



Action Plan

Making the best use of new financial schemes for European transport infrastructure projects

JUNE 2015

Transport

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This Report includes considerations and proposals for future reflexion and potential development in line with the opinion of the authors and does not constitute an official position of the European Commission.

The projects identified in this Report have been chosen by the authors for illustrative purposes and their inclusion in the Report does not entitle them to preferred access to national or European resources. They have not been subject to any specific assessment by the European Commission, the EIB or the Member States and hence do not imply their support.

The inclusion of these illustrative projects does not prevent them from accessing other EU or national sources than the financial instruments that may be developed in the framework of the Connecting Europe Facility and the Investment Package proposed by the Commission.

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Foreword

This Report is a contribution to the debate in the context of the 'Jobs, Growth and Investment Package' proposed by President Juncker and follows the request by the Italian presidency of the Council (Milan, 16-17th September 2014) to *'Former Vice President Christophersen and Coordinators Bodewig and Secchi to prepare a report, in consultation with the EIB, identifying projects along corridors particularly suited for such new financial schemes in the context of the 'Jobs, Growth and Investment Package' proposed by President Juncker'*.

As agreed, Transport Ministers received an Interim Report at their formal meeting on 3 December 2014, as a preliminary contribution to a wider work to be presented in the course of 2015, accompanying the implementation of the Financial Instruments of the Connecting Europe Facility (CEF) and other measures that may be taken in the context of the 'Jobs, Growth and Investment Package' to be proposed by the Commission under the Presidency of Mr Juncker.

The current Action Plan constitutes the Final Report, to be discussed in the Council scheduled on 11 June 2015 for the appraisal of the competent Ministers. The Authors have also been requested to present it to the Transport and Tourism Committee of the European Parliament.

The current Report consists of three main parts: firstly, the Authors put forward twelve concrete recommendations for making the best use of innovative financial instruments in the transport sector. In a second part, these twelve recommendations are further outlined by describing the concrete measures that need to be put in place to create a favourable environment for transport investments. Last but not least, the Authors followed their mandate and identified specific projects along the TEN-T core network corridors that are particularly suited for financial schemes. On the basis of the wider list of projects stemming from the corridor studies, this exercise focused on smaller, more challenging projects (from a financial perspective) that would not naturally benefit from standard EIB lending, and on those that may look for alternative sources of funding such as the European long-term investment funds (ELTIFs) supporting project finance from capital markets and others. The projects presented in this Final Report illustrate the type of projects that could potentially benefit from financial instruments within a relatively short timeframe, subject to further analysis and discussions with the respective Member States and project promoters. This list does not exclude other projects presented in the corridor studies and which show a lower degree of maturity and/or would require a different structure, nor does it constitute any financing agreement by the Commission and the EIB.

The Report is the outcome of a long reflection process which had started even before President Juncker proposed the European Fund for Strategic Investment (EFSI). The recommendations presented in this Report are therefore deemed necessary for the full success of the above-mentioned Juncker plan but are not confined to it. Rather, they are much wider in the sense that they are generally addressed to attracting private investors and new financial schemes in transport infrastructure projects. Indeed, the Authors underline their support for the implementation of the EFSI and propose useful adjustments to the (regulatory) context in order to guarantee that transport features high in the implementation of EFSI. Moreover, the proposed measures aim at fully grasping the opportunities offered by the plan, maximizing its impact on growth and jobs, while facilitating synergies between public sources made available at national and EU levels, such as the Connecting Europe Facility (CEF) and the European Structural and Investment Funds (ESIF), financing by the EIB, National Promotion Banks, and private sources such as institutional investors and the banking system more generally.

The Authors are very grateful and wish to acknowledge the extremely useful support obtained from the European Coordinators, by the Commission services, notably DG MOVE units B1 and B4, DG COMP, EUROSTAT, FISMA and the EIB, as well as all the public and private bodies consulted.

I. Action Plan for the development of project financing: 12 recommendations

1. **Member States'** administrations should have unimpeded access to dedicated technical assistance, through the **European Investment Advisory Hub**, but also through existing and future support schemes, for instance at national level, to support their activities for **the development of a stable pipeline of mature projects**. This dedicated technical assistance should also include support for PPP schemes.
2. **Project promoters** should include and pay, in the project preparation process, due consideration to the **projects' life-cycle** from project conception to development and implementation, including the costs and all other relevant issues linked to their maintenance.
3. **Member States and project promoters** should work and receive support for **improving the quality of projects** in order to build a strong pipeline of mature projects, and make them attractive to investors. Attention should be paid to contracting and risk-sharing between the public and private partners.

4. **Member States** should streamline and **simplify procurement procedures** in order to accelerate the implementation of projects. Specific issues related to the procurement of **cross-border** projects should be addressed by the **European Commission**.
5. **Member States** should streamline and thus **simplify their permitting procedures** in order to facilitate and accelerate the implementation of projects, notably for **cross-border** projects in cooperation with the European Commission.
6. The **European Commission** should ensure an adequate **State Aid** framework **conducive to the use of EU financial instruments** for boosting long-term investments, encouraging national support to infrastructure of European added value, and providing certainty to project promoters and investors as regards the consistency / compliance of the projects with the rules.

7. The **European Commission** should propose a framework to find additional resources for projects of EU added value through the facilitation of **earmarking of revenues and cross-financing** solutions.
8. The **European Commission** should propose a framework to find additional resources for projects of EU added value through **monetization of external costs and benefits, and the user-pays principle**.
9. The **European Commission and the EIB** should facilitate the **blending and pooling** by combining the grants from the Connecting Europe Facility (CEF) and the European Structural and Investment Funds (ESIF) with the financial instruments and products available under the CEF and the European Fund for Strategic Investment (EFSI) maximising, when appropriate, the **benefits from aggregation and risk diversification** of project portfolios at EU level and across sectors and modes of transport.

10. The **European Commission** should ensure that possible **unintended impacts of the Regulations on financial markets** such as Solvency 2 and Basel III on infrastructure financing **are mitigated** through a favourable and non-discriminatory recalibration of the risk weight provisions for a new infrastructure asset class to be created.
11. The **European Commission** should propose a clear and **incentivising statistical treatment of PPPs** to acknowledge their contribution to jobs and growth and provide certainty to project promoters and investors.
12. The **European Commission and the EIB** should ensure in a joint effort a **wide consultation with all the interested parties, Member States, local authorities, and the European Parliament** on the financing of transport infrastructure, the exchange of best practices, the promotion of financial instruments or dedicated financial schemes, as well as adequate **communication initiatives** with the **general public**.

II. Executive summary

Assistance for project pipeline, identification and financial structuring

1. **Member States'** administrations should have unimpeded access to dedicated technical assistance, in particular through the European Investment Advisory Hub which is an integral part of the European Fund for Strategic Investment (Juncker Plan), in order to undertake the following three goals: first, support the activities for the development of a stable **pipeline of mature projects**, encouraging investors to engage in transport infrastructure; secondly, help identify projects that could use project finance and thirdly, provide advice, when necessary, for the adaptation of the procedures and the legal framework. The existing and future support schemes, for instance at the national level, should also be mobilised towards these goals. This dedicated technical assistance should also include support dedicated to generating a better understanding of the Public Private Partnership (PPP) schemes and to mastering risk-sharing techniques.
2. **Project Promoters** should include and pay, in the project preparation process, due consideration to the **projects' life-cycle** from project conception to development and implementation, including the costs and all other relevant issues linked to their maintenance. **Maintenance** activities and costs should be carefully planned and included in the project financial structure in order to ensure full functioning of the infrastructure in its entire life-cycle and avoid future budgetary issues.
3. **Member States and project promoters** should work together and obtain support for improving the **quality of projects** in order to facilitate their development and make them attractive to investors. As part of the projects' quality, attention should be paid to the contractual arrangement and appropriate risk-sharing between public and private partners when appropriate.

Dedicated **technical assistance** should be made available to project promoters and other stakeholders for the project preparation, in dealing with environmental aspects, as well as, when appropriate, for financial structuring and procuring projects as Public-Private Partnerships (PPPs) and Project Finance and for setting up Special Purpose Vehicles. Assistance should also be considered to support European, national or local authorities in the setting-up of dedicated investment platforms (on a sectoral or geographical basis). The European Investment Advisory Hub and national advisory and training structures should focus on these activities.

Procurement, permitting and state aid consistency

4. **Member States** should streamline, adapt and thus simplify their **procurement procedures** in order to accelerate the implementation of projects and facilitate the use of alternative financing models, in line with EU legislation. Specific issues related to the procurement of cross-border projects should be addressed by the **European Commission**.
 - a. It is worth exploring systematically the use of PPPs and concessions to manage projects' life-cycle with a substantial risk transfer; the sharing of best practices and capacity building, the set-up of dedicated structures to provide standardised methodologies for risk mitigations and transfer (contracting), competitive dialogue with tenderers, gate-keeping, and advice. In this perspective, the European Commission and the Member States could develop a framework for the **cooperation between public authorities and private co-investors**, including as regards their respective role in the management and ownership of the infrastructure.

- b. On **cross-border projects**, a single legal framework has to be favoured over the coexistence of multiple national systems. Notwithstanding the progress made by the current EU rules (23-25/2014), self-executing guidelines to be applied “off-the-shelves” could significantly reduce uncertainties and reduce their time-to-market. A simplifying feature could be the use of a single language in tender and contracting documents (with the agreement of the parties involved and independent from the choice of the project's legal seat). Besides, the choice to publish a tender either at the project's legal seat or at the place where the activities occur should be given to cross-border projects.
 - c. Procurement guidelines for cross-border projects (on legal seat, language regime, dispute settlement procedures...) should be elaborated at EU level in order to simplify procurement procedures and to reduce inherent procedural risks.
5. **Member States** should streamline and thus simplify their **permitting procedures** in order to facilitate and accelerate the implementation of projects, in line with EU legislation. The specific issues related to the permitting procedures for cross-border projects simplification ought to be put forward by the **European Commission**. A fine-tuned procedure for environmental appraisal and permitting would prove useful, for instance by:
- a. Setting-up a single contact point (“one-stop-shop”) for applying for a project, notably important for cross-border projects, streamlining the different national / regional rules on the base of the EU requirements.
 - b. Streamlining and aligning in time the different procedures (Environmental Impact Assessment, Natura 2000 Directives, Water Framework Directive), benefiting from the information of comprehensive Environmental Impact Studies, gathering all the national/local authorities together in a single forum in a coherent and timely manner.
 - c. Anticipating relevant studies at an early stage in order to avoid impacting the procurement / financial structuring phase, thus curbing risks and public liabilities.
 - d. Restricting conditions leading projects to a standstill in case of appeal, and foreseeing their time-effective and efficient treatment; planning swift procedures to surrogate a non-compliant contractor in case of irregularities or difficulties.
6. The **European Commission** should ensure that **state aid rules** will be conducive for the use of EU financial instruments and for national support to infrastructure of European added value. Certainty should be given as early as possible to project promoters and investors as regards the consistency of ESIF supported projects with the rules, and compliance of any Members States co-financing; notably:
- a. A "single window, fast-track clearance procedure" for notification of grants and other national support schemes linked to the implementation of the financial instruments under the European Fund for Strategic Investments (EFSI) and Connecting Europe Facility (CEF); this would lead to an ex-ante clearance concerning the state aid compliance, thus avoiding any legal risk.
 - b. The financial instruments managed by the EU, such as the CEF Debt Instrument and the EFSI guarantee, should be considered fully consistent with state aid rules as they are offered with transparent and open procedures by the EIB to all market players, since market failure has been substantiated by ex-ante assessments.
 - c. Clarification on state aid rules for cross-financing of projects ought to be provided by the Commission services.
 - d. Provided that the Member States co-invest in projects under the same conditions as the EFSI, and projects are selected by the EIB, also the national support should be considered state aid consistent.

