



# FINAL WORKSHOP MINUTES

## CAPTURING THE IMPACTS OF TRANSPORT INFRASTRUCTURE INVESTMENTS ON COMPETITIVENESS

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## 1. Welcoming & Project Introduction

I-C-EU project officer, **C. Corposanto** welcomed all workshop participants and explained briefly about the project as well as some technical issues in relation to the workshop organization.

**J Purwanto** continued by explaining how the beginning of the project was accentuated by the three conditions and/or events, i.e. first the hardest economic crisis since EU creation, second the publication of Europe 2020 strategy that has replaced Lisbon Strategy and third, the announcement of White Paper 2011 where EU transport strategy has the objective to help establish a system that underpins European economic progress, enhances competitiveness and offers high quality mobility services while using resources more efficiently.

In his view, two years later (now) the issue is still relevant. In relation to two reports: *Helping firms grows* (by DG Enterprise) and *Reindustrializing Europe* (by the Member States), EU Press release 11 September 2014 has revealed several issues for EU and its member states concerning the idle situation of EU economic growth. According to the Press release, EU needs specific policies to tackle several important issues:

- Lack of investment
- Limited access to financial sources
- High energy price
- Inefficient public administration

The press release also mentions some of the most important potential policy actions to be taken. Among these actions are:

- The need of EU for additional investment in all sectors to ensure that EU industry can maintain its competitiveness
- Competitiveness is supported by more efficient innovation and commercialization of research and access to highly skilled labour capital.
- Support is needed to help internationalization of SMEs. Policies targeting the business environment with respect to access to capital, skills, support for innovation and actions to enhance productivity are important to help firms expand export to other EU countries and to regions outside the EU.

All in all, it is important that high quality mobility and accessibility services are able to help to offset the negative impact of increase energy price in Europe.

**J. Purwanto** closed the introduction by explaining the agenda of the day, i.e. first the consortium will present the most important results found during the project life and second the consortium together with workshop participants will have the occasion to hear from experts to enrich the insight of the subjects treated during the project.

## 2. Session 1: I-C-EU project and its most important results

**R. Fiedler** moderated this session 1. This session included presentations from I-C-EU project consortium which are reported in the following sections 2.1 to 2.6 and as well as the plenary discussion (section 2.7).

### 2.1 The I-C-EU project: overview and methodology

**C. Heyndrickx** gave an introduction to the I-C-EU project. He presented all generalities of the project namely the project's definition, background, main concept, objectives, overall strategy, as well as the expected outputs.

### 2.2 What is missing in the project assessment

**J. Purwanto** explained the whole process of input gathering during the project, especially from the previous two workshops and questionnaire. He also explained the main results of the two previous workshops and the questionnaire in relation to the final workshop. In conclusion, many technical issues and gaps between theory and practice have been gathered during the project in relation to the impacts of transport infrastructure project to competitiveness for example the determination of operational definition, essential factors affecting competitiveness, the scale of impacts, the role and place of the direct effects as well as the role of CBA, the need to improve CBA and other available tools and methodologies used in assessment, as well as the need to improve the political framework that will allow policy makers to take into account competitiveness as one of the impacts of investment in transport infrastructure and so on. Not all issues have been solved however during the project as I-C-EU needs to concentrate on several main issues during its life duration.

### 2.3 Improvement to the understanding of relation between transport infrastructure investment, indirect effect and wider economic impacts

**M.J. Smit** explained how competitiveness is a policy-driven concept, which has attracted a lot of criticism from scientific perspectives. According to him, this concept is best viewed as a triangle, where accessibility is one of the contributing factors. However, measuring it is very complicated; composite indicators are difficult to justify, full-scale causal models often both too complex and not complex enough. Meta-analyses can be helpful in assessing the benefits of policy measures such as infrastructure.

