [COM\(2014\)7174](#) - Commission Recommendation of 9.10.2014 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services.

4 Directive [2010/13/EU](#) of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive)

5 [COM\(2013\)627](#) - Proposal for a Regulation laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC and 2002/22/EC and Regulations (EC) No 1211/2009 and (EU)No 531/2012

specific aspects that, according to the EC, should be tackled in order to achieve a digital single market in the EU, which has been the historical objective of the Union. The specific issues addressed by the Connected Continent package are an effort to reduce red tape, to foster coordination of spectrum use, to support standardisation, to preserve the open internet, to reduce roaming prices and to enlarge consumers' right. The proposal of the Commission, however, has been widely criticized as inadequate given the level of the challenge, incomplete, lacking courage, contradictory and, not surprisingly, it is still under discussion.

Lastly, in May 2014 the Directive on measures to reduce the cost of deploying high-speed electronic communications networks⁶ was issued, with the aim of facilitating and incentivising the roll-out of high-speed electronic communications networks by reducing its cost. The Directive calls for the sharing and re-use of existing physical infrastructure, which are in turn expected to make the network deployment more cost efficient.

It should be noted that, in addition to the above mentioned legislative tools, the European Commission has been prolific in issuing numerous soft law instruments in order to facilitate the role of decision-makers, regulators, courts and private actors when operating in the communications and media sector.

All the legislative and regulatory measures adopted from 2010 onwards, have as their starting point the policy objectives laid down in the Digital Agenda for Europe 2020. The Digital Agenda for Europe is composed of 7 pillars: digital single market; interoperability & standards; trust & security; fast and ultra-fast Internet access; research and innovation; enhancing digital literacy, skills and inclusion, ICT-enabled benefits for EU society. The Digital Agenda is one of the flagship initiatives under Europe 2020, aiming to “*deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast internet and interoperable applications*”. The Digital Agenda includes a number of very practical goals, most recently revised in 2012, which need to be achieved in all member states by 2020.

How far we remain from these policy goals today and how can a re-examination and revision of existing regulation or the introduction of new regulations facilitate their achievement is one of the central topics for our present reflection.

6 Directive [2014/61/EU](#) of the European Parliament and of the Council of 15 May 2014.

2. Present challenges and possible responses

A change of direction for Europe to be competitive in the digital world

The liberalisation process of the '80s and 90's was accompanied by pervasive regulation of the European electronic communications industry strongly oriented by competition principles. This regulation focused on networks' interconnection, access and termination, and was highly successful in creating a widespread and lively services competition and even some infrastructure competition in most member States. However, today, this specific and sophisticated European regulatory construction is trembling under the Internet tornado.

The Internet has had an innovative but disruptive effect in the communications and media markets, completely changing market dynamics, companies' roles and their business models. Indeed, issues such as the explosion of data traffic and of online content, the market convergence (both broadband-broadcast and fixed-mobile networks), the protection of online users from a number of online threats (and therefore topics like cybercrime, data protection, online copyright, etc.), the Internet of things, are currently animating the sector specific debate.

The Internet revolution has created gigantic Internet native players, the so-called Over The Top service providers (OTTs), and has opened a deep tension between these actors (mostly non-European) and traditional telecommunications companies (Telcos). European Telcos originally were - and still are – contemporaneously building networks and offering services through them. On the contrary, OTTs started their innovative businesses by providing services without any need to worry about building and developing networks, i.e. they simply offer their services through existing networks worldwide.

Despite its tradition of technological excellence and of sophisticated pro-competition regulation, in many areas, today Europe apparently lags behind a number of other regions. European companies, which were once extremely competitive if not global leaders, appear not to be in a position to invest as rapidly as required in new technologies and do not always seem to be able to effectively compete with new worldwide Internet giants. Moreover, not only a number of European traditional players (especially network builders and device manufacturers) are facing a serious crisis, but the right conditions seem to be missing in order to stimulate the establishment and growth of new internationally competitive Internet players in the region.

Considering the political, economic and societal importance of the communications and media industry, it is time for Europe to react and transform the digital revolution in an opportunity for collaboration, development, innovation, economic growth and job creation. However, this needs to be done in an economic context of persistent financial crisis; therefore, the use of public resources to finance the construction of broadband and ultra-broadband networks is not an easy way out.

Looking at the situation as it is now, we can identify two possible future routes for European regulation of the sector, namely what we will call respectively the “*current route*” and the “*new route*”. The current route would basically mean leaving the European regulatory policy to continue in its present evolution, trying to progressively adapt and react to technological and markets changes. The new route would imply a more proactive approach with the establishment of a new balance between *ex-ante* and *ex-post* intervention and a more active pursuit of the preservation of fundamental rights of European citizens in the digital dimension.

In what follows, we will explore the pros and cons of these two concepts.

The current route

As mentioned, the major aim of the European regulatory intervention was to liberalise markets and to remove regulation once competition was been guaranteed. It is undeniable that a number of targets have been already positively achieved; in general terms, monopolies have been overtaken, the number of competitors has increased, and in various markets a workable level of competition has been ensured. Moreover, we have witnessed a spectacular growth in the sector: by way of example, mobile telephony has exploded, with a current penetration rate above 130%, and at the same time basic broadband coverage has been guaranteed to all European citizens.

Among the EU regulatory tools that have made these achievements possible, the following should certainly be mentioned: the intervention on number portability, which has significantly reduced the barriers to migrate among fixed and mobile operators; the lowering of termination rates, which has helped especially small operators to apply more competitive off-net prices; the unbundling of the local loop, which has created the conditions for more competition and for the establishment of flat rates; the separation of cable networks from the incumbents, which in a number of cases has been used to reach full divestiture, and, as a consequence, has brought cable as another carrier of intermodal competition in the broadband markets and triple play.

However, as mentioned above, the European Union approach is directed to the removal of regulation once a sufficient level of competition has been established on the relevant markets. Therefore, the 2002 regulatory framework, after the 2009 revision, should still be viewed from this perspective.

Nevertheless, although the list of relevant markets that, according to the European Commission, need *ex-ante* regulation has been regularly updated and significantly reduced, pervasive regulation still characterises the sector in Europe. Today, these regulatory instruments are called into question, especially because of the birth and rapid growth of the Internet and the growing role of OTT companies. Indeed, it is fair to say that the OTTs, that are mainly non-European companies, currently do not fall under the scope of application of the majority of European regulations, as they do not qualify as electronic communications service providers under the

European framework. Moreover, while the incomes of OTTs are constantly growing, traditional Telcos have been facing a prolonged trend of decreasing profits, and even losses, over the last years. The final consequence of this situation is that today, quite incredibly, the development of the Internet, instead of being perceived as an immense opportunity, rather appears like a threat for a large number of European players.

In this context, maintaining the “current route”, would have a number of consequences that *prima facie* seem to leave unresolved several relevant issues:

1. the permanence of the OTTs - Telcos conflict;
2. the lack of a common level playing field;
3. the commoditisation of the European networks;
4. the limited incentives to invest;
5. the increasing risk of business dispersion and disruption;
6. the increase in fiscal conflicts.

When analysing the current status of the electronic communication markets, and in particular the impact of the Internet, one has to start from the more active role of users/consumers in the digital era. Indeed, changing consumers' behaviours are at the basis of many new business models, because consumers constantly enhance the demand for online services and products and are asking for a fully connected world of services. In this context the conflict between OTTs and Telcos is the first issue that dominates the current debate. As already mentioned, OTT players are companies that offer their products and services on the Internet, which implies that, because of their very nature, they can only exist if there is an efficient and fast Internet broadband connection. In Europe, Telcos are the traditional Internet Service Providers (ISPs) that offer Internet connections to users. Looking at the issue in a very simple way, this means that Telcos play a basic and crucial role in the Internet ecosystem, as they are essential for the economic service chain to work. At the same time, OTTs, because of their innovative services, which match consumers' demand extremely well, are strengthening the need for ever faster Internet connections (mobile and fixed). In this respect, OTTs and Telcos start from a market position that has an important element of complementarity.

On the other hand, however, more and more new services offered “for free” by OTT players, which are essentially financed through advertising or the exploitation of other multisided markets externalities, directly compete with and crowd out services for which Telcos traditionally charge consumers using their networks (e.g Voice vs. VoIP, SMS vs. Instant Messaging). Thus, if on one side there is complementarity between the two actors – the need for more fast and ultra-fast broadband connections signifies new revenues for telecommunications operators -, on the other side there is direct service competition. Especially in the latter case, the current regulatory asymmetry between the two categories of actors appears problematic.

This leads to the perceived lack of a common level playing field. Telecommunications operators and OTTs indeed compete in a number of markets, the most immediate, as already mentioned, being the provision of voice calls and text messages (and they may soon start to compete also on Internet service providing). However, as mentioned above, the two players have to deal with different regulatory burdens (e.g. rules on access to competitors, universal service obligations, users' rights, security, price/cost regulation), which presently do not guarantee competition on equal terms. Theoretically speaking, the problem could be tackled in two different ways: by extending pervasive regulation also to OTTs or by relaxing part of the current regulation of the Telcos. However, extending the current regulatory regime, or even keeping it as it is, does not appear to constitute a realistic solution.

A closely related element of friction, which has generated a lively debate, is the risk perceived by traditional network operators of the progressive commoditisation of their services. If this happened, the economic interest in infrastructure investments would unavoidably decrease. The non-differentiation of products/services for Telcos would mean low profits and relatively lower interest in investing. However, the boom in data traffic, mainly due to OTT services, is challenging the existing infrastructures and, at the same time, consumers expect the level of Quality of Service (QoS) to be constantly improved, which is something that can only be ensured with innovation and investments in the networks. Over the last years, Europe has suffered an evident slowdown in infrastructure investments - which basically means in Next Generation Networks (NGN) - by several, if not all, major telecommunications operators. This cannot be explained only by the financial crisis of recent years, while it seems to confirm that Telcos have partially lost an economic incentive in investing when this is perceived as a way to further favour competing OTTs' services without creating an adequate opportunity of profit for themselves.

Worldwide, the enormous emphasis on the need for infrastructure investment in NGNs has often led authorities to public investment and/or to soften access regulation (both of copper and NGN infrastructures). While in the U.S. this resulted in the deregulation of fiber infrastructures already in 2002-2005, the EU has only now partially followed suit by recently softening price regulation of NGN wholesale access. Nonetheless, the EU leaves the door open for more stringent regulation if inter-modal competition and the competition from copper access prove to be insufficient. Given the highly uneven distribution of inter-modal competition in the EU, the new policy results in a strong reliance on competition from copper. However, the more successful NGA penetration, the less pressure can be expected from copper competition. Since efficient regulation in this area depends on the degree of urbanisation, population density and prior infrastructures, it is not clear if this is the most appropriate general policy, given that most residents of the EU do not have access to broadband cable. This may suggest implicitly or explicitly the necessity of revising the current regulatory framework, to provide for a geographical differentiation of access regulation.