Broadening funding and financing

7. The **European Commission** should propose a framework to **find additional resources** for projects of EU added value in a comprehensive and multimodal setting, for instance through the earmarking of revenues and cross-financing solutions:
 - a. "Polluter-pays" and "user-pays" principles should be more widely applied to reduce the burden borne by tax-payers for the construction and maintenance of infrastructure, as a way of eliminating distortion induced by asymmetric and inefficient taxations across transport modes, to promote more energy-efficient structures generating external benefits.
 - b. For very large infrastructures with long implementation time and low direct financial return, it is worth exploring the possibility of establishing an "infrastructure fund-like" mechanism for their development and exploitation.

8. The **European Commission** should propose a framework to find additional resources for projects of EU added value through an improved implementation of the user-pay principle. This can be achieved by calculating more accurately the external costs and by monetising the external benefits induced by the development of infrastructure.

Tools such as Eurovignette or the Emission Trading Scheme (under a potential widened scope) could be implemented in such a way as to make funding available for projects generating positive externalities.

9. The **European Commission** should facilitate the **blending and pooling** by combining the grants from the Connecting Europe Facility (CEF) and the European Structural and Investment Funds (ESIF) with the financial instruments and products available under the CEF and the European Fund for Strategic Investment (EFSI):
 - a. Financial instruments should be adapted to the needs of infrastructure sectors, the size of projects or geographical markets, and any other relevant features arising from the market needs. The assessment of specific market barriers would therefore facilitate the take-up of the financial instruments.
 - b. Consideration should be given to developing, when appropriate, financial instruments that can better address project diversity regarding their size and risk. This involves the development of financial instruments for aggregation of small projects in order to target a large number of stakeholders at once within a market segment, and financial instruments maximising the benefits of risk diversification within portfolios of projects at EU level and across sectors and modes of transport.
 - c. The Commission should reinforce the use of its right of scrutiny of the requests for grant support for revenue generating projects, for instance for Major Projects under ESIF, to better advise project promoters and shift to a more efficient use of grants combined with financial instruments.

Financial regulation and budgetary accounting of PPP
Stakeholders' involvement and Communication

10. The **European Commission** should ensure that possible **unintended impacts of the Regulations on financial markets**, such as Solvency 2 and Basel III, on infrastructure long-term financing **are mitigated**, notably through:
- a. The creation of an asset class category, notably for infrastructure projects supported by the EU: the category would cover key European projects (CEF and EFSI-related) for which economic viability is proven.
 - b. Taking into account, inter-alia, the low risk and high recovery rate recorded in past years of project finance compared with corporate finance loans, a revision of the risk weight provisions for project finance in the financial prudential regulations ought to be considered, at least for EU-backed projects.
 - c. Noting the interest of the public sector for the performance of PPPs and for the continuity of the public service these projects can ensure, a favourable treatment could be sought also in the absence of an explicit public guarantee.
11. The **European Commission** should propose a **clear and incentivising statistical treatment of PPPs** to acknowledge their contribution to growth, and provide certainty to project promoters and investors as early as possible when preparing the projects, in particular on the inclusion of the incurred debt under the Stability and Growth Pact. Considering the pivotal role of public guarantees to achieve an adequate leverage, the following elements need to be explored:
- a. Off-balance-sheet treatment of EU guarantees, including from EIB / other financial facilities.
 - b. Defining ex-ante schemes of contracts involving national guarantees (including from national development banks) that can be kept off-balance-sheet.
 - c. Conditions for limiting the inclusion in the national debt/deficit to the sole cost of the guarantee.
12. The **European Commission** and the **EIB** should ensure in a joint effort a **wide consultation** with all the interested parties (project promoters, national promotion banks, commercial banks, institutional investors) on the financing of transport infrastructure, in particular for the exchange of best practices, the promotion of financial instruments or dedicated financial schemes, and provide regular information to the Member States and to the European Parliament.

This calls for a structured cooperation and consultation between the EU actors (notably the services of the Commission and the EIB), with early screening of the potential projects and an open dialogue with project promoters.

More generally, the know-how of local, regional and central administrations of the existing legal framework for project preparation, including for procurement and state aid, should be improved through dedicated and regular training programmes offered by the European Investment Advisory Hub and national advisory and training structures.

Finally, an appropriate and effective **Communication policy** and initiative should be intensified to the benefit of a better understanding and involvement of the **general public**.

III. Measures to create a better environment for investments

The rationale to invest in the transport sector

Transport facilitates trade and connects people and businesses. **Good transport connections are vital for Europe's growth and competitiveness.** Current cross-border connections remain insufficient to make the **EU internal market work efficiently**, in particular in the rail sector. Sound transport investments sustain aggregate demand in the short run and secure solid investment returns in the long run.

Apart from the physical infrastructure, investments are needed in innovative technologies in propulsion, shipping and alternative fuels in order to a) shift the transport system towards low carbon path and b) deploy intelligent transport systems allowing a better use of existing infrastructure. Enhancing investments in these innovative sectors in Europe will also contribute to preserving and improving the competitiveness of the European industry in the global markets in sectors in which it is currently leading (e.g. innovative construction, energy providers, clean and intelligent vehicles, logistical services, engineering consultants). For instance, traffic management systems developed in Europe, **such as SESAR and ERTMS, are exported outside of Europe**, reinforcing the competitive hedge of European manufacturers in these fields.

Sustainable level of investment and investment needs

Long run transport investment levels (new investments) in developed EU economies have historically amounted to around 1% of GDP, but due also to the financial crisis, it decreased in the past few years at an unsustainable level. The EU-27 average in 2011 was only 0.7% of GDP¹. The short-term impact may be managed but in the long-term this suboptimal level of investment would create a backlog affecting trade and growth potential.

New Member States in the past years have been spending more as a percentage of GDP in order to catch-up and complete their basic networks, thus reducing the gap with the "old" Member States, but a substantial divide remains. In some old Member States, the quality of infrastructure has deteriorated due to insufficient maintenance and ageing networks, while in most new Member States the core network still needs to be completed ensuring that maintenance of the existing and future infrastructure is adequately financed. Everywhere in Europe, huge investments are required in urban areas to ensure better connections between city centres and their surroundings.

All this sums up in huge investment needs in the European transport system. A study made in the context of the 2011 White Paper estimated that investments of 1.5 trillion EUR in European transport were necessary for the period 2010–2030 in order to cope with the expected increase in demand.

The Commission and the Member States estimated that the development of the TEN-T network during the period 2014–2020 would necessitate about 500 billion EUR of investments, out of which 250 billion EUR for the investments concerning the main bottlenecks, the missing cross-border sections on the rail and inland waterway networks of the core network and its corridors, as well as for the deployment of the horizontal priorities such as SESAR and ERTMS.

The Commission is currently collecting data on investment needs identified by the Member States, the regions and infrastructure managers to ensure that the corridors are completed in line with the requirements of EU legislation. At this stage, the investment needs identified for the period 2014–2030 amount to more than 650 billion EUR, while inputs from many stakeholders are still missing.

¹ International Transport Forum database (OECD)

In addition, in a number of countries with mature transport networks, there is an issue with the renewal of ageing infrastructure where mature assets are coming to the end of their life-cycle. Rehabilitation needs of existing networks are estimated at some additional 20 billion EUR per year in Europe. Such projects generally offer strong economic returns, however rehabilitation has historically been given a lower priority in favour of more urgent investments as the impact of not renewing assets is only felt over a longer period of time.

International experience and research findings

In October 2014, the IMF has published the World Economic Outlook report, examining the macroeconomic effects of public investment in a large number of countries, including the EU. The IMF study confirms that in the EU the stock of public capital - a proxy for infrastructure investments - has declined significantly as a share of output over the past three decades, and recommends enhancing investments in countries with infrastructure needs. The study also recalls that, for advanced economies stuck in a slow growth and high unemployment environment, increased public infrastructure investment is one of the few remaining policy levers to support growth.

One of the most striking findings² of the study is that, according to the evidence gathered in a sample of advanced economies, *"an increase of 1 percentage point of GDP in investment spending raises the level of output by about 0.4 percent in the same year and by 1.5 percent four years after the increase"*. In addition, *"the boost to GDP a country gets from increasing public infrastructure investment offsets the rise in debt, so that the public debt-to-GDP ratio does not rise"*. In other words, by spending more today on infrastructures, Member States can actually improve the state of public finances, both by means of additional income resulting from multiplicative effects across a large number of economic sectors³ and by means of savings on future repairs and maintenance costs.

Furthermore, the risk of persisting structural underinvestment negatively affects public finance balances (implying higher debt and public expenditure) in the medium and long run. The IMF study makes it clear that the potential gains from infrastructure investment are shaped by a number of factors:

- *The degree of economic slack.* The short-term boost to output is substantially larger when public investment is undertaken during the periods of economic slack and monetary policy accommodation, with the latter limiting the increase in interest rates in response to the rise in investment.
- *The efficiency of public investment.* The output effects are bigger in countries with a high degree of public investment efficiency, where additional public investment spending is not wasted and is allocated to projects with high rates of return.
- *How it is financed.* Evidence from advanced economies suggests that public investment financed by issuing debt has larger output effects than when it is financed by raising taxes or cutting other spending.

A macroeconomic analysis on the impact of non-completion of the core network, contracted to the Fraunhofer Institute, highlights that the expected impact of not delivering the core network alone would amount to almost 2% loss on GDP and consumption, amounting up to over 300 billion EUR losses / year by 2030, compared with the full achievement of the core network.

² In that regard, see also McKinsey (2013), *Infrastructure productivity: How to save \$1 trillion a year.* McKinsey Global Institute, January 2013.

³ Upstream and downstream markets related to the provision of infrastructure equipment and to the provision of services based on the use of that equipment.

Section 3.01 Development of an adequate project pipeline

Visibility of the project pipeline

Accelerating major new transport investments is complex for a number of reasons:

- In some countries where administrations expect fewer projects to be funded due to budget constraints, project preparation is being scaled back. Consequently, there are few “off-the-shelf” projects mature for funding.
- Transport projects are characterized by long lead times for their preparation and lengthy public approval procedures.
- Lack of long-term visibility in the project pipeline prevents public and private investors to plan their investments.

The availability of a visible pipeline of projects is as vital to the investors as to the project promoters and public administrations. While investors need project visibility in order to adapt their investment strategies, project promoters and public administrations need confidence that there will be financing available for their projects. Therefore, the project pipeline and clarity on the potential sources of funding have to go in parallel.

It is hoped that this Report will provide evidence that there is a strong pipeline of projects to be invested in. The work on the identification of projects initiated by this Report should continue and be conducted together with the Member States, the relevant authorities, the EIB and others Promotional Banks, and should lead to the creation of a list, to be regularly updated, which would provide the necessary project visibility to investors.

Pooling and planning of resources for the project pipeline (→ section 3.09)

Public resources allocated for grants are scarce: they stem from EU funding sources (the CEF and Cohesion Policy, almost exclusively) and national public resources from Member States' central budget and local authorities – be it upfront funding available or funding anticipated through credit mechanisms from national development banks / others (rotating funds, etc.). As shown above, public investments in infrastructure have dramatically decreased in the context of the financial crisis. Even if public support increased again, the level of public investment available would not match the needs identified. The efficient use of public funding should therefore be maximised.

In order to ensure a credible critical mass and improve the efficient use of public funding, the different European and domestic sources have to be added to each other (additionality), in a complementary way, instead of substituting each other. Moreover, it is essential that such resources are made available for the projects in a timely and consistent manner taking into account the actual financial amount required and project readiness to absorb it.

Sound EU budget management calls for ensuring that EU resources are additional to the ones of the Member States, providing mutual leverage and concentration. In the Cohesion Policy the fundamental concept of additionality (i.e. Common Provision Regulation – Regulation (EU) No 1303/2013 – art 95⁴) is assessed at the macroeconomic level.