### 2.4 Integration of approaches for project assessment

The presentation of **O. Betancor** concerned the work carried out within WP2. In this WP the consortium has revised current assessment practice in Europe regarding impacts on competitiveness and growth as driven by WEIs (25 projects). The consortium has screened these projects to determine the conditions under which these impacts could be important. Finally the consortium has developed two particular case studies to explore the possibilities of integration of approaches: Málaga Airport and HSR lines in Spain.

Within the I-C-EU data base of case studies it is possible to identify four different approaches to the treatment WEIs:

1. German case studies: emphasis on the impact of infrastructure on employment and on the benefits derived from promoting international accessibility.



2. Other case studies: based on quantitative or qualitative analyses (e.g. Amsterdam Orbital and Öresund Bridge). Analysis of business changes and office rental prices, housing prices and commuting.
3. Cases with GEM: HSL Zuid and Corridor 22, respectively apply the ATHENA and EDIP models. Focus on the impacts on GDP, welfare and social impacts, consumption or aggregate employment effects.
4. UK case studies: Cross rail and the HS2. Focus on the impact of infrastructure on imperfect competition and on labour markets.

On the other hand the screening criterion focuses on:

1. Funding body's objective.
2. Nature of the project.
3. Robustness of direct effects estimates.
4. Assessment results based on direct effects.
5. Overview of wider economic impacts: first approach and expected importance or relevance.
6. Relevance for international and/or regional competitiveness.

The most important results are the following:

- Different approaches for the assessment of projects' WEIs: CBA, I-O, Social Accounting Matrices, CGE models and Econometrics.
- Depending on the nature of the infrastructure and their socioeconomic impact, some methodologies are more suited than others.
- The consortium also considered impacts on labour. According to a welfare approach, the owners of labour will be better off as long as the project increases their surplus. The analysis emphasizes the labour force welfare. Finally, if all economic agents involved in the project assessment are equally weighed, the society will observe a welfare increase as long as the sum of different surpluses increases, with the labour surplus being just one component.

## 2.5 Translating the approaches into models and tools (Jan Kiel)

**J. Kiel** explained the results from analysing the different transport and economic models used in transport infrastructure project assessment in Europe. He presented the problematic and difficulties in deriving definition of competitiveness, accessibility and the linkage between both terms. He presented also how conceptual framework based on Lengyell/Gardiner Pyramid could be used to link between transport and economy which can in turn be used as framework in working with models. J. Kiel also suggested the Good Modelling Practice (GMPs) to be considered in working with models in project assessment. GMP includes the whole model organization phases, i.e. model project, model development, model testing and model application.

## 2.6 New policy approaches to capture wider economic benefits for improving competitiveness (Przemyslaw Borkowski)

**P.Borkowski** presented the results of D4.1 and D4.3 regarding new policy approaches to capture wider economic benefits for improving competitiveness. Starting from the explanation of the link between competitiveness and transport infrastructure development and discussing the role of right policy options selection presentation moved to the key problem of project assessment practice. Description of the current project appraisal in member states and its limitations followed which led to the formulation of

recommendations. The recommendations were proposed in regard to policy options, modelling tools, project appraisal procedures and to the measurement of wider economic benefits in infrastructure investments.

## 2.7 Plenary discussion

**P. Mackie:** The final report should be very clear on what it is about. E.g. in some presentations wider economic impacts is a broad mixed concept with issues of distribution, etc. The final report should be clear in defining various terms and must be consistent. For example it should give a clear definition of the additional economic impacts, external economies, etc. and if they are considered as additional analysis to be conducted on top of CBA analysis.

Another growing view is the one that says that “CBA is dead”, i.e. there is a trend that people are more interested in gross value added, to abandon CBA and to try to measure project impacts on European economy, e.g. as very often measured in GDP terms. The political class in Britain is primarily interested in the effect (of the road construction) on economy. Nevertheless, a convincing microeconomic foundation such as agglomeration economics, for the wider economic impacts is lacking. How large firms are expected to react in response to transport investments.