A crucial issue, which has accompanied the policy debate concerning the Internet from its early days, and is closely related to the network investments issue, regards the so-called net neutrality principle. The Internet protocol permits every connected user to access all possible available content thanks to the Internet openness and non-discrimination features. This has always been regarded as one of the main reasons for its powerful and rapid development. Net neutrality is the policy standard through which these features are guaranteed. It means that all content should be treated equally, disregarding of the amount of bandwidth required and of the level of demand it generates. At present, in Europe, only two countries, the Netherlands and Slovenia, have adopted a law to establish a clear rule in favour of a net neutrality approach. The European regulatory framework explicitly states that NRAs should promote the interests of the citizens by, *inter alia*, “promoting the ability of end-users to access and distribute information or run applications and services of their choice” and introduces the competence of NRAs to set minimum quality of service requirements in order to prevent degradation of service (Directive [2002/22/EC](#)). These provisions have to be fulfilled with transparency obligations regarding the terms of service to apply to operators (Directive [2002/22/EC](#)).

The current regulatory framework, in brief, provides for a universal access to information for Internet users, together with the obligation of transparency regarding the various terms of use of the Internet connection and with a possibility for NRAs to set minimum quality standards. What has happened in the market, in fact, is that bandwidth-intensive applications, such as VOIP or P2P, have been in rare circumstances subject of blocking or throttling behaviours from ISPs, beyond the necessary traffic management (BoR (12) 30). Competition policy can play a role in these cases, but only in sanctioning abusive discriminatory behaviours from operators with significant market power. ISPs argue that the chance to charge content providers differently, based on their demand for bandwidth, would be essential to induce the right incentives to invest in the network, in times when the demand for bandwidth-intensive applications - “specialised services” - is constantly increasing and the incentives to invest are hampered by the economic crisis. On the other hand, if the “specialised services” were allowed to pay for a faster lane on the ISPs network, the fear is that they would grow at the expense of the best effort Internet and that they would fragment the market in many different Internets, whereas the strength of the online protocol has always been its ubiquitous and uniform access to all information, giving rise to an exceptional richness in the generated content. At present, the European Parliament is working on the Connected Continent package, which contains a stronger and open position in favour of net neutrality.

Business dispersion is another issue that is strictly related to the general conflict between OTTs and network providers. Services like text messaging and voice are increasingly IP based and this represents another serious and imminent challenge for the traditional business models and the economic equilibrium of telecommunications operators. In order to provide services that are competitive compared to the ones offered by OTTs, Telcos would need to re-adapt their business models and probably foster collaborative/partnership solutions with OTTs. However, the current

regulatory asymmetry may constitute an obstacle, certainly not the only one, for network operators in their need to evolve their business models, as they have to comply with a number of restrictive rules that do not concern OTT competitors.

Another asymmetric element among the two typologies of actors which is seen as an increasing reason of concern regards the level of interoperability: Telcos are regulated to apply strong interoperability rules, but OTTs often are not, i.e. you cannot communicate with a Whatsapp user unless you are on the Whatsapp network. The lack of interoperability sometimes constitutes an essential feature of these new business models. In practice, OTTs often compete with each other, fragmenting the service space and creating multiple walled gardens rather than an open interoperable scenario. The dual system of open and closed solutions might need to be further assessed in terms of competition and consumers welfare concerns.

Asymmetries between OTTs and network providers and thus the lack of a level playing field are also reflected in the fiscal conflict the two kinds of players are facing. So far OTTs have had the possibility of profiting from favourable fiscal regimes, which is not normally the case for national Telcos. In particular, while the latter do have to pay taxes in the country in which they have their network and sell their services, it is easier for OTTs to change the fiscal location of their activity and choose countries where the fiscal burden is lower. Recent investigations opened by DG Competition with regard to a number of Internet players aim to ascertain whether their profiting from preferential fiscal treatments may hide indirect State aid provisions.

In conclusion, there are a number of reasons for suggesting that the adoption of the current route does not seem to constitute a feasible solution in order to cope with all the current challenges of the communications and media sector in Europe and to reach a win-win situation for all actors. It is clear that, if no rigorous and timely action is taken to adapt the existing sector-specific regulation on a regular basis, in such a rapidly changing environment, it will be exposed to the risk of becoming obsolete.

Choosing the “current route” would mean abdicating the responsibility to face the real issues of relaxing excessive regulation, promoting European companies, fostering collaboration between the different players and favouring the diffusion of new business models in order to stimulate investments and innovation. The accumulation of too many unresolved conflicts is lowering investment and slowing down innovation in the European Union and this trend needs to be reversed.

The new route

The second path Europe could follow is what we will call the “new route”. In general terms, this route does not imply setting aside the results reached by current regulation, but rather undertaking a brave revision of motivations, boundaries and tools of regulatory intervention. It

also implies carefully looking at market developments and trying to direct them in order to avoid market failures, foster innovation and ensure a workable level of competition within the European Union.

In our view, two instruments need to be carefully balanced in this phase to guide industry developments: the use of public powers and the self-adjustment process of market forces. Clearly, these two instruments reflect different approaches: either an interventionist or a more liberal one.

If we look back at the last 20 years, the dominant approach adopted by the European Institutions has been towards the liberalisation of network industries in the interest of innovation and consumers' welfare. In order to achieve these objectives, with regard in particular to electronic communications, a number of legislative tools has been used to open up markets, to guarantee interconnection, access and termination to legacy networks and to ensure the availability of a minimum set of high-quality services for all users at an affordable price.

However, the European Union is not a State, but a supra-national union with limited competences which are conferred to it by its member states; in addition, the use of those competences is governed by the principles of subsidiarity and proportionality. Therefore, in many areas the European Union cannot directly intervene in order to regulate the markets or to impose new rules on market actors. In other words, European Institutions cannot act as a regulator outside the scope of the Treaties.

Nevertheless, what the European Union can do is to intervene in an indirect way. On the one hand, it can use a number of instruments to stimulate member states' direct action on the markets. On the other hand, it can measure and adjust regulatory ties that are imposed on market operators and which lie within its competences.

In this context, the “new route” may have at its disposal a number of potential actions, each one to be considered and balanced in its inherent overall effects:

1. the revision and direct support to State Aid policy toward the Digital Agenda;
2. the support to a merger policy toward a European single market;
3. the reduction of present regulatory burdens;
4. the largest possible reliance on competition tools;
5. the use of *ex-ante* regulation essentially to protect fundamental rights and public interests;
6. the major recourse to negotiated policies and agreed remedies.

An example of the first scenario is the strategic use of the State aid rules. It would not be the first time that the European Commission uses this instrument to reach specific policy objectives. Among others, the EC has already taken this approach with its guidelines for the application of

the State aid rules to the broadband sector, which have been shaped in a way to pursue the ambitious goals of the Digital Agenda in promoting very fast broadband connections throughout the EU. In fact, as it is well known, the guidelines contain a strengthening of open access obligations and improved transparency rules; moreover, they allow for well-designed public interventions targeted at market failures and aim at ensuring open access to State funded infrastructure.

The limit of this strategy is reached when member states, which are allowed and even invited to intervene, find themselves in a condition of funding shortage and thus cannot properly take the actions suggested. In this case, a solution would be for the European Union to intervene alongside the member States. A possible option is to engage in public-private partnerships (PPP) in order to support a particular European industry considered strategic for the future of the Union. In fact, this is what the European Commission has started with the 5G Infrastructure PPP, the contractual partnership built in order to contribute solutions to important societal challenges as identified in the Digital Agenda, for instance energy reduction in network operations or optimised radio frequency usage. European investments, alongside member States investments, to foster the Digital Agenda results offer a serious possibility in a time of economic crisis and limited public resources.

Another tool that can be used to pursue a European policy in the electronic communications sector is the re-orientation of mergers control. Looking at the European communications and media ecosystem, we see that a number of Telcos are trying to resist the strong competitive pressure exercised by new competitors, essentially the OTT players, by consolidating their presence on the market through a scale increase. Thus, they are pursuing a strategy of mergers and acquisitions, which is as usual subject to the examination and authorisation by the European Commission on competition grounds. A type of scrutiny, especially for cross border mergers, that strengthens and favours a truly European dimension of the industry in the direction of a single market, could leave players more freedom to redefine market forces equilibrium.

Another type of intervention that could be tailored to helping European markets is by easing certain regulatory burdens currently imposed on market players in order to increase their possibilities of operating. Here again it is possible to identify a number of concrete examples.

The European Union could rapidly pull back from those markets where a workable degree of competition is established. This seems to be the approach followed in the recently adopted revised Recommendation on relevant product and service markets within the electronic communications services. In industries such as communications and media, where technological change is quick and has a strong impact on market dynamics, the de-regulation exercise might be the most effective solution. In fact, commercial agreements and business strategies are well placed to cope with the rhythm of technology developments, while regulation is unavoidably

slower. However, close attention should be paid in order to guarantee that, even in these cases, a workable level of competition is always ensured on the marketplace.

Another option is the possible move from regulation to competition policy. In general, competition policy is not fit to deal with externalities and discriminatory practices in the absence of established market power, but it could become much more relevant in the current historical period where the tension between Telcos and OTTs is strong. Market de-regulation with *ex-post* control should be complemented with lower levels of regulation such as transparency requirements, especially on QoS and minimum quality regulation for basic services. This is particularly true when considering the issue of net neutrality, regarding which it needs to be guaranteed that ISP's traffic management techniques are transparent and do not hide discriminations, and that a minimum quality of connection is ensured even after the introduction of specialised services, which can be allowed only if there is enough capacity and not to the detriment of already existing services. Nonetheless, given the weak empirical incidence of net neutrality violations, even on this important topic it would be advisable to give priority to competition policy and activate new *ex-ante* regulation only when and if it is clear that competition policy is not sufficient.

Externality-related beneficial outcomes could also, potentially, be achieved by strengthening the consumer protection bureaus in competition policy agencies. In this scenario, there might be a need to re-shape the relation between *ex-ante* (regulation) and *ex-post* (competition) interventions. Probably the organization of a common task force of competition enforcers and regulators, both at European and national level, as was done at the beginning of the liberalisation process, could constitute a valid instrument to reassess the equilibrium of the markets, identify new situations of dominance, and redesign the borders between regulation and competition intervention.