For the sake of effectiveness of the stimulus package, additionality of public resources ought to be verified for each sectoral policy, preferably within the scope of the concerned EU Regulations (primarily ESIF and CEF Regulation). It is therefore important to ensure that the national budgets are also dedicated to the TEN-T core network, allowing the acceleration of the key projects and reducing their actual time-to-market.

⁴ Art 95.3 states that: "Member States shall maintain for the period 2014-2020 a level of public or equivalent structural expenditure on average per year at least equal to the reference level set in the Partnership Agreement."

In this respect and with regard to project planning process, different cases are possible:

- Ex-ante complementarity of national and earmarked EU resources which are included in a comprehensive plan or project.
- On-going complementarity: the project is lacking some resources and its financing is defined thanks to the EU committed funds needed to start up / proceed with the implementation phase.

If the project is however already endowed with all the necessary (national) resources and ready to start or it has already started, the complementarity and additionality of EU resources has to be ensured by reallocating the national resources freed from the EU contribution to other national projects within the core network.

Besides the complementarity issue, it is crucial to ensure that available money is allocated to the right projects at the right time – i.e. according to the actual needs of the projects over a sustained period of time. Credit mechanisms can be envisaged to ensure the anticipation of the needed funding. These mechanisms are for instance already widely used to provide the national co-financing of the European Structural and Investment Funds (ESIF). It is thus desirable, on the one hand, to have the certainty of national resources allocated to the core projects, and, on the other, to match in an optimal way funding allocation with expenditure (of cash-flow) and development needs of the projects. Another way of improving certainty while facilitating the planning of investments could be for the Member States to work in the framework of multiannual budgetary forecast for infrastructure projects.

Securing a credible amount of public resources to the project pipeline is however only possible when the projects themselves are defined with an adequate quality and maturity, which can only be achieved when equally good capacity is built in both public administrations and project promoters. Accordingly, dedicated technical assistance has to be made available when needed, but not exclusively, through the European Investment Advisory Hub, which is an integral part of the European Fund for Strategic Investment (Juncker Plan), to support their activities for the development of a stable pipeline of mature projects. This is a condition to be met in order to broaden the scope for project financing and to encourage investors to engage in transport infrastructure.

One of the initial tasks of technical assistance should be to contribute to the identification of projects that could use project finance, as well as to provide advice, when needed, for the adaptation of the procedures and the legal framework.

The existing and future support schemes, for instance at the national level, should also be mobilised towards these goals. This dedicated technical assistance should also include support in better understanding Public-Private Partnership (PPP) schemes and in mastering risk sharing techniques.

Section 3.02 Comprehensive approach on projects' life-cycle

In order to avoid resources being allocated in a rigid way to specific projects with an insufficient level of implementation, mechanisms where resources are pooled together for a group of projects and made available over time according to each specific project development need can be explored (e.g. through a rotating fund mechanism).

The potential of a life-cycle approach is commonly exploited for the development, operation and maintenance of logistic platforms, airports and port concessions (typically BOT-Build Operate and Transfer or DBOT - Design, Finance, Build, Operate, Maintain schemes), but promising developments are taking place in the railway sector as well (→ section 3.04).

The provision of transport infrastructure has typically been the responsibility of the public sector and this trend continues today. However, there has been significant private sector investment associated with transport infrastructure that generates revenues from users: toll roads, ports and airports. In a fiscally constrained environment, encouraging private participation in transport projects has to become an important part of the solution to accelerate investment.

The use of private finance is a matter of national policy for each country, but some Member States have already adopted concession financing, public private partnership models or have provided stable regulatory environments to encourage private sector investments.

Private financing shall not be seen as some privatisation exercise. It favours a procurement model that allows an optimal risk allocation and sets the incentives for a project to be optimised in costs and revenues from the implementation to the operational phase, notably useful for dealing with different technical options.

In Germany, the experience with the expansion and upgrade of motorway sections under the PPP A-Model shows that it is at least as cost-efficient as the conventional method of construction. The procurement of German federal roads by using the life cycle approach proved to be efficient, with a strong competition and adequate pricing guaranteed by an efficient risk allocation. All projects had a reduced construction time in combination with high levels of quality in construction and operation. Overall, this model managed to combine a positive effect on economic growth by allowing an early implementation of projects while reducing the impact on the annual public budget.

A comprehensive life-cycle approach must span from the construction of transport infrastructure, to its maintenance and transfer. In this respect, it is advisable to mainstream maintenance needs from the design stage, e.g. by setting up a forecast for the maintenance needs at national level and even linking this future outlook on maintenance to the development and planning of transport master plans.

Section 3.03 Support for improving the quality of projects and for attracting private finance

Both the public and private sector promoters in the transport sector can require public support, however their needs are different. Public sector promoters, notably local authorities of some Member States, are confronted with a lack of capacity to structure and deliver infrastructure projects. For instance in many countries the use of the PPP procurement model is limited by the lack of specialist skill sets required.

Some Member States are also reluctant to use private finance to contribute to the financing of their investment programme either because they prefer focusing on the absorption of EU grants (even when the project could be implemented without the EU grants) or due to previous experiences with badly structured PPPs that have created a negative perception.

In order to have a real step change in the way transport infrastructure is financed in Europe, **a strong dedicated technical assistance facilities should be offered**, for instance through the deployment of teams, possibly financed with EU funds, to support the implementation of financial instruments aiming at attracting private investors to infrastructure. These technical assistance facilities should be first made available at the level of the administrations.

PPP and project finance models need to be better understood by the public administration and project promoters. PPPs should be seen as a partnership, not as "privately funded government projects": the PPP schemes should primarily be explored for efficiency gains rather than for budgetary constraints, and be monitored by well-designed performance indicators. Public Private Partnerships are based on risk-sharing arrangements between the public and private sectors where each part should retain and allocate the risks according to its management and mitigation capacity. Public authorities should be adequately equipped to assess those risks and to find the right risk-sharing arrangements avoiding that unreasonable level of liability burden are assumed by the tax-payers.

The administrations should also receive support, in the form of technical assistance, to the development of the project pipeline (i.e. dedicated teams should be offered to the Member States to help them identify projects that could use project finance models and advise them in adapting their procurement procedures and overall legal framework to encourage PPP) and at the level of projects, i.e. a dedicated financial engineering team should be able to provide support to individual operations, by proposing financing structures customised to the needs of the projects, advise project promoters on the use of financial instruments as an alternative to grants (full or partial), or

provide options with different risk/cost/complexity scenarios for financing structures and advise project promoters on options for sourcing additional co-lenders to complement EIB's products.

This dedicated support, which could in future be provided, inter alia, by the Advisory Hub currently being launched, requires a deep knowledge of the local markets, and should come in addition to the technical assistance already provided by JASPERS (cost-benefit analysis, environmental issues, and feasibility studies), for example.

Section 3.04 Optimisation of procurement procedures

Rationale for Public Private Partnerships (PPP)

In many Member States, the usual procurement procedures are not suitable for project-financing schemes, preventing private sector involvement in infrastructure projects. Guidelines and standard procurement procedures for PPP should be promoted in general; a specific effort should be devoted to cross-border projects.

Procurement procedures are often ill-adapted because of limited capacity and experience of the administrations in understanding the requirements for private financing and the mechanisms of risks transfers.

The reasons for widening the scope for innovative financing linked to project development are twofold:

- Efficient use of (scarce) public resources in quantity (avoiding over-financing upfront projects with a self-financing potential) and quality (concentration of public resources to projects with high risk profile – notably regulatory risk – long implementation time and poor financial return).
- Effective use of public funding, in terms of timely completion – and therefore return – of the investment, as well as full availability/exploitation of the infrastructure throughout its life-cycle.

The added value of such innovative procurement schemes relies on shifting clearly defined responsibilities on a subject in charge of project implementation and exploitation (as is often the case in project financing), therefore:

- Effective risk transfer leading to a better time-to-market and cost control of the project that requires a clear contractual framework for the project development, and that can notably mitigate the political/regulatory risk which is the most adverse to investors.
- Life-cycle approach, that can internalise positive and negative externalities, and have all the stakeholders involved in speeding up and maximizing the generation of benefits by the project; it has proven successful to facilitate, inter alia, cross-financing.
- Red tape and lead-time reduction, streamlining most of the decision-making within the remit of the project promoter; as shown in the examples provided herein, it has significantly contributed to deliver the projects on time, to the required standards and budget, ensuring the overall quality of public expenditure.
- Generation of innovation, which is facilitated by the association of enterprises in project development.
- Crowding of private and public resources, thus speeding up the development of the project pipeline (i.e. generating additional projects within a timeframe), which is the underlying assumption of the Juncker Plan / EFSI mechanism.

In spite of these potential advantages, the current EU scenario is characterised by strong territorial and sectoral asymmetries on project development patterns, which has often prevented from attracting the private capital into the project development – a state-of-play leading to an underestimation of the potential scope for it.

Sectorial experience with PPPs and lessons learned

The practice of developing motorways through concession linked to a generalised tolling for freight and passengers have led in some Member States to mature markets and a genuine appetite from the construction and financial sector, while the A-model in Germany highlighted that a business case for limited tolling systems (so far applied to freight alone in this case) is also present. In general - when these overall conditions are not met, public procurement tends to be shaped as traditional public works.

A common misperception is that rail projects are unfit for Innovative Financial Instruments / PPPs / Concessions or “concession-like” schemes⁵, while, currently, in Europe at least two successful business models for financing large rail infrastructure projects - including risky greenfield projects and cross-border sections – exist: A) Life-cycle concession / “concession-like” models and B) Dedicated transport funds for strategic long-term infrastructure development.

A) Life-cycle concession and “concession-like” models such as in the projects illustrated in the table below:

Project	Financial size	Self-financing	Cross-Financing	Traffic risk / Operational risk	Project developer
LGV SEA – Tours-Bordeaux	7.8 B€ (7.2 B€ new 303 km HSL)	48% over 50-Y concession	-	Traffic Risk (mitigated with LGTT)	Concessionaire LISEA (private consortium)
Oresund fixed link	2.7 B€ (2008)	95%	Yes – majority of revenues from Road tolls, benefiting to rail investments	Traffic risk	Public concessionaire (Sund und Belt)
Contournement Nimes-Montpellier	1.8 B€	Around 65% investments; 100% operational costs; availability payments	No	Operational risks (payment on availability)	Private consortium benefiting financing and re-financing by EIB & CDC
Perpignan-Figueres⁶	1.1 B€	Around 50% from track access charges	No	Traffic risk	International Private consortium
Fehmarn Belt	6.2 B€ plus land connections)	70-85% of construction and 100% operation costs (30-40 year concession)	75% revenues from Road tolls, 25% Rail covering most of construction and 100% operations	Traffic risk	Public concessionaire (Sund und Belt)

⁵ It is interesting to note that the US Treasury and Council of Economic Advisers, in their 2012 paper on “NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT” for President Obama plan to re-launch infrastructural investments come to an opposite conclusion - i.e. roads are assumed to be less suited for project financing.

⁶ Note: in spite of the current financial problems due to a lack of fine-tuning of national sections development, the Perpignan-Figueres case showed the potential of an international consortium to deliver a complicated cross-border section on time, to the required cost and quality – the transfer of the construction risk was successful, but the public did not overcome the coordination problem between the Member States in infrastructure planning (and no guarantees covered the traffic ramp-up, thus mitigating its impact).

In all these cases, complex infrastructures aiming at rebalancing the modal shift, developing new connections (thus not benefiting from existing demand to be diverted), and delivering strong network effects on other branches (positive externalities) have been made possible through a public grant component (funding) that has acted as the enabler for financing.