**O. Betancor:** CBA is more alive than ever, and it is indeed a powerful tool. We have to be clear when using the CBA (and other analysis) approach to avoid double counting. This is the framework to consider.

**C. Heyndrickx:** The economic foundation of wider economic impact does exist, for example: new economy geography as promoted by Krugman. However they appear to be complicated macroeconomic models. Agglomeration effects for example do not always mean an increase in welfare. The consortium is making a framework of practical recommendations: we can use a lot of methods to evaluate the transport infrastructures. However, the most important point to keep in mind is that they are transparent and have sound scientific basis founded by actual empiric work instead of a simple rule of thumb.

**P. Borkowski:** CBA is the only thing that keeps politics honest as it is the only standardized tool so far where the procedures are in general quite transparent. Of course we have to always consider other approaches such as GVA based approaches.

**M. Ponti:** Financial variables are currently dominating the economic variables especially in the period of economic crises. In other words: the role of financial analysis is increasing while CBA is decreasing due to the crisis (see: works of Alain Bonnafous). This problem has to be stressed: financial analysis is much simpler than CBA but not always available in project assessment. In some cases, only that analysis is being performed. The use of marginal opportunity costs of public funding (MOCPF) as an assessment indicator in studies is so far vague and unclear. When public funding is extremely scarce as predicted to happen in the coming years, it is logic that a financial analysis (MOCPF) will become more dominant than CBA.

In addition, even if it is standardized and clear we have to acknowledge that CBA is very vulnerable in term of tricks to please funder. We need to democratize this practice, i.e. performing a comparative analysis should help to avoid “making tricks” with CBA.

**C. Heyndrickx:** A financial analysis is often not done because it is not something that transport engineers are familiar with. It is an interesting issue, but we must have a decent way to rank projects first and leave the financing to the politicians. The most important thing is to have the right projects financed.

**M. Ponti:** You have to include the financial analysis in the CBA.

**P. Mackie:** We have to distinguish two different things: financial analysis and economic impact as the main focus of I-C-EU. It is important to keep in mind that the results of the two analyses of a project can be in two opposite directions.

**O. Betancor:** Both analyses should be complementary. We need to know how much money will be put in it. In relation to CBA tricks: we may play tricks on CBA with people that don't know about assessment, but we can avoid that with transparency and with the help of specialists in the field to verify things.

**O. Ivanova:** There are two separated issues here, i.e. first is the theoretically correct CBA's or good guideline for that and second is the practice or implementation of that method or guidelines which is rarely good. We have to think on how to enforce a good practice of the guidelines.

**R. Fiedler:** Who calls for a new standard? HEATCO also sets standards. Do you call for a new project?

**O. Ivanova:** DG REGIO has very good CBA guidelines and if everyone would apply these, that would be great.

**P. Borkowski:** Good and detailed CBA guidelines is really important, i.e. some practitioners in the field really need step-by-step guide to do CBA correctly.

**C. Heyndrickx:** Transparency is a matter of policy issue. The CBA used should be public. In the Netherlands you have a second CBA done by the National Planning Agency. This is an example of good practices. Clear standards about what CBA is and how it should be applied are really needed.

**A. Grzelakowski:** Direct and wider economic effects generated by transport infrastructure development: the transport market is the market where the effects are the most visible. The global effects relating to the global transport and economy market – can they be captured? EU transport policy has neglected the competitiveness, what are the consequences to setting transport goals in the EU?

**J. Kiel:** Depends on the project you are talking about.

**A. Grzelakowski :** How about TEN-T development projects

**J. Kiel:** Even TEN-T consists of a couple of smaller projects. In Western Europe there is enough infrastructure, thus it is difficult to say something sensible about this (response to the first question).

**C. Heyndrickx:** Competitiveness is a fashion word that comes and goes. Maybe the 'word' is not there, but other words are, like job creation, regional growth, GDP growth etc., are easier to see and to measure than the competitiveness per se.