In principle, our belief is that *ex-ante* intervention should be mainly used to protect fundamental rights and public interests, while the rest of policy objectives could be left to *ex-post* intervention. In other words, the European Commission should re-examine the core motivation behind each regulatory intervention and confirm only those aimed at the protection of European citizens' fundamental rights and freedoms or those that are essential to preserve a workable level of competition.

This is certainly the case for privacy and data protection, the safeguard of which should be equally ensured both in the offline and online dimensions of the communications and media market. Indeed, data play a fundamental role in the current and future sector dynamics as it has become an essential asset for many businesses; thus, in line with the need of a common level

playing field, the issue needs a regulatory approach that applies to the different players⁷. Consumers' trust in the online environment is at the basis of the latter's further development (be it with regard to online services and products, to e-commerce but also to the Internet of things and smart cities). In the long term, enhancing such trust will represent an added value both for OTTs and Telcos.

Taxation is another major front. The fiscal system is supposed to guarantee the redistribution of national wealth and to provide the State with the resources it needs to be able to perform the essential services and to comply with its solidarity duties. However, we have seen that Internet businesses create a conflict between the concept of "permanent establishment", on which tax rules are based, and the digital presence of firms in one country or another. It is now clear that the issue cannot be solved by market forces and a regulatory intervention, at the appropriate level, is needed.

While shaping these specific regulatory tools, due attention should be paid, on the one side, to the fact that companies operating in the communications and media ecosystem often have a global dimension. Therefore, any attempt to regulate those firms' behaviours exclusively within national, and sometimes even regional, boundaries is bound to be doomed. On the other side, global political actors and global powers are a scarce commodity. Two conclusions may be derived from this situation: first, any step the Commission will take has to be assessed looking at the European communications and media markets not in isolation, but as an integral part of a global Internet ecosystem and, second, European firms should be put in a condition to be able to compete on the global scene.

Focusing on media, the AVMS Directive introduced the pillar principle of the "country of origin". However, content is increasingly moving online and consequently the way audiovisual media products are consumed is deeply changing and new market players have entered the scene (e.g. social networks, search engines, online content providers, etc.). The foreseen 2015 revision of the Directive should respond to the current changes in consumers' behaviours and anticipate future trends. Convergence is the core of the current revolution, in the context of the revision process it is of great importance to strictly coordinate the AVMS Directive with the relevant legislation in the electronic communications sector. Moreover, it may also be important to consider the establishment of independent and coordinated (at European level) National Regulatory Authorities, along the lines of what happened for the electronic communications sector.

⁷ The Proposal for a Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) can be a starting point for that.

Another issue, which is central to the debates in both the electronic communications and media sector and that is strongly related to media convergence, is online copyright. The consequence of the current situation, which is mainly based on an obsolete Directive that leads to a “country by country approach”, is that in the EU there are 28 different legislations, inevitably constituting a threat to the single market. Indeed, the situation as it stands today is problematic both for creators and for consumers. In fact, the latter are facing issues such as content that is accessible only in some member states (blocked in others), content from home country that is not accessible when in other EU member states, content from home country for which a subscription has been paid that is not accessible when in other member states, content offered at different prices and conditions in the different EU countries. With regard to the authors, it is obvious that the online world constitutes both an opportunity (lowering costs for production and distribution) and a threat (piracy definitely becoming easier online). The need for a new future proof regulation that takes into account the progressive technological developments is self-evident.

In synthesis, we suggest that where no fundamental rights are at stake or an immediate danger for competition is present, the European Commission could de-regulate and rely on commercial negotiations among players as the driving force for market developments. We have mentioned that, in our view, firms are better placed to cope with the fast pace of technological changes and to adopt a cross-sectorial approach which is more in line with the convergent trend of a number of markets, as opposed to sector-specific regulations, and thus can better contribute to the creation of a level playing field among different actors.

In any circumstance, a workable degree of competition should always be guaranteed on the marketplace. No return to a monopolistic situation can be in the interest of European consumers and citizens. As a consequence, an *ex-post* intervention of the European Commission is desirable any time there is a need to correct market failures, stimulate innovation and contribute to the maintenance of a competitive and effective business environment.

However, also when antitrust issues arise, the specificity of the ecosystem at stake is to be taken into due account. In fact, the communications and media markets change at a very fast pace. Therefore, the European Commission or NCAs should assess whether the intervention could be able to correct market failures in a reasonable amount of time. If the answer is negative, it may be wiser to adopt a “wait and see” approach, observing how companies and society react to the market failure in the short-term.

On the contrary, if an intervention is deemed to be in any case essential, and time is a decisive factor, it may be the case that relying on persuasion, and thus engaging in negotiations with the undertakings concerned, could pay out more than adopting a punishment strategy, which is unlikely to be truly effective when technological realities change too quickly and obligations with a detailed content are unlikely to remain up to date.

In conclusion, a “new route” for the future of the European communication and media industry could be an optimal and balanced mix of more public policy toward investment in NGNs, more cross border consolidation, less *ex-ante* regulation, a fair amount of *ex-post* competition control, a strong regulatory presidium of fundamental rights of European citizens, and a new capacity to negotiate market solutions with players.

Chapter 3: Transport

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The overarching goal of the European Union is the creation of a Single European Transport Area (SETA) and the completion of the Internal Market for the transport of goods and passengers. This was outlined in the 2011 White Paper ([COM\(2011\)144](#)), accompanying Staff Working Document ([SEC\(2011\)391](#)) and the Single Market Act II ([COM\(2012\)573](#)). Corresponding activities of the European Union date back to the Rome Treaty (1957) and have mainly been undertaken in a sector specific approach, i.e., transport mode by transport mode. This overarching objective raises a series of challenges in all the transport modes.

The Florence School of Regulation Transport Area (FSR-Transport) has focused, so far, on four of these modes, namely railways, air transport, urban public transport and maritime transport (waterways). We have not addressed road transport yet, which will therefore not be covered by this Manifesto. However, we will address postal and delivery services, which have been a traditional activity of FSR-Transport and FSR-Communications and Media jointly. Furthermore, transport is intrinsically international. However, in this section we do not cover the role that the EU does and should play in the global arena and focus exclusively on the challenges that arise from the goal of creating an internal European transport market. Also, we take for granted the commitments of the EU in matters of safety, security and environmental protection. In this introduction, we will briefly present the five main challenges of the EU when it comes to creating a Single European Transport Area, as we see them, namely (1) the elimination of barriers between States and modes, (2) market distortion and competition, (3) the introduction of the Information and Communication Technologies (ICTs), (4) decarbonisation, and (5) social sustainability. All these challenges will be found again in the discussion of each transport mode below.

The first and most important challenge for the EU is the *elimination of barriers between Member States and modes*. More precisely, there is the challenge of harmonizing the historically national approaches to transport, which are most visible in the railway sector. Yet there are limits to harmonization as countries and their transport systems also vary, and because of regional specificities, not the least due to different geographic situations. Such harmonization pertains to

technical matters (interconnection and interoperability), to financing and to institutional setup, as they all have the potential to lead to market distortions in the different transport modes between countries as well as between the transport modes themselves. Indeed, there is also the challenge of integrating the different transport modes into a coherent intermodal European transport system.

The basic EU approach to network industries has always been one of distinguishing between the infrastructures on the one hand and the services provided on the basis of these infrastructures on the other. This approach is also systematically applied in the different transport sectors. From this theoretical separation a series of challenges related to *market distortion and competition* arises. First, the legal framework should be stabilised: the focus between 2014 and 2018 should be put on effective and symmetric implementation of this framework in Member States. Secondly, a readjustment of the intermodal framework conditions is needed in order to improve the competitiveness of rail, in particular through correct application of the internalisation of external costs principle and in order to prevent one-sided increases in factor costs. Thirdly, the Commission should focus on the problem of insufficient infrastructure funding by providing assistance through EU-funding. Fourth, the Commission will have to deal with the imperfect market situation that has been caused by un-harmonized subsidies and framework conditions between the transport modes as well as between the countries. Last but not least, a new approach to pricing is needed: the costs of transport should be reflected in its price, which means that both correct and consistent monetary incentives and user charges should be applied.

New technologies and innovation (meaning research and deployment) will play a key role in the establishment of both the SETA and of economically, environmentally and socially sustainable infrastructure operations. The *introduction of the Information and Communication Technologies* (ICTs) in the different transport modes (for instance through research and development such as Shift2Rail and the various technologies developed under the SESAR⁸ framework for the air sector), as well as supporting their implementation, is one of the most urgent tasks for European policy makers. In short, the main challenge for the new Commission pertains to two aspects: on the one hand, the Commission has to build a legislative framework that favours rather than stifles technical innovation and, on the other hand, the new legislation should promote technological innovation and related standards in a way that reduces market distortions.

Transport is particularly energy-intensive. As energy, especially in transport, still stems mainly from fossil fuels, another very important challenge is to *decarbonize* the different transport modes without sacrificing their efficiency and without curbing mobility. There are two main components to achieve the reduction of oil dependence and the reduction of greenhouse gas

⁸ Deployment of the Single European Sky ATM Research according to the [European ATM Master Plan](#)

emissions, namely a more efficient use of resources and the phasing out of carbon fuelled vehicles.

The other cross cutting challenge relates to the *social sustainability* of transport: the SETA can and should only be achieved in compliance with the respect of working conditions and passengers' rights. Reform processes have to be accompanied with an appropriate level of involvement of the concerned groups namely staff representatives and passenger associations. The challenge is to guarantee that this is respected on the European as well as on the national and regional levels.

The Commission has developed several principles that relate to all modes of transports. Now the aim is to look at transport regulation as *mobility regulation* and to overcome the fragmented sectoral approach. This is essential to addressing what should be the central reference point for regulation: the needs of the users. Passengers and freight transport customers alike need reliable, efficient and affordable connections. To provide for these, while simultaneously promoting the use of more sustainable modes of transport, an intermodal approach indispensable. Yet to evaluate the specific state of play in the diversely structured transport sectors, it is important to examine the challenges in the railways, the air transport, the urban public transport, the waterways and the postal and delivery sectors separately.

1. Railways

The past decade has seen extensive changes and new initiatives in the de- and re-regulation of railways at the European level. To recall, the ultimate goal of the Commission is to create a Single European Railway Area (SERA). The strategy to achieve this vision was set out in the First Railway Package of 2001. However, the first initiative to extend the Single Market to the Railway Sector dates back to 1991 ([91/440/EC](#)). After almost 25 years of regulatory fine-tuning and new legislative initiatives, the general institutional framework and the broad market structure are taking shape. Today, the main focus of the European Commission lies on the transposition of the so-called Recast of the First Railway Package ([2012/34/EU](#)) as well as on the completion of the Fourth Railway Package.