Another key triggering factor, in all the above-mentioned cases, is a guarantee component, either provided in form of a contractual provision or contingent liability, or provided as an ad hoc financial instrument which enabled the setting-up of the schemes.

The statistical treatment of the PPPs and Concessions vis-à-vis the Stability and Growth pact (→ Section 3.11), allowing to keep part of financing from public resources off-balance-sheet, is one of the key factors leading to the use of such procurement model.

Remarkably, the PPP procurement mechanism has proven successful with project promoters of private ownership as well as with public shareholders.

B) Dedicated transport funds for strategic long-term infrastructure development, such as the AlpTransit (CH). The AlpTransit is a wide-ranging project supported by an ad hoc fund, where transport investments in line with Swiss overall transport policy are cross-financed with revenues from road users.

The fund is set with the aim of leading to effective cross-alpine flows (primarily North-South freight transport) channelling them to railways through long base tunnels (Lötschberg – 33 km and Gotthard – 57 km plus Mount Ceneri tunnel) and it can finance any ancillary measures, works and systems needed to deliver its ultimate objective.

The fund can provide both investment costs, including fixed equipment, on-board equipment (to optimize the actual use of infrastructure), complementary investments in cross-border sections, removal of small bottlenecks in other states and incentives to the use of the infrastructure (rebates on the cost of freight transport), in order to fully exploit the capacity of infrastructure (i.e. maximizing the return on investment from a socio-economic point of view).

The Fund manager constantly reports on the fund's performance in terms of:

- financial indicators,
- physical output indicators (infrastructure built) and
- **result indicators** (in terms of transport flows).

Funding is generated by three financial streams linked to (road) transport operations (user-pay principle):

- The Vignette for passenger cars.
- Additional excise duties from car fuels (Diesel and Petrol).
- The toll for road freight transport (that applies everywhere – on motorways and on the local networks), based on a GPS-based system.

In order to match the revenue stream with the investment expenditure profile, the fund can borrow public money issuing additional sovereign bonds, which it has to repay to cover the related national public debt service.

It is noteworthy that this innovative scheme has led to the use of 100% of the actual capacity of the corridor (more than 110 daily trains through Lötschberg – partially single-tube base tunnel) managing one of the more balanced, sustainable and efficient modal split for both passengers and freight in Europe.

Such a solution seems to be preferable compared to the concession and "concession-like" models in case of projects with very low or no net revenues during the operational phase, notably in the following cases:

- Very long-term, expensive strategic projects (e.g. in the case of base tunnels).
- To support a pool of individual projects along a corridor collectively needed to achieve specific transport objectives.
- When revenues are not project-borne (cross-financing, ad hoc taxations e.g. on transit/congestion, pollution charges in sensitive areas, fuels).

Specific measures:

- It is worth exploring systematically the use of PPPs and concessions to manage projects' life-cycle with a substantial risk transfer; the sharing of best practices and capacity building, the set-up of dedicated structures to provide standardised methodologies for risk mitigations and transfer (contracting), competitive dialogue with tenderers, gate-keeping, and advice. In this perspective, the European Commission and the Member States could develop a framework for the cooperation between public authorities and private co-investors, including as regards their respective role in the management and ownership of the infrastructure.
- In most cases of cross-border projects the permitting and tendering of which tends to be more cumbersome and uncertain (at least when it is not a fully privately managed project) compared to a single-country project:
 - A single legal framework compliant with the internal market rules (but potentially ad-hoc for specific mega-projects) has to be favoured to the coexistence of multiple national systems. Notwithstanding the progress made by the current EU rules (Directives 23-25/2014), more self-executing guidelines to be applied “off-the-shelves” could significantly simplify, reduce uncertainties, and reduce time-to-market of cross-border projects.
 - The use of a single language in all the tender and contracting documents (with the agreement of the parties involved) could, among other things, save time, increase the accuracy and minimise misunderstandings, representing a step in the right direction, and ought to be sought for.
 - Procurement guidelines for cross-border projects should be elaborated at EU level in order to simplify procurement procedures and to reduce inherent procedural risks.
- On financing, it is worth exploring the possibility of setting up “transport fund” mechanisms for dedicated strategic infrastructures development (notably for very large infrastructures / set of infrastructures with long implementation time and low direct financial return, or when additional sources outside the boundary of the project(s) are used to finance the project).
- On PPPs and Concessions, besides clarifying their on/off balance-sheet status, it is important to share best practices and set-up, when not present, a dedicated structure within national administrations to provide with standardised methodologies notably for risk mitigations and transfer (contracting), competitive dialogue with tenderers, gate-keeping, and to advise any public administration in developing such schemes. These schemes ought to ensure that infrastructure is well-functioning and exploited throughout its life-cycle.
- It is worth highlighting that these models, as shown above, can successfully deal with a construction risk. Broadly speaking, attracting private capital is ought to be considered in order to make a better use of the public resources (avoiding over-financing those projects that can be partially or totally self-sustained) and to pool additional resources to finance additional projects.

Section 3.05 Simplification of permitting

Another key element to be taken into the broad picture of project development is permitting. Besides the tendering and contracting phases, the permitting procedure can often prove to be cumbersome for transport projects, particularly for cross-border projects which involve different sets of national legislation. These projects are considered administratively too risky and can prevent private investors from financing them. Tackling these administrative barriers and making sure that projects start their implementation without delay is essential in order to ensure the counter-cyclical effect of any investment plans (e.g. EFSI).

In this respect a specific aspect to be addressed is related to the judicial procedures for appeals. For key projects of common European interest, with large and positive socio-economic and environmental impacts, these appeals and their processing should be anticipated, and constrained in time, as detailed below.

Specific measures:

- It is important to define a unified, comprehensive procedure for environmental appraisal and permitting, by:
 - Setting-up a single contact point (“one-stop-shop”) per project. This is notably important for cross-border projects. This in turn calls for clarifying, simplifying and streamlining the different national or local rules for cross-border projects based on the EU requirements.
 - Fine-tuning of timing for the different procedures (Environmental Impact Assessment, Natura 2000 – birds and habitats Directive, and Water Framework Directive) under a comprehensive “Environmental Impact Study”.
 - Anticipating the “Environmental Impact Study” at an early stage, so as to maximize its impact in the project’s definition, and to avoid impacting the procurement and financial structuring phase, where undefined environmental requirement would be seen as a major risk or a large public liability.
 - Gathering all the national/local authorities together in a single forum to appraise the project in a synergic way, coherently and timely.
- Similarly, measures to avoid and/or limit blocking appeals ought to be deployed, notably on EU projects that have a strong socio-economic and environmental rationale and that are supposed to deliver an anti-cyclical effect. It might therefore be desirable to set a platform to diffuse the following best practices already available in the Member states:
 - A single step for appeals.
 - Meet the restrictive conditions to stop the project in case of appeal, and only after an adequate, technical and legal, but not formalistic, scrutiny.
 - Limit the amount of time for the judicial / administrative action.
 - Automatic procedures to substitute a non-compliant contractor or contractors facing major difficulties of legal, financial and technical nature.

Section 3.06 Clarification of EU state aid rules

State aid is defined⁷ as "an advantage in any form whatsoever conferred on a selective basis to undertakings by national public authorities." The Treaty on the Functioning of the European Union (TFEU) prohibits state aid unless it is justified by reasons of general economic development.

Despite the general prohibition of state aid by the TFEU, under certain circumstances government intervention may be necessary to ensure a well-functioning and equitable economy. The Treaty leaves room for a number of policy objectives for which state aid can be considered compatible. The legislation initiated by the Commission stipulates these exemptions.

It is crucial to highlight that public intervention in transport (as foreseen by the Common Transport Policy agreed at Union level) is justified since the sector is characterised by a **systemic market failure** for the relevance of costs and benefits which are not monetized / are incurred by different actors than the one generating them.

For instance, the huge costs induced by road network maintenance and congestion are not recovered, nor are the ones linked to local, regional and global pollution - which would require distance / time-related tolling for each road infrastructure including within the urban areas.

In addition, public incentives are often at odds with the Common Transport Policy and do not address the above-mentioned distortion: energy taxation among transport sector is uneven, with international air transport exempted in most cases, while electrified railways pay carbon emission linked to energy production, in spite of leading to a net reduction of the greenhouse gases. In some cases, the more polluting sectors are given distortive exemptions (e.g. road haulage on excise duties).

Besides, were market distortion is addressed, it would anyhow be unlikely to attract private investors and capitals to projects with long implementation time and high uncertainties (e.g. base tunnels), thus calling for a public intervention.

Public financing of transport infrastructures under state aid rules

National public support to infrastructure development is subject to scrutiny vis-à-vis the current set of competition rules. Until the year 2000, the Commission's view was that "the construction [or] enlargement of infrastructure projects (such as airports, motorways, bridges, etc.) represents a general measure of economic policy which cannot be controlled by the Commission under the Treaty rules on state aid". That view changed with the judgement of the EU Court of Justice in the case "Aéroports de Paris", later on confirmed in the judgement of the "Leipzig-Halle airport" case. In those judgments, the Court clarified that the operation of an airport is an economic activity, and the construction of airport infrastructure is an inseparable part of it. From the date of the judgment in 'Aéroports de Paris' (12 December 2000), the operation and construction of airport infrastructures, and, by extension, of other transport infrastructures, has been considered as falling within the ambit of state aid control.

In July 2008, the Commission adopted Guidelines on state aid for railway undertakings, in which it explained that "where infrastructure use is open to all potential users in a fair and non-discriminatory manner, and access to that infrastructure is charged for at a rate in accordance with EU legislation (Directive 2001/14/EC), the Commission normally considers that public financing of the infrastructure does not constitute state aid to railway undertakings".

In February 2014, the Commission adopted Aviation Guidelines recalling that the public funding / financing of airport infrastructures constitutes state aid and has to be notified to the Commission. The guidelines provide guidance about the compatibility of the aid, explaining, for example, that for large airports with a passenger volume of over 5 million

⁷ see http://ec.europa.eu/competition/state_aid/overview/index_en.html

per annum, investment aid is, in principle, incompatible with the internal market and can be approved only under very exceptional circumstances.

In June 2014, the Commission adopted “Criteria for the analysis of the compatibility with the internal market of state aid to promote the execution of important projects of common European interest.” The document recognises that TEN-T projects may fall under that category and explains the general criteria that the Commission will take into account when assessing the compatibility with the internal market of aid to promote the execution of an IPCEI on the basis of Article 107(3)(b) of the Treaty⁸.

Notwithstanding the guidance provided so far by the Commission, Member States have the general obligation of ex-ante notification to the Commission of their intentions to grant support to the construction of transport infrastructures. Before granting the aid, the Commission has to confirm by means of a decision that the intended support respects the state aid rules.

In the absence of the notification exemptions (e.g. a block exemption for a particular category of projects in certain sectors), Member States should consider notifying to the Commission all infrastructure investments foreseen in their transport plans, for clearance under state aid rules.

Procedural aspects: applying for EU's grant support and Member States' contributions

While the **support provided by the Commission to the financing of transport infrastructures** that are part of the TEN-T **does not involve state aid** within the meaning of the Treaty, the co-financing support provided by Member States does.

In practice, that means that Member States have to obtain double clearance from the Commission in order to carry out a transport infrastructure project:

- A Commission's decision granting the EU financial support to the project.
- A Commission's decision confirming that the Member State co-financing of the project in question is compatible with state aid rules.

The first decision involves a competitive tendering and evaluation process in line with the requirements of the TEN-T Guidelines (Regulation (EU) 1315/2013), in order to approve the EU grants to the project.

The second decision involves a notification under the state aid rules and the adoption of a Commission Decision examining (and eventually approving) the national co-funding of the project.

The situation is similar for non-TEN-T transport projects supported by the Structural Funds in the Member States.

So far, the Commission has not provided formal guidance to Member States' administrations about how to deal with the double notification / application process (when to do it, time-schedule of the COM decisions processes, information to be provided under the different procedures).