**J. Kiel:** 'Competitiveness' is a marketing concept for politicians.

**O. Betancor:** How to estimate wider economic impacts? Currently there is no specific guideline for that in Europe. In general, transport projects aim to solve transport problems such as to reduce congestion and this is considered to be the direct effects of the project. The indirect effects of the project such as on competitiveness, (resulting from increased time savings for consumers which have impact on their productivity, i.e. competitiveness of companies) come later.

**D. Smith:** Should we concentrate more on cities or more abroad? Global competitiveness? How do we look at externalities? Capacity constraints? Scale investments?

**M. J. Smit:** We were thinking of relevant firms in the market. So it is better to have a comparison to the rest of the world instead of Europe.



**J. Siwinski** : You stated that the objectives of the transport policy could be contradictory. I was surprised about that. Is it not just the problem of the proper naming of the competitiveness?

**R. Fiedler**: Well-being /welfare are also related to competitiveness. In the long run this can be a competitive advantage, good living standards.

**P. Borkowski**: There is no Europe wide discussion on the city level in Europe. Living standard as indicator is good for us.

**O. Ivanova**: Competitiveness could mean more cost in the short run, but in the long run it could mean knowledge (and its spill over effects) for the firms which can be significant. In the climate sector it is clear that policies are often costly in the short run, but we will benefit in the long run. It is not always bad to invest in infrastructure, even if the costs were enormous.

**P. Borkowski**: Global effects can take example on global warming. Some don't care, others will. Others will benefit from the efforts of the ones who care.

**M. Grzeszczyk**: Competitiveness has always been present in the European policy and this has become more important.

**R. Fiedler**: Our statement is that competitiveness is not prominently stated in the policies, but it is indeed present.

**P. Mackie**: This project is mostly about impact of infrastructure on economic performance. In term of guidelines there exists a cultural battle, i.e. do we want to know which projects could be considered as good values for money? In some countries there is a prevailing culture where the answer is yes. But we might not always follow what analysts say, because there are other factors to consider. At European level they have to create that culture but somehow we are not there yet.

### 3. Session 2: Keynote Speakers

**M.J. Smit** moderated this session 2 where presentations of three keynote speakers are reported in the following sub-sections. Each presentation was followed by a brief question & answer session.

#### 3.1 Transport investment and economic performance: implications for project appraisal

**T. Venables** gave a presentation based on a project conducted for the Department for Transport (DfT) in UK. He explained first the relation between transport and economic performance, where changes in transport provision (and costs) are considered as proxy of “user benefit” in relation to changes in factor productivity and to changes in the level and spatial distribution of investment and employment. DfT approach takes into account wider impacts as agglomeration & productivity, labour force participation/movement to more productive jobs. His presentation focuses on two things: (i) productivity and agglomeration and (ii) investment and employment: land development & change of use. He concludes that user-benefit approach is too narrow to capture changes in economic geography and to engage with parts of the public debate. Wider benefits in term of productivity and agglomeration is based on grounded theory, evidence base, and proofed practical techniques but need to be applied more project/context specific. Investment and employment effects are central in the debate but we need to test the arguments in relation to additionality and displacement, labour market effects, non-marginal effects and coordination failure. Finally he emphasizes the need to develop econometric studies/modelling techniques that use ‘bottom-up’ knowledge: covering local area and or a particular sector.

##### Question & Answer

**M. Ponti:** If space shrank and everything collapsed into one point than the only cost would be congestion. Is that the ideal world, i.e. a world without transport cost? How can be the negative effects? The positive extra benefits are bigger. What about congestion?

**T. Venables:** Spatial costs are a cost. And land would be a very scarce factor. This is too hypothetical. Increasing returns from the productivity and the decrease of land are the two factors to weigh.