State of play and achievements

The Commission's "regulatory toolkit" for the network industries is proving particularly challenging when applied in the case of the railway sector. Consequently, many of the proposed concepts are not yet implemented. The Commission's main achievements pertain to the organization of railway undertakings, to railway regulation and to infrastructure development.

The Organization of Railway undertakings: to recall, the Commission advocates a model of full vertical separation between transport services and infrastructure management so as to guarantee

fair market conditions for new entrants. So far, two models of railway organization have emerged: some Member States have fully separated the railway infrastructure from transport operations (e.g., Denmark, Portugal, Spain, Sweden and the UK), while other Member States have implemented a holding model as is the case in Austria, Germany, Greece, Italy, Poland and France. However, there is today no general consensus as to the optimal model for the organization of railway undertakings. The regulation allows both the integrated and the fully separated model. The argument from the supporters of a more integrated railway system is that vertical separation prevents overall system optimization, causes duplication of fixed costs and may reduce the potential for technical innovation covering all stakeholders in the rail system.

The current legislation foresees that this “freedom of organizational structure” should not be questioned. Directive 91/440/EU, Directive [2001/14/EU](#) and the Recast have already introduced independent management for State-owned railway undertakings along with legal, organisational and accounting separation as well as functional separation (regarding the ‘essential functions’ track access and track pricing) between the infrastructure manager and the railway undertaking. The Commission’s proposals for the 4th Railway package would introduce even stricter unbundling requirements for all tasks of the infrastructure manager by extending the definition of essential functions. The Commission further supports a ‘verification clause’ according to which integrated railway companies could be banned from operating abroad, if they do not guarantee free access in their home country (Art. 7, 7a, 7b, 7c, [COM\(2013\)29](#)).

Independent Regulators and European Railway Agency: just as in the other network industries the key element of European railway governance has been the creation of Independent Regulatory Bodies (IRBs) to supervise the functioning of the market. Overall, there has been significant progress in the establishment of such national regulatory bodies in all the Member States. However, full independence and sufficient resources are still not the case everywhere⁹. The Recast provides for truly independent regulators constituting a “stand-alone authority which is, in organizational, functional, hierarchical and decision-making terms, legally distinct and independent from any other public or private entity” (Art. 55, 2012/34/EU). The rail regulator may however be part of an integrated cross-sectoral regulator as is practiced for instance in Germany and the Netherlands. Full implementation of the Recast will further improve the relevance of the regulators, also thanks to the establishment of the “European Network of Rail Regulatory Bodies” (ENRRB), which could constitute the nucleus of a future pan-European railway regulatory regime.

⁹ [7th Florence Rail Forum](#) “Current Challenges of Rail Regulation in Europe: the Regulators’ View” (Florence, 29 November 2013)

Financing of infrastructure: while ensuring the right level of investments in the whole railway sector remains as a major challenge¹⁰, some important steps in providing a better basis for sustainable infrastructure funding have been taken. The TEN-T core network ([2013/1315/EU](#)) includes, among others, the upgrading to high-speed of more than 15.000km of European railway infrastructures, the rail connection between airports and cities, and the connection of ports with railways. All these projects are eligible for funding via the Connecting Europe Facility ([2013/1316/EU](#))¹¹. On the other hand, direct funding by the EU for rail projects has increased with a particular focus on freight transport. In particular for the freight sector the right planning of infrastructure investments remains crucial. To ensure that investments are made in a way that they benefit operators, these have to be included at an early stage.

Further, the Recast has introduced an important mechanism that should provide appropriate funding for the maintenance of rail networks. Also, the network manager has to adopt a plan of at least five years, which takes into consideration future mobility needs and determines how much funding will be made available for investments in maintenance and renewal. In this way, the Recast contributes significantly to a more sustainable railway funding scheme. Another important element in the Recast is the obligation for Member States to conclude multi-annual financing agreements with infrastructure managers.

Remaining challenges and possible responses

Some significant challenges remain when it comes to achieving the Single European Railway Area. Besides financing, which remains before all a national challenge, the Commission must progress especially in the areas of transparency, technology, passenger transport and inter-modal competition.

Transparency remains as a key challenge. It serves as an important tool for a more efficient rail sector in several aspects. To recall, the Third Railway Package had already introduced more transparent procedures for Public Service Obligations. But the Fourth Railway Package will now also require a coherent justification for direct tenders of such Public Service Obligations. Transparency is also needed in matters of Access Charges, as this will help overcome distortions resulting from (non-transparent) pricing mechanisms as applied by some infrastructure managers. With regard to transparent track access pricing, rules are laid down in Directive 2001/14/EU. Further, the Commission is working on an implementing act based on Article 31 (3) of the Recast which sets out consistent and transparent principles for taking into account direct

¹⁰ [8th Florence Rail Forum](#) “Rail Infrastructure and Rolling Stock: investments, asset renewal and regulation” (Florence, 28 April 2014)

¹¹ At [this link](#), the Innovation and Networks Executive Agency of the European Commission listed the projects in the rail sector so far awarded of EU funding (last visit 14/11/2014) for a general overview, see also: European Commission “Connecting Europe Facility: investing in Europe’s growth”

costs for the calculation of track access charges. With regard to the transparency of capacity allocation, Directive 2001/14/EU and Article 38 et seq. of the Recast provides strict rules for clear capacity allocation processes. With regard to the transparency of financial flows within railway undertakings, Art. 6 (4) of the Recast on Separation of Accounts already contains strict rules on the prohibition of transferring public funds from one activity to another and extends the rights of the regulatory authority to control these financial funds. These rules must be implemented. Finally, in its first reading of the Fourth Railway Package, the European Parliament proposed a financing cycle: unless profits are retained within its business, the infrastructure manager's profits may only be used for a single purpose - the payment of a dividend to the ultimate owner, who in turn is obliged to completely reinvest these resources in the infrastructure.

Implementation of common technical standards/interoperability: railway technology, notably technological harmonization and especially the harmonization of technical standards remains a major impediment both for both freight and passenger transport companies to operate in different markets. The creation of the European Railway Agency (ERA) in 2004 ([Regulation \(EC\) No 881/2004](#)) and the parallel introduction of the Technical Standards for Interoperability Directive ([2004/50/EC](#)) have been a first step towards interoperability. However, numerous technical market entry barriers due to technical problems still exist such as lengthy and costly vehicle authorisation procedures which directly impact the competitiveness of rail transport in Europe. The Fourth Railway Package addressed these issues to a significant extent. Actually, the so-called Technical Pillar seems to be the least controversial¹² of the Commission's recent initiatives, introducing, among others, a single safety certificate that would be valid and recognized in all Member States. While this would mean a major improvement for all cross-border rail operations, much remains to be done. Almost 50% (in t/km) of the EU rail freight market is international, but the rail freight sector faces immense obstacles from the lack of harmonized technical standards and lengthy procedures for authorizations of rolling stock. As for the institutional side, the role of the European Railway Agency will also need to be strengthened.

National passenger transport: the Fourth Railway Package aims at the liberalization of passenger transport to be completed by 2019. Member States have made varied progress and will continue to have different views on the role of competition in the different areas of passenger transport. The opening of the national passenger market will therefore be very controversial. Also, there will be a conflict of models: while the Commission foresees that the majority of the passenger transport will follow competitive open market model, competition *in* the market today still remains the exception and most of the competitively awarded transport lines in Europe remain

¹² [7th Florence Rail Forum](#) "The Technical Pillar of the 4th Railway Package: Challenges for Standardisation and Interoperability" (Florence, 27 May 2013)

attributed along the competition *for* the transport model. Therefore, the Commission's approach has evolved in this regard and PSOs are generally accepted.

Intra-modal and inter-modal competition: there is indeed little progress when it comes to creating a level playing field for intermodal competition. One of the major, if not the most important remaining challenges is the alignment of costs for using road and rail infrastructures, as well as the internalization of externalities of the different transport modes. The EU set the goal to reach a 30% shift from road freight to rail freight for journeys of over 300 km by 2030 and over 50% by 2050. This goal is however already now almost impossible to achieve, as there is no clear cross-modal strategy to implement it. If the ambitious goal of a level playing field is to be taken seriously, it will be necessary to include modal shift as a goal also in the other transport modes.

2. Air Transport

The removal of barriers towards an internal air transport market has made significant progress during the 2nd Barroso Commission, especially in matters of competition among air transport carriers. Nevertheless, more than in other sectors, concerns about national sovereignty continue to determine the agenda of European aviation policy, as is particularly visible in the case of the Single European Sky, which has turned out to be the main focus of the Barroso Commission.

State of play and achievements

To recall, the European aviation policy is concerned with the rules for the internal market for air services, airports, international agreements, the integration of the European airspace, air safety and security, passenger rights, and environmental protection.

Prior to the Barroso Commission, air transport liberalization was achieved by way of three air transport packages, resulting in the creation of the *internal air transport market* as of January 1993. "Stand alone cabotage", the ninth and last so-called Freedom of the Air was realized in 1997, thus completing the *internal market* for air transport services. As a result, especially former national flag carriers have come under pressure by low cost airlines, forcing a concentration process among them. On the other hand, low cost airlines have grown exponentially since and account today for approx. 25% of European air transport market share.

Also in the 1990s, measures were taken to facilitate the access of airlines to *key infrastructures and services*. In 1993 the EU Council started to regulate airport slot allocation by way of its [Regulation \(EEC\) No 95/93](#), which, as variously amended, remains the only piece of European legislation in this matter. The aim of this regulation was to offer certain priorities to new entrants when it comes to allocating recently available slots. However, 8 years later the effectiveness of this Regulation remains highly contested by new entrants, as well as by experts, as capacity

remains scarce at many European airports at peak hours. As a result, the Commission is currently proposing new legislation to amend the slot allocation regulation focusing in particular on a slot-trading approach ([COM/2011/0827](#)). The proposal that is part of the so-called “better airport package” has however not yet been adopted.

Similarly, the market for *ground-handling services* was opened by EU Directive in 1996 ([EC 67/1996](#)). The aim of this Directive was to make ground-handling services more cost-efficient as well as to increase their quality. As part of the better airports package the Commission plans to replace and repeal this regulation to guarantee a more efficient system and the complete liberalization of ground handling services. The proposal ([COM/2011/0827](#)) that was brought forward in 2011 is however still under negotiation between Parliament and Council. The Commission proposal foresees, amongst others, a minimum number of three service providers for ground handling services at larger airports.