The particular case of EU-financial instruments supporting transport infrastructure

Over the past years, the Commission has launched a number of financial instruments to attract private finance to transport infrastructure projects. Such instruments include the Europe 2020 Project Bonds Initiative (PBI), the Loan Guarantee for Transport Projects (LGTT) or the European Fund for Energy, Climate Change and Infrastructure (Marguerite Fund).

⁸ Aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State.

Financial instruments supported by the EU bring significant advantages to the transport infrastructure promoters in the form of loans, guarantees, support provided to obtain investment grades of infrastructure bonds or equity contributions from the EIB and other public banks.

Several big infrastructure projects of EU interest, including major ports, airports and motorways, have been facilitated by the use of the PBI, LGTT and Marguerite Fund instruments. The EU support to transport infrastructures by means of those instruments is not subject to "compliance" with state aid rules. In fact, the EU financial instruments do not involve state aid within the meaning of the Treaty, but according to the EU Financial Regulation (Article 140.2(c)) adopted in 2013, "consistency" with state aid rules needs to be ensured at financial instrument level.

Treatment of the EIB own risk lending under state aid

There is common understanding that EIB's own resources awarded directly by the EIB Group do not constitute state aid under Article 107(1) TFEU, and as such fall outside the scope of the state aid rules.

Furthermore, where the EIB group acts under a mandate from the European Commission and manages EU funds, Union financing does not qualify as state aid – and therefore substantive and procedural requirements of the state aid rules do not apply, when it consists only of Union resources without involvement of any resources from or under the control of Member States.

New financial instruments under the Connecting Europe Facility

The Connecting Europe Facility (Regulation (EU) 1316/2013) foresees a significant increase in the use of financial instruments to attract private finance to transport infrastructures. The fundamental purpose of those instruments is to reduce the amount of public resources that Member States need in order to complete the projects belonging to the TEN-T core and comprehensive networks (a legally binding obligation according to Regulation (EU) 1315/2013).

As mentioned above, in line with the provisions of the EU Financial Regulation, the CEF Financial Instruments have to be used in a "consistent" manner with state aid rules in order to avoid undue distortion of competition on the internal market and to have a consistent treatment of financing for equivalent projects granted from Union and Member States' funds.

The **criteria** for ensuring respect of the consistency principle and the **procedure** for ensuring practical application of those criteria are of critical importance for using CEF financial instruments. In particular, it is important to clarify:

- Who (and by what means) will provide the private investors interested in participating in a project supported by the CEF FI with the legal certainty that the "consistency test" – in practice state aid clearance – has been passed.
- How do the state aid consistency principles (that should prevent market distortions) apply to infrastructure transactions in markets that are suffering from market failures⁹.
- In which markets should the consistency criteria apply, i.e. transport sectors or capital markets.

Proposed measures:

From the perspective of both Public Administrations and private investors willing to provide finance to transport infrastructures, the current situation is unsatisfactory because of a lack of legal certainty. The following steps should be undertaken in order to improve the current situation:

⁹ The existence of market failures results, for example, from negative effects of financial regulations (Solvency 2, Basel III) on the financing of long-term infrastructure projects.

- A clear priority – in terms of systematic presumption of compatibility with state aid rules - should be given to the financing measures required for the provision of transport infrastructures needed to complete the TEN-T core and comprehensive networks. The financing of those infrastructures is a legally binding obligation for the Member States (cf. Regulation (EU) 1315/2013).
- The Commission's decisions to support the financing of infrastructure projects by means of financial instruments managed by the EU – implemented through the independent evaluation of the economic and financial viability by the EIB - should be considered as fully consistent with state aid rules.
- The creation of a "single window, fast track clearance procedure" for notification of grants linked to the completion of TEN-T projects would lead to a complete clearance concerning state aids, avoiding any legal risk on the development of a given project.
- Recalling that financial instruments managed by the EU, such as the CEF Debt Instrument, are fully consistent with state aid rules, since those instruments are not State managed, and therefore differs in nature by the underlying principle justifying the existence of state aids within the treaties. The Commission should urgently establish a straightforward, easy to follow, procedure for verifying those criteria and providing legal certainty to investors.
- The same level of clarity applying for the CEF Financial Instruments should be provided for the EFSI guarantee which, just like in the case of the CEF financial instruments, is not State managed but offered by the EIB with transparent and open procedures, and therefore should not constitute state aid.
- The criteria and procedure should neither disadvantage the CEF Financial Instruments nor those of the EFSI in respect to the EIB own risk lending instruments. Accordingly, for CEF or ESIF-supported projects, only consistency would be checked.

Section 3.07 Finding additional resources: cross-financing and earmarking of revenues

Cross-financing schemes may be considered as financing models that complement, in some cases, the available funding for infrastructure. The use of cross-financing schemes within the same mode of transport seems to have already reached consensus. However, the use of road charges, for instance, for the funding of rail projects is still criticised because railways already benefit from higher levels of subsidy than roads or air transport. Nonetheless, most of the successful examples of the implementation of large railway infrastructural projects, including cross-border rail projects, have been made possible by cross-financing, lending themselves as measures that contribute to correcting the market distortions.

One existing and successful product for engaging with the institutional investors are the Climate Awareness Bonds, the EIB's green bonds that are earmarked for projects supporting investment on Energy Efficiency and Renewables. The Bank has played a significant role in developing this new segment of the market and is currently the largest supranational issuer of the green bonds. The following measures could help make the best use of cross-financing:

Specific measures:

- The Commission should foster the use of cross-financing for the removal of critical bottlenecks within the TEN-T core network. A list or a **typology of projects** on the corridors which could be subject to cross-financing could be defined.
- The most suitable projects for cross-financing are those **with net social benefits** but that experience difficulty in being financed either because of the high investment costs or because of their **cross-border nature**. The financing of the Brenner Base Tunnel (in progress) or of the Oresund fixed link (completed) as well as the AlpTransit Scheme serve as useful examples of cross-financing in the transport sector.

The case of Brenner Base Tunnel

The agreement reached on 18 April 2011 by Austria and Italy on the total cost for the project of 7,460 million EUR (1 January 2010 prices) was a key milestone. This agreement paved the way for the main construction works on the base tunnel, the so-called Phase III, to be carried out by the project promoter BBT SE. Since 2010 BBT SE provides updated expected costs for the entire project on an annual basis. The expected costs as per 1 January 2013 prices amount to 8,756 million EUR, including a 500 million EUR contingency for non-identifiable risks. The tunnel will be completed in 2025 and become operational in 2026. The review made clear that the measures taken by the EU, including the appointment of European Coordinators, the increased programme resources and the increased co-funding rates, in particular for cross-border sections, have had a stimulating effect on the implementation of the trans-European Transport network.

- The use of road charges to fund rail projects could be criticised because - as measured on the basis of national accounts, including tax revenues and direct charges - railways benefit from much higher existing levels of subsidy than roads or air transport. External benefits of sustainable infrastructure should therefore be further identified and potentially rewarded, e.g. by facilitating cross-financing schemes between the different modes of transport (e.g. by using revenues of road tolls to finance railways in sensitive environmental areas). This would be a way of eliminating distortion induced by asymmetric and inefficient taxations across transport modes, so as to promote more energy-efficient modes and their development, contributing to furthering the Commission's modal shift target from road to more environmentally friendly modes of transport, rail and inland waterways.
- The creation of a user-fund could also be an instrument to extract value from existing infrastructure. Future revenues from infrastructure, like ports, airports and toll highways could contribute to such a fund. This implies action needs on concessions and it will generate a cross-financing approach.
- The creation of a specialised institution or body at national level which manages regional / national funds and incomes as well as project bonds could constitute – if conditions allow – a long-term solution that would facilitate the combination of the construction of new infrastructure with its maintenance needs.
- Specific EU tools, aiming at deploying the user/polluter pays principle, such as the Eurovignette or the Emission Trading Scheme (→section 3.08), could be implemented in such a way as to make funding available for projects/modes generating positive externalities. This would also help overcome market distortions and shortcomings.
- The inclusion of "sustainable" transport within the scope of the Climate Awareness Bonds, currently issued by the EIB, could be considered, ensuring that investments supported under this new category respect stringent criteria on environment integrity.

Section 3.08 Monetisation of external costs and benefits

Transport infrastructure often produces revenues and societal benefits which are not monetised, or when they are, they are not earmarked to finance the maintenance or the development of new infrastructure. The de-coupling between State budget and infrastructure financing seems to be of paramount importance in order to remedy the traditional incoherence between political priorities (by nature short/mid-term) and transport investment needs (long-term).

"Polluter-pays" and "user-pays" principles should be more widely applied to reduce the burden on the tax-payers for the construction and maintenance of transport infrastructure, and this ties in well with the cross-financing schemes. As explained in the above section, the external benefits of sustainable infrastructure can be successfully applied in the cross-financing schemes between the different modes of transport (e.g. using revenues of road tolls to finance railways in sensitive environmental areas). It would be a way of eliminating distortion induced by asymmetric and inefficient taxations across transport modes, so as to promote more energy-efficient modes and their development.

An enlarged role for Emission Trading Scheme (ETS) ought to be considered in the on-going revision of the ETS mechanism in order to generate income for sustainable mobility projects. Currently, we see rather an opposite distortion – e.g. railways pay carbon taxation on top of the whole (production plus taxation) cost of energy, including when they divert demand from more polluting transport mode, thereby reducing carbon emissions. On the other hand, aviation fuel is still tax-free, and road transport is often subsidised. The overall effect is therefore a negative distortion heading transport away from the Common Transport Policy towards a suboptimal use of infrastructure, increasing the energy dependency and the external debt of the Union.

The current ETS Directive includes an obligation for Member States to spend at least 50% of the auctioning revenues for climate and energy related purposes. To support the achievement of the 2030 decarbonisation targets, the EU Heads of State agreed in October 2014 to widen EU support to innovation, including industrial innovation, of the modernisation of the power sector. They agreed to set up an Innovation Fund for all Member States under the EU-ETS with the initial endowment of €400 million allowances. Moreover, a reserve of 2% of the allowances in the EU-ETS will be set aside between 2020 and 2030, and the proceeds from this reserve will be used to create a Modernisation Fund (MF) to support the EU Member States with lower income (with GDP per capita below 60% of the EU average) in improving energy efficiency and modernising their energy systems. The Commission Communication on Energy Union recently endorsed by the Council on Energy Union calls to speed up electrification of transport and become a leader in electro-mobility and energy storage technologies. In this respect, it might well be considered to include - in a consistent manner - sustainable transport within the scope of these two funds.

Section 3.09 Pooling and Blending

An increased use of pooling and blending of the resources could provide for an additional and synergic use of the limited resources available at the EU and national levels, in order to:

- Create the critical mass use of investments around key transport infrastructure allowing for the finalisation of the key projects in the short to medium term.
- Deliver network effects, notably for TEN-T (as well as Energy and Telecom networks).
- Maximize the leverage of public grants through blending, including support triggered by the EIB / National Promotion Banks.

As mentioned in the previous sections, sound management of the EU budget requires that the EU resources were additional and supplementary to the ones of the Member States, providing a mutual leverage and concentration, thus speeding-up the implementation of the key projects by reducing their time-to-market, in order to deliver the expected positive results for the economy.

A large variety of transport projects can be made possible through pooling and blending, and a number of success examples already exist. Such projects include the expansion of port capacity, rail connections or airports or ports as well as some of the more complex projects, including the deployment of ERTMS.

In some transport projects the use of financial instruments may appear to be limited. For example, the financing of some core projects addressing the missing links and bottlenecks on the TEN-T by the financial instruments alone may not be sufficient because only a part of the investment costs can be covered by the revenues from the projects, even over the long-term. In order to make sure that such and similar projects are realised, while maximising the use of the public budget by covering with EU grants only the share of the investment that cannot be repaid, the blending of financial instruments and grants from the EU budget will be necessary.