Also, the European Court of Justice confirmed the Commission’s legitimacy in negotiating *international air services agreements* in 2002 with a special focus on its Open Skies ruling (Judgments of the Court, 5 November 2002). Since then, the European Commission has been successful in negotiating a large number of Air Services Agreements with third countries, most of them replacing the existing bilateral agreements between the Member States and third countries. The 2nd Barroso Commission has built on these successes and has further structured their approach with the 2012 communication “The EU’s External Aviation Policy - Addressing Future Challenges” ([COM\(2012\)556](#)). It has proven its capability and is now following the right approach to its overall external aviation policy.

The *Single European Sky* (SES) initiative was launched in 2004, with the objective of defragmenting the European airspace, yet it remains far from completion. However, in spite of failing to implement the Single European Sky by 2009 as was initially set as a goal, some achievements were made in the reform of the European Air Navigation Service (ANS) system. The most important progress made pertains to the separation of regulatory and service provision functions, the establishment of national supervisory authorities in all Member States, the designation and certification of Air Navigation Service Providers and the implementation of transparent route charging systems as foreseen by the European Regulations of the first SES package. The legislative framework for the SES that was established in 2004 was amended by a second package of legislation (SESII) in 2009, which set up a new rule making and governance framework, leading, among others, to a performance scheme, the creation of Functional Airspace Blocks, the Single European Sky Air Traffic Management Research and development program (SESAR) and the strengthening of EASA. Another development of the SES framework (SES II+) is currently under consideration.

Commission [Regulation 691/2010](#) established the so-called *performance scheme*, as performance is the central element of the SES2. In order to implement it, a Performance Review Body was

assigned by the Commission to set up EU wide performance targets in the key areas of environment, capacity/delays and cost efficiency. These performance targets were adopted for the first reference period by the Commission in early 2011 ([Decision 2011/121/EU](#)). The Commission designated the Performance Review Commission of Eurocontrol to act as the Performance Review Body and to produce regular reports on the progress towards achieving the performance targets. In the field of safety performance, EASA has been tasked with setting up safety performance indicators.

Functional Airspace Blocks (FABs) were already part of the first SES package and further enforced in SESII as an intermediate step to a fully integrated Single European Sky. Their implementation has been far less successful than hoped. Member States were originally required to set up the FABs by the end of 2012; most however failed and the Commission initiated infringement procedures. The Commission supported their establishment by making available guidance material and by setting up the FAB coordinator who reports regularly on the progress. The FABs are furthermore eligible to be supported with funds from the TEN-T.

The technological pillar enabling the Single European Sky is moving to its crucial phase with the deployment of the first solutions developed by *SESAR* planned for 2015. After the successful development of a variety of ATC technologies, the focus now lies on organizing their deployment. The Pilot Common Projects are a set of ATM functionalities developed by *SESAR* that are mature enough to be deployed on a cross country scale. Yet the complications in the decision making process show the difficulties that will need to be overcome to deploy standardized technology in a harmonized and synchronized way. The European ATM Master Plan set the course for the technologies to be developed and deployed. It was adopted in 2009 and revised in 2012. The *SESAR* JU that was set up to carry out the *SESAR* program was largely successful and in terms of outputs created and research projects completed *SESAR* has been a success. However the transition from development to deployment will be more complex and also more conflictual. Stakeholders need to be involved and the Commission has selected a deployment manager to carry out this task as of November 2014.¹³

The role of *EASA* – the European Aviation Safety Agency – has consistently become more important since its foundation in 2002. The SES2 package of 2009 has added a new field of responsibility by extending its tasks to include air traffic management and air navigation services, as well as the safety of aerodromes ([Regulation 1108/2009](#)). *EASA* works closely with the Commission. The regulation has furthermore put *EASA* in charge of ensuring the proper coordination of safety rules. Future institutional developments could expand the mandate of the *EASA*, which could eventually become the European regulator for aviation.

¹³ [5th Florence Air Forum](#) (2014) “Making effective use of technology in *SESAR* deployment” (Florence, 24 March 2014)

One of the biggest concerns in the reform processes of the SES is the appropriate level of involvement of *staff representations* and the regard for the social dimension of the process. The challenge is that, while the EU has always stressed this importance on the EU level, it is not competent to enforce the same degree of involvement on a national level. The Commission advocates a three layered approach consisting of the national, European and FAB level.

Passengers have benefited from several initiatives by the Commission in the air sector. This has been in particular the result of pressure from the European Parliament which has become more influential in the last legislative term due the institutional reforms of the Treaty of Lisbon. Passengers are now entitled to compensation in the event of denied boarding or loss of luggage. The EU set up a website and an information campaign to inform passengers of their rights. Nevertheless, passenger rights groups state that these rights are still being enforced poorly. The challenge in this field has moved on to enforcing the application of the rules that have been adopted. Nevertheless the Commission has taken another initiative to ensure proper enforcement of passenger rights in the air sector ([COM\(2013\)130](#)).

The extension of the EU *Emissions Trading Scheme* (ETS) to airlines finally took effect in 2012 after intense debate, criticism and litigation, leading to a judgment of the European Court of Justice confirming the validity of ETS. Technically all airlines flying to, from and within Europe must now report their emissions and acquire corresponding allowances. However, the debate is not finished, as the ETS for the air sector is currently put on hold for flights going to or coming from outside the European Economic Area. This so called “stop the clock” deal has recently been extended until 2016 and shall be lifted as soon as a solution for the global level is found through International Civil Aviation Organisation (ICAO). The current situation disadvantages the airlines operating only within Europe, however the inclusion of external flights will prove extremely difficult, as, for instance, US legislation might forbid US carriers to comply with the ETS. In the current situation a lot depends on ICAO’s capability to find a deal that is satisfactory for all sides.

Remaining challenges and possible responses

In spite of the gradual achievements many substantial challenges remain.

Implementing the Single European Sky: with the SES2 package the Commission has moved towards a strategy of focusing strictly on performance. This can deliver results and bridge political resistances, as achieving greater performance is a goal that all Member States can agree upon. The problem with this approach is, however, that there are not yet any functional sanctioning mechanisms available at the EU level. It has to be acknowledged that, in the current system, many important actors do not support the ambitious Commission approach: when there is no acute pressure to increase performance because of capacity shortages, national ANSPs do not face enough incentives to significantly lower their costs and States are reluctant to

compromise on air space sovereignty for the sake of a better performing ATM system. On the other hand, there are technical solutions available that can bridge these differences, but they need to be implemented, which requires political leadership. These include a shift from monolith integrated infrastructures shaped by national considerations to open systems and shared services to reduce the costs of individual control centres¹⁴.

Noise regulation: a compromise could be found on noise regulation. A corresponding regulation was proposed that will harmonize and strengthen rules on operating restrictions at EU airports, so as to limit noise-related nuisance, in particular when it comes to night flights (Regulation [598/2014/EU](#)). It will continue to be difficult for the EU to make decisions in this field without infringing on the subsidiarity principle, as this is still considered a responsibility of the region where the airport is located.

Airports, bottleneck on the ground: airports and their capacity can be considered today to be the bottleneck to facilitating greater traffic volumes. A more efficient ATM system will eventually be limited in its effect if capacities of airports are not used in a more efficient way. This is why a lot of effort of the Commission has been focused on improving the performance of European airports. The progress in terms of finding a compromise on regulation has however been slow: in 2011 the Commission proposed a “better airports package” which included three regulations, two of which have still not been adopted. Especially slot allocation remains a problem: the proposal for a recast regulation on slot allocation should introduce common rules for a more efficient and transparent procedure of allocating slots at congested airports. Consequently, airlines will be given the possibility to buy and sell airport slots allocated to them. Airport slot allocation could also be largely improved if better technical systems were deployed than is currently the case.

3. Urban Transport

The European Commission’s actions in the field of urban transport undertaken during the period 2009-2014 are based on the Green Paper “Towards a new culture for urban mobility” ([COM\(2007\)551](#)). In particular, the adoption of the Action Plan on Urban Mobility in September 2009 is the first result of the broad debate that was opened by the Green Paper on key issues, such as greening of towns and cities, smarter urban mobility, as well as more accessible safe and secure urban transport. The 2011 White Paper ([COM\(2011\)144](#)) also covered urban transport and in 2013 the Commission came up with an Urban Mobility Package ([COM\(2013\)913](#) and related annexes and staff working documents) to address the initiatives called for by the White Paper.

¹⁴ [4th European Air Transport Regulation Forum](#) (2013) “Consolidating the Single European Sky: From Physical to Virtual” (Florence, 22 April 2013)

Sate of play and achievements

In line with the principle of subsidiarity, urban mobility is primarily a local responsibility. Therefore, different from the other transport sectors, harmonization in urban transport entails *sharing responsibility between local, national and European authorities*. This mainly leads to non-binding measures that can be implemented at the national and local levels. In fact, there is a long tradition of EU intervention and support in different areas thanks to soft law measures, which refer to the definition of the policy framework, funding (both for research and innovation and for implementation), facilitation for the exchange of experiences and best practices, along with awareness-raising. So far, such sharing of responsibility has been done successfully by the Commission.

The Commission and the Member States thus develop national operational programs based on the specific situation of each region and country, namely with the goal of promoting sustainable urban public and private transport. In terms of *financing*, this is mainly and successfully achieved by way of co-funding from European programs. The most important such sources are Horizon2020 (Mobility for Growth, Green Vehicles, Small Business and Fast Track Innovation for Transport), the European Structural and Investment Funds, which allocate several billion € for urban mobility projects, along with the CEF funds for TEN-T projects, which include also urban nodes.

The *Information and Communication Technologies* play a pivotal role in addressing the major environmental, societal and health challenges that European cities are facing today. Intelligent Transport Systems (ITS) can significantly contribute to a cleaner, safer and more efficient transport system. A corresponding new legal framework, aimed at accelerating the coordinated deployment and use of intelligent transport technologies across Europe, has successfully been adopted in July 2010 (ITS directive [2010/40/EU](#) and following working programme [C\(2011\)289](#)). This Directive builds upon the 2008 Action Plan for the Deployment of ITS in Europe ([COM\(2008\)886](#)), even though its implementation has been quite slow).

In order to drastically reduce GHG emissions without reducing mobility, as well as to tackle the issues of scarcity and uncertainty of oil supply in the future, the European Commission set the following goals in the transport sector: minus 20% CO₂ emissions by 2030 (compared to 2008 levels) and minus 60% CO₂ emissions until 2050 (with respect to 1990 levels) ([COM\(2011\)144](#)). On the one hand, the promotion of *clean and energy-efficient* road transport vehicles had already been addressed in a Directive ([2009/33/EC](#)) that aimed at a broad market introduction of environmentally-friendly vehicles. This regulation also refers to the Public Procurement Directive and the Public Service Regulation. On the other hand, in January 2013, the European Commission published the package Clean Power for Transport ([COM\(2013\)17](#)), which has led to the final Directive on the deployment of alternative fuels infrastructure adopted by the European Parliament and the Council in September 2014 ([2014/94/EU](#)). Since urban areas

account for 40% of all CO₂ emission from transport, cities need to make more progress in shifting towards more sustainable modes of urban mobility. In the 2013 Urban Mobility Package ([COM\(2013\)913](#) and related annexes and staff working documents) the European Commission reinforced its support for a competitive and resource-efficient urban mobility¹⁵.

Citizens choose whether they want to use a private or a public means of transport. And the reasons behind such individual choice is the discriminating factor on which policies should focus. The European Commission strongly encourages the use of public transport. However, several factors determine the ultimate customer choice and the answer mainly lies at the local level. Here, the Commission focuses on the promotion of exchange of best practices aimed at assisting public authorities with the implementation of the EU Directives (www.eltis.org) and with the development of Sustainable Urban Mobility Plans ([SUMP](#)).

Remaining challenges and possible responses

Building on the current situation and the path outlined in the recent Urban Mobility Package, the main challenges in the urban transport sector for the next legislative period are as follows:

Keep a local focus in the accomplishment of the Single European Transport Area: there has to be the recognition that challenges (congestion, pollution, sustainability of the system from a socio/economic/environmental point of view) are common, yet the solutions must ultimately be implemented at the local level. Therefore, there is a need for a good balance between binding obligations aimed at harmonizing the regulatory framework throughout the EU and subsidiarity. Recommendation for coordinated action in specific areas such as urban logistic, access regulations, ITS deployment, and road safety are defined in the Urban Mobility Package and should be promoted together with the Member States, which will then monitor the implementation by the local authorities.

Funding for innovation and research and funding for implementation: the commitment of EU funding for urban transport and smart mobility is clear and the framework for such funding is defined. However, the challenge of deployment of the EU funds remains: firstly and foremost, research and testing of innovative and integrated strategies addressing energy, transport and environmental objectives should be widely supported (for instance extending the scope of the [CIVITAS initiative](#)); secondly, market introduction of technologies developed thanks to the cooperation of public and private actors should be encouraged (such as fuel cells and hydrogen as an instrument in achieving a carbon-lean energy system with the [FCH JU](#)); thirdly, the

¹⁵ [4th European Urban Transport Regulation Forum](#) (2013) “Sustainable Urban Mobility: a case for regulation?” (Florence, 30 September 2013)

[5th Florence Urban Transport Forum](#) (2014) “Energy efficiency in urban public transport” (Florence, 27 October 2014)

involvement of civil society and local communities should be favoured so as to implement agreed smart cities solutions along with the exchange of best practices (for instance thanks to the [EIP-SCC](#) that brings together cities, industry and citizens to improve urban life through more sustainable integrated solutions).

*ITS deployment*¹⁶: along with the adoption of the ITS Directive, the European ITS Committee and an ITS Advisory Group were established to support the Commission in the implementation of the priorities listed in the working programme of this Directive. So far, the ITS Directive has been an efficient tool for the rapid adoption of common specifications for the first three priority actions (as per the Report released in October 2014 by the European Commission [COM\(2014\)642](#) and related Staff Working Documents). However, some priorities that have not successfully been tackled so far and should be re-addressed. Therefore, and in line with the major initiative [EasyWay](#) (a project for EU-wide ITS deployment on the Trans-European Road Network), more should be done in matters of ITS deployment in urban transport.

Green transport implementation at the urban level: the deployment of alternative fuel infrastructures ([2014/94/EU](#)) should be the priority for the upcoming legislative period and the European Commission should support and monitor the progresses of the Member States in performing their tasks. As far as the Clean Vehicles Directive is concerned ([2009/33/EC](#)), the implementation should also be monitored and favoured in order to allow economies of scale and reduce the costs for introducing new technologies. Initiatives, such as the STEER strand of the [Intelligent Energy Europe](#) programme (focusing on alternative vehicle propulsion, policy measures for the more efficient use of energy in transport, and strengthening the knowledge of local management agencies in the transport field), along with the [Clean Vehicle](#) portal (which offers access to database system of vehicle data with the aim to ensure a level of demand for clean and energy-efficient road transport vehicles and to encourage manufacturers to invest in development of vehicles with low energy consumption, CO2 emissions and pollutant emissions) should be promoted.

Answer citizens' needs: an attractive public transport and smart mobility incentives: easy access to travel information and integrated ticketing are key areas in both the development of an attractive transport offer (public authority level) and the awareness-rising of the existence of alternatives to private transport (citizens level). Next to the essential behavioural change, additional policy actions are needed. Thus, the structural promotion of a sustainable mobility culture should be better coordinated with the push for greening public transport fleets, car restriction policies, urban road charging schemes and access charging.

¹⁶ European Commission (2011) "Intelligent Transport Systems in action" Luxembourg: Publications Office of the European Union ISBN 978-92-79-18475-8

4. Waterborne Transport: Navigation of Inland Waterways and Maritime Transport ¹⁷

The 2011 White Paper ([COM\(2011\)144](#)) can be identified as the most significant policy document released by the European Commission with regard to inland waterways and maritime transport during the past 2009-2014 legislative period. Some of the aspects mentioned here build on the maritime strategy published in the “Strategic goals and recommendations for the EU’s maritime transport policy until 2018” ([COM\(2009\)8](#)) and on the positions expressed by the European Parliament ([2009/2095\(INI\)](#)) and the Council ([PRES/2009/73](#)). From there, and in line with the big challenges listed in the introduction of this transport section, one can outline the current situation and identify the following remaining challenges in the maritime and inland navigation sectors.

Sate of play and achievements

Competition in the shipping sector increased significantly over the past years and shipping companies are now regrouping so as to gain economies of scale. In spite of the fact that the maritime portion used to be the most important element of the shipping value chain, now that the ships are increasing in scale, the role of ports and their hinterland becomes as important as the purely maritime portion¹⁸. It can therefore be expected that new, vertical integration will take place, mainly because shipping companies will seek to maintain their dominant position in the overall value chain. Furthermore, the role of the ports and their development as multi-modal nodes is becoming an issue which the European Commission had already started to address in specific proposals ([COM\(2013\)296](#)) and via the identification of ports-hinterland connections as key challenge for the TEN-T policy (TEN-T guidelines [2013/1315/EU](#) and CEF regulation [2013/1316/EU](#)).

The European Commission aims at fostering the use of *advanced information and communication technologies*, as well as at promoting innovation and technological research in shipping (EU e-Maritime initiative), with the aim of increasing the global competitiveness of the European maritime industry, while at the same time meeting environmental, energy, safety and human challenges (COM(2009)8 and 2009/17/EC of the Third Maritime Safety Package). Yet, the shipping companies are still in a very dominant position, basically deciding about the

¹⁷ The main input for this section comes from Christa Sys, Edwin van Hassel and Thierry Vanelslander (2014) “Regulation of maritime transport and inland waterways: the European balance sheet”. *Forthcoming publication*.

¹⁸ [1st European Maritime Transport Regulation Forum](#) (2012) “Ports: how to regulate logistic interfaces?” (Florence, 9 November 2012)

technologies they will invest in. Other technologies, which may have higher social or environmental cost-benefit ratios, may require incentives, be they financial or regulatory.

Closely related to the issue of technological innovation is the Commission's long-term objective of "zero-waste, zero-emission", which also covers the waterborne sector. In this case, this means improving traffic management by the deployment of advanced systems (SafeSeaNet and LRIT) as well as introducing operational and technical measures (such as cleaner engines, new vessels design and shift to low-carbon fuels). Furthermore, Member States and port State authorities are required to cooperate to detect illegal discharges and to identify particular ships producing pollution offences. The European Maritime Safety Agency (EMSA) has been assigned the task to assist Member States to this end to respond to maritime ([2013/100/EU](#)).

The EMSA also has the task of assisting Member States with the practical implementation of EU legislation. Formal *Safety Assessments* (FSA) which are used to quantify the risks in maritime transportation are growing in importance, as safer and more secure shipping is one of the priorities of the EU. A comprehensive framework (Directives 2009/15/EC 2009/16/EC 2009/17/EC 2009/18/EC 2009/20/EC 2009/21/EC, Regulations 2009/391/EC 2009/392/EC) in terms of prevention, reaction capacity and resilience are now going to be implemented in compliance with the Third package of legislative measures on maritime safety in the European Union ([COM\(2005\)585](#)).

Remaining challenges and possible responses

Building on the current situation and the achievements of the past legislative period, open issues and challenges still remain in the following five areas:

A Solid European shipping sector vis-à-vis the global competitors: maritime transport remains the backbone of goods trade and the European shipping sector is facing global competition, especially on the long distance routes from the Far East to Europe. Therefore, there is a need for the European Union to work with international partners and to act in the international fora (bi-lateral agreements with the main partners in the world, World Trade Organisation, International Maritime Organisation) to both guarantee quality shipping of the goods that are traded with the Member States and to promote the competitiveness of Europe's shipping sector at the global level.

An integrated and competitive maritime and navigation sector in the multimodal transport chain: support to the shipping companies should not result in subsidies to the sector, and must be contribute to the objective of integrated mobility. The development of multi-modal logistic chains that include maritime operations is the main challenge for the waterborne transport sector in both long-distance and short sea shipping. The inclusion of the Motorways of the Sea in the TEN-T planning as well as the inclusion of several ports in the TEN-T core network is a good

starting point, both from a policy point of view and from a financial perspective. Implementation should follow. This excludes of course Public Service Obligations (PSO) regulated under the Cabotage Regulation (3577/1992/EEC).

Availability of new technologies: technologies such as SafeSeaNet and LRIT are available and should be coherently deployed. Moreover, one of the main open issues for the sector refers to unmanned vehicles, which could make the maritime industry more attractive and sustainable. Yet, their level of safety still needs to be demonstrated. Legislation currently prohibits unmanned ships, but this situation should be examined in the future.

Greener maritime transport: Member States are still ignoring or failing to implement and enforce EU environmental legislation. Here, EMSA should be overseeing compliance. In general, environmental issues should be more forcefully addressed.

Safer and qualitatively better services: the transformation of the maritime safety culture from a reactive and prescriptive approach to a proactive and goal-setting regime should be pushed, notably by the active involvement of maritime governing bodies (European and international), training institutions and shipping companies.