However, the differences in procedures and calendars make this type of arrangement rather difficult to implement. The following measures are proposed to help address the situation and facilitate the take-up of financial instruments:

Specific measures:

- Guidance should be provided by the Commission, with the support of the Innovation and Network Executive Agency (INEA), to facilitate the blending for project promoters, when necessary.
- The Commission should facilitate the blending and pooling of financial products from the CEF or the EFSI with grants from the CEF or the European Structural and Investment Funds (ESIF). The Commission and the EIB should also ensure complementarity between the financial instruments of the CEF and the EFSI.
- Structured cooperation and consultation between the EU actors (notably the Commission and EIB services) ought to be ensured by early screening of the potential projects, an open dialogue with the project promoters, and the identification and removal of the regulatory barriers to blending (please see other sections of the Action Plan).
- New financial instruments ought to fit the specific needs of infrastructure sectors, the size of projects or geographical markets, and all other relevant features peculiar to the market needs, including the assessment of specific market barriers.
- Due consideration should be given to developing, when appropriate, a wide sectoral approach or, where deemed appropriate, transport mode specific approach for the use of financial instruments or schemes to target a large number of stakeholders at once.

Section 3.10 Attracting the private sector: financial markets and regulations

Private funding and capital market

A better use of liquidity available on the capital markets and in particular the assets managed by the institutional investors have attracted a lot of attention in the recent years. Institutional investors are one of the largest sources of private and public capital with roughly EUR 63 trillion¹⁰ of assets under management versus global financial assets of around EUR 190 trillion.¹¹ In Europe, assets managed by the institutional investors amount to roughly EUR 13.5 trillion¹² equivalent to over 90% of EU GDP. Institutional investors are a reliable source of long-term capital mainly because they need to match their liabilities with long-term maturity assets. This makes institutional investors exceptionally suitable to undertaking long-term counter-cyclical investments in sectors of the real economy characterized by high productivity. This in turn helps generate stable streams of revenues.

Despite the fact that so far in Europe their level of investment in infrastructure is still limited, there is a growing interest in infrastructure debt, as pointed out in the Chatham House Report "Building Growth in Europe, Innovative Financing for Infrastructure"¹³ - a view that is widely shared and confirmed¹⁴ by the institutional investors themselves.

Background

The use of financial instruments as an EU aid scheme for transport infrastructure projects is justified on the basis of market imperfections or sub-optimal investment situations and investment needs¹⁴. It is assumed that, in perfect

¹⁰ Kaminker, Ch. et al. (2013), "Institutional investors and green infrastructure investments: selected case studies", OECD Working Papers on Finance, Insurance and Private Pensions, No.35, OECD Publishing.

¹¹ Estimates from the McKinsey Global Institute based on 2012 trends.

¹² OECD Institutional Investor database.

¹³ Paola Subacchi, Stephen Pickford, Davide Tentori and Helena Huang, September 2014

¹⁴ cf. article 14(1) Regulation (EU) 1316/2013

market situation, financial markets would allocate optimal resources, in terms of quantity and price, to support economically viable transport infrastructure projects. As indicated by the EIB¹⁵:

"In competitive, undistorted markets with well-defined property rights [...], the financial return on capital of the project would be a necessary and sufficient indicator to determine whether the project is worth undertaking or not from the social welfare point of view".

Therefore, in absence of a market failure, the market mechanisms would ensure the most efficient allocation of investment resources, ensuring that all transport projects needed for the general economic development of a country are carried out at optimal cost (for the investors) and optimal returns (for the financiers).

Market failures in EU capital markets

Market mechanisms may have important shortcomings for achieving optimal investment situations for infrastructure projects: *"Markets are not always sufficiently competitive, prices are often distorted, and property rights are at times not well defined, leaving externalities with no price assigned to them. For these reasons, a project's financial return may not be an adequate indicator for the desirability of the project for society at large. At times, as in some public goods, a financial return may not exist at all. Provision of public goods may be made free of charge to the user and generate no revenues to the investor, such as a dyke to preserve an eroding beach."*¹⁶

This situation has been exacerbated by the financial and economic crisis, bringing another layer of difficulties to the financing of transport infrastructure projects in the EU:

- The European banking sector, with strong disparities in different Member States, has considerably obstructed the allocation of lending funds to long-term infrastructure investment projects¹⁷.
- The fragmentation of EU capital markets, which limits the access to direct finance for project promoters¹⁸.
- The impact of the sovereign risk crisis on national capital markets: sound investment projects highly needed to support the economic recovery have been less positively viewed by the international investors¹⁹.
- Monetary policies, falling inflation and currency turmoil has been negatively affecting the capacity of the capital markets to efficiently allocate long-term resources in the Eurozone and non-Eurozone.
- Weak economic performance and growth prospects in the EU and the Eurozone, as well as the continuing deleveraging, have had a negative impact on foreign investment.

Some of the consequences of the current conjuncture can be supported with the following facts:

"As a consequence of the economic and financial crisis, the level of investment in the EU has dropped significantly since its peak in 2007, by about 15%. In some Member States, that dip is even more dramatic. This is notably the case for Italy (-25%), Portugal (-36%), Spain (-38%), Ireland (-39%), and Greece (-64%). This level is also well below its historical trend. Only a partial rebound is projected over the coming years"²⁰.

"Preliminary data for 25 EU Member States show that while direct investment into and out of the EU grew again in 2013, intra-EU cross-border investment continued its downward path, and plummeted to EUR 123 billion in 2013

¹⁵ see, e.g. "The Economic Appraisal of Investment Projects at the EIB", EIB (2013)

http://www.eib.org/attachments/thematic/economic_appraisal_of_investment_projects_en.pdf

¹⁶ cf "The Economic Appraisal of Investment Projects at the EIB", page 9

¹⁷ see, e.g. "Institutional Investors and Infrastructure financing", OECD (2013)

<http://www.mmc.com/content/dam/mmc-web/Files/OECD-Institutional-investors-and-Infrastructure-financing-Working-Paper-No-36.pdf>

¹⁸ cf. Green Paper "Building a Capital markets Union" (2015)

¹⁹ see, e.g. "The Pricing of Sovereign Risk and Contagion during the European Sovereign Debt Crisis", EIB (2013)

<http://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1625.pdf>

²⁰ http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_en.htm

(marking a 74 % decline from 2011). These data suggest that EU investors lack confidence in the single market as a destination for investment"²¹.

"The geographical breakdown of capital inflows into the United States reveals that the EU was one of the main sources of external financing for the US economy, and that the United States was one of the main destinations of capital outflows from the euro area and the United Kingdom. After declining and even turning negative in 2012, capital inflows into the United States originating from the euro area increased steadily in 2013 and 2014"²².

A level playing field required for EU financial instruments to work

EU financial instruments can be part of the solution to the above-mentioned market failures by for example helping economically viable infrastructure projects that are unduly marginalised by the market to obtain a higher investment grade. Capital Markets are of crucial importance for the transport projects identified in this Report. The proposal by the Commission for setting-up a Capital Markets Union²³ provides a substantial contribution for the successful financing of long-term transport infrastructure projects, including through the CEF. Some decisive factors for more efficient long-term financing of the economy, and especially infrastructure, are as follows:

- Introduction of instruments to assure the level where institutional investors are comfortable investing long-term.
- Access to liquidity for major infrastructure and transport investments.
- The question of available and standardised credit statistics and/or ratings on infrastructure, including the role of rating agencies in assessing the infrastructure projects for investors as well as ratings/regulations for green bonds.
- Taking a fresh look on new asset-classes or sub-classes.
- Taking account of past Commission's initiatives to promote Project Bonds and Long-Term Guarantees for TEN-T Projects.
- Be more ambitious in the promotion of EU-supported products in Capital markets, for example "green TEN bonds" as an asset class in itself.

In order to be effective, the EU financial instrument would require actions addressing the underlying problems in the capital market.

Potential measures:

- **The creation of an asset class category²⁴ (of sub-category) for EU supported transport infrastructure projects:** the category would cover projects that are part of the TEN-T core and comprehensive networks and for which independent appraisal (e.g. by the EIB) probes economic viability.
- The design of **financial instruments** (inter alia, innovative PBCE, loan guarantees, green bonds or infrastructure debt funds)²⁵ **adapted to the needs of particular transport sectors, size of projects or geographical markets**, or other relevant features (products tailored to fit the market needs).

²¹ 4th edition of the Commission Staff Working document on the movement of capital and freedom of payments, (2015)
http://ec.europa.eu/finance/capital/reports/index_en.htm

²² 4th edition of the Commission Staff Working document on the movement of capital and freedom of payments

²³ http://ec.europa.eu/finance/consultations/2015/capital-markets-union/index_en.htm

²⁴ "Asset class" is defined (Investopedia) as "A group of securities that exhibit similar characteristics, behave similarly in the marketplace, and are subject to the same laws and regulations. The three main asset classes are equities (stocks), fixed-income (bonds) and cash equivalents (money market instruments)".

²⁵ see, e.g. "The Potential of Private Institutional Investors for the Financing of Transport Infrastructure", OECD/ITF(2013),
<http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201314.pdf>

- **EU Banking and Financial Regulatory framework consistent with EU investment needs**, notably by recognition in the Solvency II and Basel III regulations the existence of an EU asset class category, investment grade, for long-term investments. Banks and Financial Institutions should be in a position to keep those safe, EU-backed assets without being penalised in terms of capital requirements. A prudent revision in the financial regulations of the risk weight provisions for project finance ought to be considered, at least for these EU-backed, lower risk assets.

Section 3.11 Statistical treatment of PPPs

The on/off balance-sheet treatment of a privately-developed project provides key information for decision-makers when assessing compliance with the Stability and Growth Pact (SGP). The Commission should look at clarifying and potentially reviewing the guidance and standard clause on the current EUROSTAT rules (ESA2010) on risk transfer mechanisms, in order not to penalise concessions and PPPs for project implementation. This should be done in the context of the rules of the SGP, while fully exploiting the existing flexibility of the Pact.

The ESA2010 rule includes the criteria used to assess if a PPP has to be included or not in State Expenditure – it is therefore highly desirable to provide formal clarification on the conditions a PPP must fulfil in order to be kept off-balance-sheet, and highlight the potential role for the EU / EIB Guarantees within this framework (i.e. guarantees triggered / brokered by the EU support). This is of the uttermost importance in transport, since, even when transport infrastructure projects are privately financed, public authorities are providing guarantees or reimbursing the long-term debt contracted for those projects.

In general terms, the role of public guarantees is pivotal to enhance leverage – therefore, three elements need to be assessed:

- Firstly, off-balance-sheet treatment of national guarantees (including from national development banks), or, at least, limiting the cost to be included on balance-sheet to the cost of the financial guarantee.
- Then, EU guarantees (including from the EIB / other financial facilities) ought not to be considered as national public, since they are not linked to any liability on the national account of Member States where the project is taking place. Moreover, these are issued through entities such as the EIB after ex-ante risk mitigation (thus keeping the AAA status – therefore falling into the prudential regulation of the capital markets, rather than relying on public finances).
- Finally, EUROSTAT provides ex-ante check of the PPP status on request by the national statistical offices – it is worth exploring the same tool and deepen the cooperation with EUROSTAT in order to define off-the-shelf models for contract / set precise conditions for the EU-backed Financial Instruments and contracts to be considered off balance-sheet, thus providing real additional resources with public finances constrained by the SGP. More generally, the active involvement of EUROSTAT in advisory function would provide a meaningful contribution for developing the PPP schemes, which may not correctly affect the public budgets (“off-balance-sheet” treatment). A structured cooperation between EUROSTAT and the European Investments Advisory Hub ought to be considered.

Section 3.12 Stakeholder involvement and consultation. Communication

The establishment of a structured dialogue with potential long-term investors that could be interested in infrastructure financing is paramount to ensure the success of the initiatives that are going to be implemented under the CEF or the new measures proposed by the Commission in the context of the "300bn investment package". Liquidity is available on the markets, but one must ensure that there is a match between the project proposed, the instruments offered, the regulatory framework and the requirements of investors to which these instruments and projects will offer new opportunity for investments.

Obvious partners for the financing of transport infrastructure projects have been the **commercial banks**, which historically constituted one of the leading sources to privately financed European infrastructure projects. The financial crisis negatively impacted the capacity of the public sector to invest, many banks suffered losses and have abandoned the infrastructure lending sectors without being fully replaced as others had to reduce their overall lending volume in order to comply with stricter regulatory capital requirements (Basel III).

In this context, new partners must be found, and the most logical ones are the **institutional investors**. Institutional investors such as **pension funds, insurance companies and wealth funds** are showing an increasing interest in moving into infrastructure investment given its potential to match long-term assets and provide diversification. For instance, the stability provided by the regulated model in energy and natural monopoly situation in transport corresponds to pension funds' investment profile, characterised by relatively low rates of return – around 7%-8% – and long investment horizons.

These investors are also becoming increasingly ready to invest directly in infrastructure assets. This is new, as their exposure to infrastructure has traditionally been via listed companies (such as utilities) or via real estate portfolios. However, for such new classes of investors to invest, there needs to be investment opportunities available, i.e. equity opened to participation and/or debt products. Hence, the need for new products, and possible enhancements, that would allow channelling the investment into the infrastructures of European importance. It must be noted that some of these investors, in particular the pension funds, are politically driven, with investment guidelines established by law. Discussions at political level may be necessary in order to influence the investment profiles of these investors to direct them towards transport infrastructure financing.

Other partners should be contacted to assess the potential for cooperation, notably the **pension funds of large corporates, sovereign funds, investments and hedge funds, investor platforms, private equity funds, foundations**. It must be noted however that the type of returns expected by some of these investors may greatly differ from the type of financing necessary for transport infrastructure projects; therefore priority for cooperation should be given to long-term investors and institutional investors (pension funds and insurers) as their investment profile matches in particular the infrastructure needs.

Rating agencies are also to be contacted as they have a key role in assessing the projects for investors which do not have the capacity to analyse their own projects.

This requires at least two parallel actions: An exercise of project screening as well as the exchange of best practices among public administrations and the potential project promoters, and regular information flow to the Member States and to the European Parliament. This in turn calls for a structured cooperation and consultation between the EU actors (notably the Commission and the EIB services) with early screening of potential projects and an open dialogue with project promoters.

More generally, the know-how of local, regional and central administrations on the existing legal framework for project preparation, including for procurement and state aid, should be improved through dedicated and regular training programmes offered by the European Investment Advisory Hub and national advisory and training structures.

Finally, an appropriate and effective **Communication** policy and initiatives should be intensified with a view to generating a better understanding and greater involvement of **the general public**.

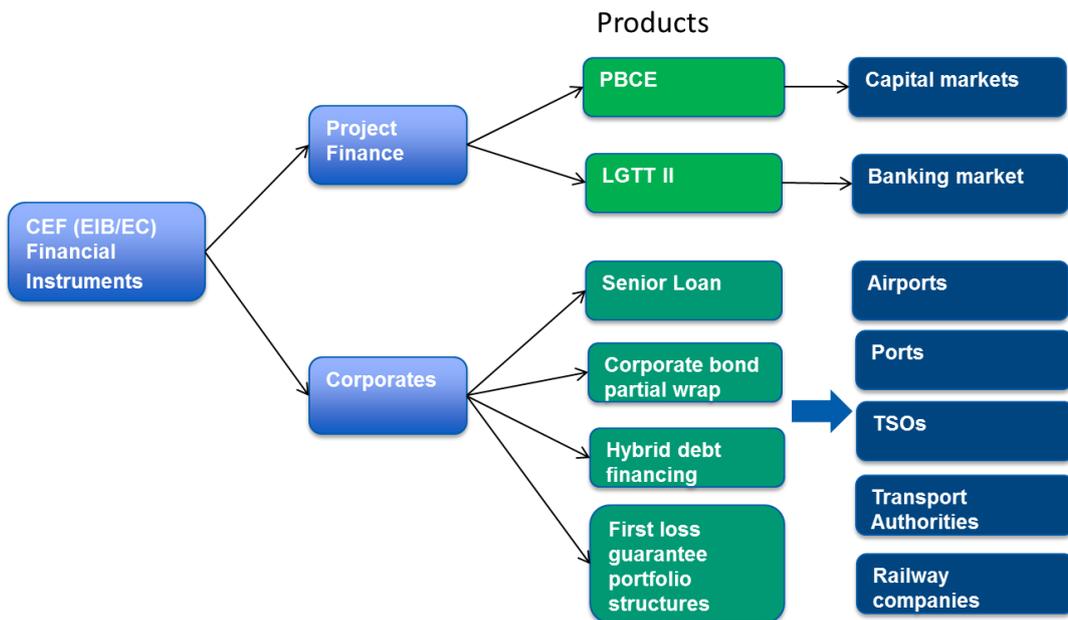
IV. Identification of pilot projects for financial instruments on the corridors and for soft transport infrastructure priorities

This section presents the proposed content on projects in the Report. This part will build upon the work of the identification of pilot projects undertaken by DG MOVE and the EIB, and will be complemented with additional elements, as follows.

The mandate indicated by the Italian Presidency of the Council at the Informal Council in Milano in September 2014 was to identify projects along corridors particularly suited for new financial schemes. In the Interim Report presented to the Transport Ministers during the Council of 3rd December 2014, a list of illustrative projects was presented together with global figures, on the basis of a general analysis of the projects included in the corridor studies. It was presented as a preliminary contribution of the Authors to the more extensive work on the identification of projects and the identification of adapted financial schemes, which was to be done in coordination with the EIB and the Member States.

Section 4.01 Overview of CEF Financial Instruments

A diversified product range is being developed by the EIB in coordination with the Commission to complement the existing financial instruments rolled out in the transport sector such as the project bond credit enhancement (PBCE) guarantee and the loan guarantee for TEN-T projects (LGTT).



The financial instruments will be supported by the Connecting Europe Facility (CEF) or possibly through the proposed European Fund for Strategic Investment (EFSI or the Juncker Plan). They are developed to finance projects structured on a project finance basis and those implemented directly by corporates. The financial instruments "tool box" that is being developed aims at facilitating access to financing by corporates and project finance structures whether they wish to tap the commercial banking market, the institutional investor market or capital markets more generally.

In addition to "standard" TEN-T infrastructure projects such as ports or railways, the Commission and the EIB are working on schemes to support specific TEN-T policies such as ERTMS, SESAR, greener transport solutions in the

shipping and urban transport sectors and the deployment of alternative fuels. These initiatives are presented in section 4.04.

Section 4.02 Methodology

A further review of the projects included in the corridor studies was conducted by the Commission (DG MOVE together with INEA) and the EIB, involving both the Projects Directorate and the Directorate for Operations, on the basis of the information available (in particular in the corridor studies, through the information available on these projects by the teams of the EIB, and on the basis of the projects' information available at INEA for projects that benefited from grants from the TEN-T Programme 2007–2013).

It was decided to identify a limited number of those pilot projects on the corridors that had the potential to use financial instruments such as EIB's project bond credit enhancement, guarantee schemes (LGTT) or corporate loan structures and where the corridor studies indicated a higher degree of readiness on which the Commission and the EIB could focus their support in the coming months.

In order to ensure additionality of the financial instruments, projects were not retained if they were already in the EIB's pipeline as EIB "standard" lending operations or with sponsors with a credit rating of a level to make them eligible for standard EIB lending operations or alternative competitive financing.

It appears that for an important number of projects included in the corridor studies, classic EIB intervention would be sufficient to support the projects considering the financing structure currently envisaged. For instance, EIB is already significantly involved in the **railway sector** which is mostly financed by Member states or the rail infrastructure managers. The **airport sector** is often dominated by commercially strong promoters not requiring any financial instrument to finance its investments. This is also the case in the **port sector**, but the wider range of promoters may open further opportunities for financial instruments. Finally, the EIB is significantly involved in the roads sector, both through "standard" loans and financial instruments.

It should be noted that the volume of potential projects to be financed by financial instruments is also dependent on the policy decisions taken by the Member States as regards the procurement solutions and ownership of infrastructure projects, with a view to including or not the costs related to the infrastructure projects in the national public debt and deficits. The same project could benefit from an EIB loan when a public authority is the beneficiary or from a financial instrument if the project is structured around a project company capable of borrowing debt and reimbursing it through a steady and consistent flow of revenues. As such, some projects not included in the pilot project list could benefit from financial instruments in the future if a different structure is promoted by the relevant authority as a policy matter.

The focus of this exercise therefore was on smaller or more challenging projects (from a financial perspective) that would be too risky to benefit from standard EIB lending and on those that may look for alternative sources of funding such as the capital market. The financial instruments are therefore new products aiming at capturing a new population of revenue generating projects allowing an efficient use of the limited public budgets available through grants. It must be noted that a combination of grants and financial instruments is sometimes required for the project to be financially sustainable.

The projects presented below illustrate the type of projects that could potentially benefit from financial instruments within a relatively short timeframe, subject to further analysis and discussions with the respective Member states and promoters. This list does not exclude other projects presented in the corridor studies, for example those that show a lower level of maturity and/or would require a different structure, nor does it consist in any financing agreement by the Commission and the EIB. Technical Assistance that can be offered through the Juncker Plan (i.e. Advisory Hub) should in particular help public and private project promoters to better structure projects in order to benefit from the financial instruments in the years to come.

As projects were often prepared with the view of attracting public grants, the number of projects ready to use financial instruments is currently limited. This explains why there is an important gap between projects that Member States have in their pipeline, and the pipeline of projects suitable for financial instruments. A combination of dedicated technical assistance and regulatory changes will help addressing this issue, building a strong project pipeline of mature projects for financial instruments.

Section 4.03 Projects identified on the nine core network corridors

(a) Atlantic Corridor

In this corridor with an important maritime dimension, several ports with projects for improvements (interconnections, capacity extensions) could benefit from financial instruments support in the coming year (assuming their maturity is confirmed).

The projects identified are located within the following ports:

- Sines
- Bilbao
- Bordeaux
- La Rochelle (linked to the corridor but not belonging to it)
- Paris

A number of ports or airports along this corridor (with potential projects) are either existing or potential clients of the standard EIB under its normal lending operation. In addition, some smaller projects could benefit from instruments individually or regrouped in dedicated investments platforms or funds (discussions currently ongoing in Spain while the port of Leixões has expressed interest).

(b) North Sea – Baltic Corridor

Projects identified were:

- Port of Hamburg & interconnections
- Efde Locks in the Twentekanaal

In addition, pending clarifications as regards the maturity and the type of financing structure chosen, projects on the Kiel Canal might also benefit from financial instruments.

(c) Orient/East – Mediterranean Corridor

In the corridor, where transport infrastructure projects often benefit from Cohesion Policy instruments, the following projects were identified for potential use of financial instruments:

- Port of Hamburg & interconnections
- Port of Lemesos
- Motorway D4 in Slovakia, bypass of Bratislava

(d) Scandinavian – Mediterranean Corridor

Projects identified in this exercise are located in Germany:

- Ports of Lübeck and Hamburg

- A7 Motorway section Salzgitter-Göttingen (section Hamburg-Neumünster of this motorway was already financed through the Pilot phase of the project bond initiative).

(e) Rhine – Danube Corridor

For this corridor which has an important inland waterway dimension, inland ports and locks have been identified as potential beneficiaries for financial instruments, either on a stand-alone basis or pooled together.