5. Postal and delivery services¹⁹

The main policy goal to which the current European Commission sees itself committed is the achievement of a European single market for goods and services. This overall Commission's goal is reflected in the postal sector as well. Hence, the postal sector in the EU was subject to major regulatory changes in the past two decades (Framework Postal Directive [97/67/EC](#), Second Postal Directive [2002/39/EC](#) and Third Postal Directive [2008/06/EC](#)). The adoption of the Third Postal Directive is a major step towards the creation of a single market for postal services; the last Barroso Commission took it as an asset and focused on its update to guarantee better quality and to gain higher effectivity and efficiency for the sector as a whole.

State of play and achievements

To complete the EU internal market for postal services, three relevant objectives have been identified in the past five years: first, implementation of the Third Postal Directive; second, fostering e-commerce and parcel delivery; third, ensuring the application of the State aid framework in the context of European Universal Service Obligations (USO).

¹⁹ The main input for this section comes from Christian Jaag, Urs Trinkner and Jeffrey Yusof (2014) "Assessment of EU Postal Sector Policy during the Second Barroso Administration (2010-2014)". RSCAS 2014/117.

As far as the implementation of the *Third Postal Directive* is concerned, all Member States have established a National Regulatory Authority; in parallel, the European Commission set up a European Regulators Group for Postal Services (ERGP) in 2010. Also, significant steps have been taken in the field of market opening from collection to delivery of letters and parcels.

In the EU, *e-commerce* is governed by the E-Commerce Directive ([2000/31/EC](#)), which sets up the internal market framework for e-commerce. After more than a decade during which new challenges and regulatory needs have emerged²⁰, the European Commission published a Green Paper in 2012 ([COM\(2012\)698](#)) with the objective to boost e-commerce through establishing an integrated parcel delivery market in the EU. The Green Paper was followed by a “roadmap for completing the Single Market for parcel delivery” ([COM\(2013\)886](#)), where the Commission outlines the main actions that should be taken by the main stakeholders in a well-defined period of 18 months in order to: (1) increase transparency and information for costumers and e-retailers, (2) improve delivery solutions and (3) enhance complaint handling and redress mechanisms for consumers.

According to the European Commission ([SWD\(2013\)53](#)), *postal universal services* belong to the Services of General Economic Interest (SGEI), namely those services for the overall public good that would not be supplied by the market without public intervention. Therefore, a set of criteria has been elaborated under which compensations for SGEIs (and therefore postal USO) do not constitute State aid (within the meaning of Article 107 TFEU) and do not distort competition.

Remaining challenges and possible responses

The Third Postal Directive has been transposed by the Member States into national law within the required transition period, but several infringement cases, related to the national implementation of the EU law, have been opened. Therefore, the next Commission should keep the focus on the *implementation and transposition of the Third Postal Directive*.

Beside this, there are two major challenges ahead that relate to fair *competition*. In fact, despite full market opening of the letters market, competition has emerged to a limited extent only, and incumbent operators still maintain high market shares.

The decrease of letter volumes due to the development in the electronic communication sector (e-substitution) adds to the risk for possible new entrants. Therefore, the challenge for the Commission does not only lay on the regulation of competition in the traditional sector, but also in the need of *taking into account electronic substitutes* (e-commerce, especially in cross-border

²⁰ [2nd European Postal Regulation Forum](#), “Postal Regulation in the Context of a Growing e-commerce Market” (Florence, 15 February 2013)

delivery), possibly starting from the inputs given by the Green Paper “An integrated parcel delivery market for the growth of e-commerce in the EU” adopted in 2012.

Second, a level playing field for all competitors should be ensured by establishing a framework for regulating *compensation for unfair financial burdens due to USO obligations*. With regard to this, two related major issues remain open²¹: on the one hand, the definition of an unfair burden of the USO and, on the other, the interaction of sector-specific compensation rules with the state aid framework.

Conclusion

Besides the sector-specific challenges outlined above, there are also some cross-sectoral issues affecting all the transport modes alike. These are in fact challenges for DG MOVE as a whole and should therefore be approached from a cross-sectoral perspective.²² We have already mentioned, in the introduction, the main challenges which cut across all the transport modes, namely (1) the elimination of barriers between states and modes, (2) market distortions across modes due to a too sector-specific approach, (3) the role of the information and communication technologies, namely in terms of (sector-specific) innovation, (4) decarbonisation and environmental sustainability more generally, (5) social sustainability and the user perspective, notably in terms of (sector-specific) passenger rights. In this conclusion, we would like to come back to two specific aspects, namely the pervasive role of the information and communication technologies on the one hand and the user perspective on the other.

It is obvious that the role of the information and communication technologies in transport goes far beyond sector-specific innovation. Rather, this *digitalization of transport* thanks to the ICTs allows, to a certain extent, for a redefinition of transport altogether. The question, therefore, is no longer about creating a level playing field among transport modes so as to favour the emergence of a single European transport area, but rather about considering transport – or, better, *mobility* – as a whole. The ICTs indeed allow for a more integrated timetable and ticketing and therefore for a single mobility interface vis-à-vis the users, as this is, in part, already the case in some urban agglomerations. From there it will only be a step to move towards more integrated pricing, so-called “mobility pricing”, which, at the same time, will be a small advancement towards a modal shift in both cargo and passenger transport. We think that taking up the opportunities that the digitalization of transport offers constitutes one of the two major challenges before the incoming Juncker Commission in the transport area.

²¹ [1st European Postal Regulation Forum](#), “Revisiting the European Universal Service Obligation” (Florence, 17 February 2013) already addressed the issue.

²² This of course does not include the postal and delivery sector which is part of DG Internal Market.

The other major challenge is linked to this digitalization of transport but goes one step further inasmuch as the users, the European citizens, are put at the centre: rather than simply further developing and gradually integrating the different transport modes, one may start to look at integrated *mobility as a service* to the European citizens, comparable to communications and energy services. Again, the model may be found at the urban level, where citizens are no longer simply considered as users of different transport modes, but as consumers of seamlessly integrated mobility services (rail, metro, trams, buses, cars, taxis, bicycles, etc.) without being owners of any of the vehicles and without having to worry about parking and maintaining any of the vehicles. This seems to us to be a vision that the incoming Juncker Commission (DG MOVE) could easily embrace and work towards.

Chapter 4: Water

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The importance of water in our societies is often underrated. It is one of the most precious natural resources but it also brings along some of the biggest challenges at the European level. Climate change, evolution of population, urbanization, increasing pollution pressures, investment needs, affordability, accountability are some of the issues, which put water governance under serious pressure. Water is essential for human life, nature and the economy. It is permanently renewed but it is also finite and cannot be made or replaced with other resources. Freshwater constitutes only about 2% of the water on the planet and competing demands may lead to an estimated 40% global water supply shortage by 2030²³. The overriding importance of the water sector for smart, sustainable and inclusive growth can hardly be overstated and explains why *many different DG units should include water in their agenda*.

1. State of play and achievements

European water policy is quite young. It basically starts with the approval of the first European Water Framework Directive (WFD) in 2000²⁴. EU actions before the WFD such as the Drinking Water Directive²⁵ (1998) and the Urban Waste Water Directive²⁶ (1991) can duly be considered milestones. However, the EU WFD addressed for the first time in a comprehensive manner all the challenges associated with water, *making it clear that water management is much more than just water distribution and treatment*. Its primary aims were to achieve good ecological status of waters in Europe by the end of 2015.

²³ See the introduction of the Communication from the Commission to the European Parliament, the Council, the European economic and social committee and the committee of the regions a blueprint to safeguard Europe's water resources ([COM/2012/0673](#)).

²⁴ Directive [2000/60/EC](#) of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

²⁵ Council Directive [98/83/EC](#) of 3 November 1998 on the quality of water intended for human consumption)

²⁶ Directive [91/271/EEC](#) on Urban Waste Water Treatment

To reach such an objective, the WFD sets up a model of water management focused on three key elements: *i/* the river basins as the basic unit of water management; *ii/* the introduction of the economic model "water pays for water" stipulating that Member States will be required to ensure that the price charged to water consumers reflects the true costs; *iii/* the promotion of citizen participation in water policy with the following Leitmotiv "Getting Europe's water cleaner. Getting the citizens involved"²⁷.

Concerning this last objective, there are two main reasons for an extension of public participation. The first is that the decisions on the most appropriate measures to achieve the objectives in the river basin management plan will involve balancing the interests of various groups: it is essential that the process is open to the scrutiny of those who will be affected. The second reason concerns enforceability. The higher the transparency in the establishment of objectives, the imposition of measures and the reporting of standards, the more the Member States will take care of implementing the legislation in good faith, and the greater the power of the citizens to influence the direction of environmental protection, whether through consultation or, if disagreement persists, through the complaints procedures and the courts. Caring for Europe's waters will require more involvement of citizens, interested parties, non-governmental organizations (NGOs). This is an important issue on which we will come back later on.

The balance sheet that can be made of the WFD is ambivalent. The objective of good ecological status of waters in Europe will not be reached in 2015. Overall, in 2012, more than half (55%) of the total number of classified surface water bodies in Europe is reported to have less than good ecological status/potential²⁸. In addition, objectives concerning the access to safe drinking water are still not reached for a part of EU citizens among the poorest citizens. And the situation concerning basic sanitation system is very contrasted. The proportion of the population connected to urban wastewater treatment has been gradually increasing and is above 80% in eleven EU Member States for which data are available, and is exceeding 90% in some countries (i.e. highest rates in Malta, the Netherlands, UK, Germany, Spain, and Luxembourg). At the other end of the range, less than one in two households are connected to urban wastewater treatment in Romania, Serbia, the Former Yugoslav Republic of Macedonia, and Bosnia and Herzegovina²⁹.

²⁷ European Commission website http://ec.europa.eu/environment/water/water-framework/info/intro_en.htm (accessed 08/01/2015)

²⁸ Report from the Commission to the European Parliament and the Council on the Implementation of the Water Framework Directive (2000/60/EC) River Basin Management Plans, [COM\(2012\) 670](#).

²⁹ Eurostat website – Water Statistics, March 2014 - http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Water_statistics#Wastewater_treatment (accessed 08/01/2015)

We can thus talk about a *Water divide in Europe* as well as many people are talking about a digital divide. Europe has one of the longest track records in water management in the World and is still a global industrial leader in terms of service provision and technology development. This history has also led to Europe having a wide spectrum of leading expertise in the various aspects of water resource management. Hundreds of European Institutions, public and private water service providers, SMEs, engineering and consulting companies have developed and continue to develop highly technical concepts to address water problems in the EU and around the globe. With the Water Framework Directive and related policies, the EU has one of the most ambitious and challenging pieces of water legislation in the world. It provides a unique regulatory driver for innovation in the water - dependent economy, and potentially offers a competitive advantages comparing to other regions. Still, there are remaining challenges to be addressed by the Juncker Commission.

2. Some remaining challenges

The water sector brings together a number of economic, environmental and societal issues. Without trying to be exhaustive, we would like to point out some of them that we believe should be on top of the agenda of the next Commission.

Competition and the Provision of Water Services: a Missed Opportunity

The EU should favour, as much as possible, the efficient use of scarce water resources as well as efficient production of water services without hampering investments made in this sector. Maintenance of existing infrastructure and investment in new assets remains crucial to secure supply, and there are concerns about raising sufficient revenue to support these activities to the level required to provide this essential service to future generations. A study from the French observatory on water sector performance stated that the average rate of network replacement in France lead to a full replacement every 160 years³⁰. Knowing that the life duration of water network infrastructures is around 50 years, more investments are needed. And France is not an exception at the European level.

One way to increase efficiency is to foster competition and to allow for public private cooperation in producing water services. Developing such a road is not without any difficulties. Markets and competitions are not emerging naturally, especially for public services that are local monopolies. The economic analysis studied such market failures for decades now and the limits

³⁰ See Performance of the French water sector report 2012, ONEMA, page 39. Available online at http://www.services.eaufrance.fr/docs/synthese/rapports/spea2009_201202_EN.pdf

of competition are identified as well as their remedies³¹. The Concessions Directive voted in early 2014 is a good step towards a more structured competition in the provision of public services³². However, the exclusion of water from the Concessions Directive is, from our point of view, a missed opportunity and it presents one immediate task for the Commission. The Commission must indeed produce a report within five years *to assess the effects of the water exemption* identifying the costs and benefits, which may have resulted. The Commission thus will have a role in informing the political and economic debate through providing data on the current nature of the water services sector. This role will be crucial in a context where citizens are more demanding concerning information on water.

More Transparency in order to Have More Informed Stakeholders

The last Eurobarometer on Water³³, based on the interview of 25,524 European citizens, concluded that fewer than four out of ten respondents feel well or very well informed (37%) about problems facing groundwater, lakes, rivers and coastal waters in their country. Two-thirds of respondents believe that more information about the environmental consequences of water use is the most effective way of tackling water problems showing that progress still have to be made concerning information given to citizens.

In addition, the Right2Water campaign³⁴ submitted a policy proposal to the EC in December 2013, using the EU Citizen's Initiative (ECI). More than 1.8 million citizens signed. One of the main messages of the campaign, leading to the exclusion of water of the Concessions European Directive was that water supply and management of water resources should not be subject to internal market rules and should be excluded from liberalization³⁵. The EC responded by affirming the unique role of water "not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such". The EC also emphasized the importance of developing more *transparency* and *benchmarking*, and ensuring equal treatment within the context of national and local choice.

³¹ An Economic Analysis of the Closure of Markets and other Dysfunctions in the Awarding of Concession Contracts, S. Saussier, 2013, FSR Working Paper - [EUI RSCAS; 2013/08](#); Loyola de Palacio Program on Energy Policy

³² Directive [2014/23/EU](#) of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts.

³³ <http://ec.europa.eu/environment/water/eurobarometer.htm>

³⁴ www.right2water.eu

³⁵ This highlights the fact that the management of public services is much more complex than ordinary services because of the involvement of third parties urging for new theories of public management (See Spiller P. 2008, An Institutional Theory of Public Contracts: Regulatory Implications. National Bureau of Economic Research, Inc.).

We believe more transparency as well as more benchmarking should be on the top of the agenda of the European Commission. Transparency is clearly an issue. With the exception of few countries, it is very hard to obtain basic data concerning water services such as prices, operating costs, quality of distributed water, treatments, leakage rates, % of referenced network and so on, number of calls for tenders per years when the services are operated through concession contracts, and so on. And this information is crucial to understand and inform citizens about how efficient their water services are.

We argue that transparency and benchmarking needs are inseparable. Benchmarking is a way for utilities to improve their performances by comparing themselves with other comparable utilities. However, this does not mean that benchmarking should be operated by and for utilities at their will. In our view, *benchmarking is a key element in order to achieve more transparency.* It is also one regulation tool. Without any benchmarking exercise, transparency does not give any valuable information to citizens. For example, observing that prices are on average higher when service are privately operated is misleading if privately operated services are specialized in specific and difficult-to-operate areas as it is the case in France³⁶. Without any economic analysis of this information, through benchmarking exercises comparing prices between comparable services, more information does not lead to more knowledge for citizens.

A Better Coordination Between Regulatory Bodies to Achieve a Smarter Regulation of Water

There is a great variety between water services within Europe concerning the quality and abundance of raw water; the degree of fragmentation of water services (In France, there exist more than 30,000 water services. In the UK, less than 35); the degree of vertical integration between services (in France, water distribution and water sewage are separated services, leading to separated contracts when externalized to private operators; in Italy, utilities are providing both services), the fragmentation of responsibilities; the existence of a national regulation agencies (NRAs) and their powers; diverse organizational arrangement and their frequency (i.e. direct public management vs. public private partnerships) and so on.

We believe the Commission should be committed more explicitly not only to provide data on all those dimensions but also to support *benchmarking initiatives* between water services in Europe which will provide information on the relative performance of the water sector in different geographical areas. While comparability may be difficult because of varying local conditions, the Commission should be encouraged to provide data and to foster benchmarking exercises, which will inform the debate and enable future decisions to be taken with more knowledge of the costs and benefits of different arrangements. This benchmarking exercise could be easily facilitated if

³⁶ Water under the Bridge: City Size, Bargaining Power, Prices and Franchise Renewals in the Provision of Water, E. Chong, S. Saussier & B. Silverman, 2012, Sorbonne Business School Working Paper. Available online at http://chaire-eppp.org/files_chaire/2012-05_chong_et_al.pdf

the Commission helps for the *creation of a network of water regulators* (broadly defined, with NRAs when they exist or authorities building regulation when regulators do not exist), in order to share data, experiences and foster capacity building in a number of Member States where the NRAs are still weak. Such a network would be very valuable and probably less easily captured than a single European authority that is sometimes called for.

It would also bring more transparency because transparency is not just about putting data on line but is also about informing citizens through providing benchmark studies, explaining raw data, *comparing efficiency of water services “all things being equals”*.

More Competition, More Transparency and Smarter Regulation while Preserving the Resources

Europe's freshwater resources are under increasing stress, with a worrying mismatch between demand for, and availability of, water resources across both temporal and geographical (spatial) scales. Water stress is an issue for arid regions with low rainfall and high population density, but also for temperate areas with intense agricultural, tourism and industrial activities. Among the EU-28 Member States, Croatia, Finland and Sweden recorded the highest freshwater annual resources per inhabitant (around 20,000 m³ or more). By contrast, relatively low levels per inhabitant (below 3,000 m³) were recorded in the six most populous Member States (France, Italy, the United Kingdom, Spain, Germany and Poland). Poland, the Czech Republic, Cyprus and Malta present the lowest values with between 200 and 1,600 m³ per person³⁷ (An area is experiencing water stress when annual water supplies drop below 1,700 m³ per person (UN World Water Development Report 4, 2012)).

Global climate change is already exacerbating these problems with projections indicating significant and widespread impacts over the medium to long term. Growing competition for water resources between different water using sectors is already emerging.

One partial answer is the maximization of water reuse. It is a specific objective of the Blueprint to Safeguard Europe's Water Resources ([COM/2012/0673](#)) which mentioned the development of a possible regulation establishing common standards for water reuse. It is also a top priority area in the Strategic Implementation Plan of the European Innovation Partnership (EIP) for Water. As a follow-up to the Blueprint, the Commission aims to evaluate the most suitable EU-level instrument(s) to foster water reuse, while ensuring the health and environmental safety of water

³⁷ Eurostat website – Water Statistics, March 2014 - http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Water_statistics#Wastewater_treatment (accessed 08/01/2015)

reuse practices and the free trade of food products. In 2015, the Commission intends to finalize an assessment on the issue and, subject to its conclusions, to make a proposal as appropriate.

This is a first step, but probably more should be done in order to preserve the resources and secure access to water to the EU citizen.

These three priorities are clearly linked altogether. Implementing more competition with smart regulation processes can be achieved only if it leads to more transparency in order for regulation to be accepted by stakeholders and if it respects constraints such as the preservation of the resources and the access to water for everyone.

Concluding remarks and future directions for regulatory policies and research

The overall aim of this Manifesto was to critically reflect upon the achievements of the 2nd Barroso Commission in the various network industries and, building upon these as well as upon the needs of the different stakeholders operating in the various sectors, to outline the main challenges as well as the priorities for the incoming Juncker Commission. Thanks to the collaboration of the four FSR Area Directors and FSR Research Associates, and also thanks to the interviews and the inputs collected from the partners and the network of the Florence School of Regulation during the past six months, this Manifesto offers a fair account of the achievements of the 2nd Barroso Commission and a realistic outlook onto the challenges that await the Juncker Commission in the various network industries in terms of regulatory policy.

The 2nd Barroso Commission had pursued its sectoral approach to network industries and, in doing so, made significant progress towards creating a single European energy market, an ever more integrated European market for electronic communications and media, and a Single European Transport Area. Progress in the water sector, however, had been quite scant.

At the end of the 2nd Barroso Commission, a 2014-2020 EU budget, which focuses on research, innovation and infrastructures as instruments to connect the European Union within and beyond its borders in the energy, transport and electronic communications sectors, was adopted.

The Commission has already started to move towards cross-cutting topics, such as decarbonisation, social issues and the promotion of ICTs. Together with the new budget it lays the grounds for a new concept of a more integrated infrastructure connecting the continent. From the perspective of the Florence School of Regulation, this concept should be on the top of the agenda of the Juncker Commission for the coming five years.

However, all this will probably continue to be done in a sectoral approach, and here is, where we think the main challenge of the incoming Juncker Commission lies: technological innovation, especially in the area of the ICTs, is increasingly blurring the boundaries of the different network industry sectors. While there will continue to be energy services, transportation services, communications services and water services, these services will increasingly be provided on the basis of a new “data infrastructure”, which is collecting, storing, manipulating and packaging all the data shared by users. It is imaginable that this will be the new, cross sectoral infrastructure of the future and we urge the Commission to start seeing it as such. Subsequently, this new “data infrastructure” will have to be harmonized, integrated and regulated, in the interest of the European citizens and according to the principle of non-discriminatory access.

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