- Inland ports of Nürnberg and Regensburg
- Ports of Galati, Giurgiu & Constanta
- Port of Vienna and Linz Trimodal port
- Port of Bratislava
- Rehabilitation of locks Main - Danube Canal

(f) Rhine – Alpine Corridor

In this corridor, one major project, the Amsterdam IJmuiden Sea Lock is considering using the project bond credit enhancement instrument as one of the financing option. Most projects along this corridor were rail projects likely to be financed with grants and classic loans. One project was identified assuming in its financial structure a PPP structure is retained:

- The Brussels ring road
- VIA 15 in the Netherlands, cross-border missing link with Germany

A similar project could be the ring road of Antwerp, but further clarifications are required as regards timing issues, political decisions, choice of project structure...

(g) Baltic – Adriatic Corridor

In the corridor, where transport infrastructure projects often benefit from Cohesion Policy instruments, three specific projects were identified for potential use of financial instruments:

- Port of Vienna
- A1 Motorway in Poland, section Tuszyn-Czestochowa
- The port of Trieste could also be a possible project, but may benefit from standard EIB instruments according to the level of risk associated with the project.

(h) North Sea – Mediterranean Corridor

Several projects in different modes of transport have been identified on this corridor:

- The Beatrix lock and the improvement of the Lekkanaal
- Terneuzen locks
- Dunkerque port
- Port of Cork
- Dedicated rail line to Roissy Charles de Gaulle airport (CDG Express)

Another project could be the lifting of bridges on the Albert Canal, pending clarifications on the financial structuring of the projects.

(i) Mediterranean Corridor

Several ports projects could be supported by financial instruments or classic EIB lending along this corridor. Other projects may use financial instruments, possibly with support of upstream dedicated assistance. In particular, the port of Barcelona seems rather mature.

- Barcelona port
- Multimodal platform in Avignon
- A4 Autovia Venete

Section 4.04 Soft transport infrastructure and related equipment

Building the European transport system of the future is not only about building the railways, inland waterways, ports and motorways adapted to the future needs. It is also about adapting the transport system of the technologies of the 21st century, with two main aspects: developing efficient pan-European traffic management systems to make the best use of the existing and future infrastructure, and rolling-out the necessary infrastructure for greening the transport system, with the deployment of electricity fast-charging points along the main roads and in urban centers, of biofuels, LNG or CNG refuelling points in ports and airports. The deployment of the ground infrastructure must be accompanied with the adequate deployments of adapted fleets, by retrofitting vehicles with the new technologies or by buying new fleets of vehicles. Progressively, European roads will have to be equipped with IT infrastructures, enabling the new generations of vehicles to receive information on road signs, road works, accidents and traffic jams, improving traffic conditions. The first step is the introduction of the "e-Call", compulsory in the EU from 2017.

These sectors could benefit from the use of private finance, since in most of the cases, these investments have, in addition to their evident socio-economic and environmental benefits, a clear medium to long-term profitability, for instance by lowering the energy consumption of the fleets, allowing to reimburse the initial higher investment costs.

Below some examples of projects are given that could be mature enough to be implemented in the first years of the new Commission.

(a) Deployment of ERTMS on-board trains

ERTMS is the European Rail Traffic Management System, ensuring the interoperability of trains beyond the national borders. The ERTMS system must be implemented along the rail tracks, but also on-board vehicles. The investment needs, in terms of retrofitting existing locomotives or by buying adapted locomotive, exceed largely the available public financing. The Commission is currently running studies to identify dedicated financial models that would support the investments in rolling-stock through dedicated funds. These funds, securing long-term funding to spread over the life time of the vehicles the initial investments costs and securing investors towards the technological risk associated to the ERTMS system, could be implemented in 2016. The equipment of existing rolling-stock requires about 1 billion EUR of investment until 2020, and more investments are needed in new rolling-stock.

(b) Greening of maritime & inland waterways transport

Maritime transport is subject to new environmental regulations aiming at reducing the emissions from ships, in particular for Sulphur. The Baltic Sea, the North Sea and the English Channel have been designed as sulphur emission control areas (SECAs) and limited the maximum sulphur content of the fuels used by ships operating in these sea areas to 0.1%. The maritime companies in these areas are therefore looking at adapting their fleets as the new legislation will apply from 2015, by retrofitting the existing fleets with scrubbers or LNG propulsion systems, or by buying new ships. It is estimated that it corresponds to 5 to 10 billion EUR investment needs in the next years.

These investments have the potential of being profitable in the long run as the new ships will be more fuel efficient and LNG is cheaper than diesel. However, investors are reluctant to provide the financing for these types of

equipment as technological risks is perceived as being still high. In addition, a number of factors are creating challenging conditions for financing these investments. Dedicated long-term funds involving EU and if necessary national guarantees could be set up rapidly.

On the basis of a first assessment by the Commission services, the use of financial instruments for greening the inland waterways sector appears more challenging, due to the small scale of the market and companies involved and lack of a mandatory regulatory frame for further greening. However the use of financial vehicles, such as fund or guarantees, for aggregation and intermediation to mitigate the financial barriers ship owners are facing and to facilitate their access to credits can be explored.

(c) Alternative fuels infrastructure along major roads

The market for alternative fuels technologies is, despite the advances in the last years, still incipient also because the necessary infrastructure, in particular outside city centres, is missing. However the implementation of the Directive 2014/94/EU of 22 October 2014 will speed up the process and a number of Member States have already taken proactive measures. The Directive requires Member States to set minimum targets for the infrastructure build-up, and includes common and mandatory technical specifications for electric chargers and refuelling stations.

In parallel the overall objective of opening TEN-T support to Innovation and New Technologies has grown since 2008 and has become an important element of TEN-T policy with six innovation calls until end 2013 under the TEN-T Programme and an on-going call with dedicated budget to support the roll-out of innovation and new technologies schemes ready for deployment. These on-going projects are developing business cases and test feasibility using real life trials.

Existing EIB's own risk and EU financial instruments (e.g. InnovFin) and EFSI can already support R&D and innovation (non-mature technologies), while the possible use of the CEF debt instruments (CEF DI) and the EFSI to deploy infrastructures for alternative fuels (mature technologies) remain to be explored. Moreover, the establishment of PPPs among the key stakeholders (e.g. involving national and local authorities, public banks, car manufacturers, electricity suppliers and existing oil stations) benefiting from concessions along corridors connecting main cities, could also be considered.

(d) Deployment of SESAR and the European Single Sky

The SESAR project is an initiative of the European Union aiming to modernise and harmonise the European Air Traffic Management (ATM) System from a technological and operational perspective. It is an essential component of the broader Single European Sky (SES) initiative. SESAR contributes to achieving the SES high level performance objectives in terms of increasing the capacity of current European ATM system, while reducing their costs and the environmental impact of flights, yet increasing the level of safety. In 2015, the SESAR Deployment Manager – a consortium of key industrial players charged with the implementation of the system, will in collaboration with EIB examine the financial needs and the modalities that could allow the actors involved, public authorities, airports, airlines and aviation manufacturers among others, to cover investment costs.

With 3 billion EUR of EU funds in combination of grants and financial instruments, 30 billion EUR of investments on the ground and on-board could be generated.

(e) Clean urban transport

In addition, urban transport is also a sector in which investment needs are huge, since most journeys begin and end in cities and most of the traffic happens in urban and industrial nodes. In many urban areas, an increasing demand for urban mobility has created a situation that is not sustainable: severe congestion, poor air quality, noise emissions and high levels of CO₂ emissions. Urban congestion jeopardises EU goals for a competitive and resource-efficient transport system. CEF financial instruments could support the deployment of sustainable urban mobility plans. It is

likely that the number of projects in this field is high, with projects which represent relatively small amounts (average of 50 to 100 million EUR). An option to be considered could be to regroup these projects to attract private investors within a portfolio approach. The level of investments needs is difficult to estimate at this stage and should be collected from national and local authorities. For instance, in France, the "Ecotaxe" was supposed to contribute to the financing of about 120 (mostly) urban projects worth a total of 6 billion EUR. The Ecotaxe being cancelled at this stage, these projects will be looking for alternative financing solution.

V. Additional remarks and follow-up

Following a wide-ranging analysis of the context of transport infrastructure projects' development and the (potential) use of innovative financial instruments, the Authors decided to put forward an Action Plan with 12 recommendations which consists of concrete measures dedicated to improving the framework for investments in transport infrastructure, notably with the view to favouring accelerated implementation of projects, especially if they are lagging behind, slowly progressing or even blocked..

This Action Plan, to be considered as the Final Report by the Authors, is therefore presented to the Transport Council in order to trigger a discussion on the proposed measures, structured in twelve recommendations addressing different stakeholders, namely the Member States, the European Commission, the EIB, as well as project promoters.

Besides its appraisal by the above-mentioned stakeholders, this Report could potentially be transmitted to the ECOFIN and to the European Council, as some topics addressed by the Authors go beyond transport specific issues and may need to be discussed in a wider context. In the same perspective, the Authors would also like to have the opportunity to discuss the Action Plan with the representatives of the European Parliament, notably with the Transport and Tourism Committee (TRAN) and possibly other relevant Committees and Intergroups such as the one on "long-term investments and reindustrialisation".

The recommendations and measures have been proposed by the Authors for investments in the transport sector. However, many of them could also be important elements for the implementation of the two other sectors addressed by the CEF, notably energy and digital agenda. The Authors believe that some urgent action is needed on these recommendations in order to ensure the success of the Juncker Plan in the infrastructure sector and call upon the Commission to envisage legislative and non-legislative measures. The Authors therefore recommend that the Commission and the Member States establish as soon as possible a work plan for the implementation of the necessary changes in the aforementioned regulatory framework.

The backlog in transport infrastructure enhancement and maintenance is a common challenge for the EU and the US, as exemplified by recent studies and reports issued, among others, by the US Treasury, and similar efforts to trigger public and private investments in the sector are currently being widely undertaken²⁶. Similar concerns are present in the Far-East, where a dedicated Asian Infrastructure Investment Bank (AIIB) is currently being launched.

In Europe, as explained above, building a strong and stable pipeline of projects is essential for the success of financial instruments in the transport sector, to help bridging the investment gap. The work that has been done in coordination with the Commission's services, the European TEN-T Coordinators, and the EIB to identify pilot projects is only the first step, which is essential to demonstrate that the instruments can work for a much wider list of projects. As outlined in the Interim Report, out of the 600 billion EUR investment needs identified on the corridors, there is a

²⁶ see Roger C. Altman, Aaron Klein, and Alan B. Krueger, 2015 – "Financing U.S. Transportation Infrastructure in the 21st Century" - The Hamilton Report by The Brookings Institute -; US Department of the Treasury with the Council of Economic Advisers , 2012 - A new Economic Analysis of Infrastructure Investment.

potential of more than 120 billion EUR for financial instruments, without including all possible investments for horizontal priorities such as the traffic management systems and new technologies.

An important point that the Authors would like to underline is the importance of blending financial instruments and grants. For most of the projects, revenues stemming from operations will only be able to cover a part of the investments and maintenance costs. For these projects of public interest, public grants will have to be combined with financial instruments to make sure that the projects can actually happen with the support of private investors. For some sectors, in particular rail and inland waterways, where project revenues are rather low but projects generate major benefits at socio-economic and environmental level, the grant component, in particular coming from the EU budget for the projects of EU added value, is essential to their realisation.

In this perspective, the Authors are concerned with the reduction of the limited CEF budget as it may have an impact on the success of the Juncker Plan by reducing the potential of investments in some sectors. The Commission should work in coordination with the European Parliament and the Council in order to assess the possibility of supporting over the next years the implementation of the Juncker Plan through a sufficient level of grant funding for projects of EU added value by the Connecting Europe Facility.



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