#### 3.2 How to deal with ‘soft factors’ in the case of infrastructure and regional economic development?

**F. Bruinsma’s** presentation discussed the problem of spatial planning, the level of spatial aggregation, issues in relation to urban-rural dichotomy, the relative position in network, equity issues and some lessons learnt. He concludes that the impact of infrastructure investments on competitiveness depends on: (i) mega trends, such as economic cycles and demography and (ii) political choice/visions on spatial planning, equity issues, etc. He suggested criticizing the need to do CBA in project appraisal when clear choices are made and when the vision of the project are robustly defined. He also suggests to put more attention to ex-post project appraisal.

##### Question & Answers

**M. Ponti:** Rail improvements are beneficial and important, but somehow firms prefer to relocate near highways...

**F. Bruinsma:** Transport is one of the many decision factors where to locate firms. There are much larger investments in rail than in road. The impact of rail is large but only in travel time and accessibility. It does not say anything on the persons who travel, travel benefits, cost....

**M. Ponti:** Are those firms in tradable sectors?

**F. Bruinsma:** All kind of firms, most of them were offices, some industry. No retail.

**P. Mackie:** What are the consequences of appraisal?

**F. Bruinsma:** The consequences depend on what we are talking about. There are countries with strict spatial planning appraisal such as The Netherlands, less strict such as France, or none at all such as Belgium.

**J. Visser:** The two types of appraisals coexist in the Netherlands, i.e. spatial planning on one hand and CBA's on the other hand. Now we have in the Netherlands two ministries together that try to speak the same language and cooperate.

### **3.3 The impact of Cohesion Policy interventions in infrastructure – A model based simulation using Rhomolo**

**P. Monfort** presented the models used in DG Regio analysing Cohesion Policy effects, in particular developing and using Rhomolo model. He explained model background, main features, concepts, cohesion policy scenarios as well as the simulation results of the scenarios for the period 2014-2020 using the model.

#### **Question & Answers**

**J. Purwanto:** There is an increase of a number of firms due to reallocating and from the creation of new firms. Does the model take both reactions into account?

**P. Monfort:** Yes, as the model is based on a spatial equilibrium where the long run outcome of the market conditions is modelled. It is not only a competition between regions that prevails, the model also calculates the number of new firms entering the market.

**M. Ponti:** We pay for infrastructure in poor countries. Will we benefit in the long run?

**P. Monfort:** Some regions are losing, because of taxes/losing firms/with the model you can go both ways.

**C. Heyndrickx:** It seems that infrastructure investments allocated to the transport costs is a bit ad hoc.

**P. Monfort:** Input of a transport model is used, e.g. Transtools (in the future). We can improve it by using the input of dedicated models.

**O. Betancor:** How can be sure when we are measuring location of labour/firms. What data do we have to use for that? What would be the ideal database for that purpose? We need to think about labour welfare as well, how? Opportunity cost? How do we fit this in in a CBA framework?

**F. Bruinsma:** Labour is always a difficult issue. If you noticed the change in the labour market: Is the additional labour a result from the project or other factors?

**M. J. Smit:** Using micro data you can spot where the gain is when e.g. people switch jobs.

**P. Monfort:** Usually models have a welfare function. We should be prudent with that. It is just a specification chosen by the modeller that is easy to use from a mathematical point of view.

#### 4. Session 3: Round table: determining future needs

**H. de Groot** moderated this third session where all the three keynote speakers, three advisory board members (**P. Mackie**, **M. Ponti** and **A. Grzelakowski**) and the two EC representatives (**C. Corposanto** and **C. Marolda**) were present at the podium.

**P. Mackie:** First, we had interesting papers and results from the project upon which the consortium should draw the final story together in a consistent way, emphasizing in the relationship between the direct transport impacts and wider economy impacts. The consortium need to define what is in scope and what not.

Second, it is important to convey to the EC the fact that circumstances depend on each case and there is not one method that is ideal to deal with the various dimensions of competitiveness. Different economic linkages might be triggered. Using the Lengyel/Gardiner triangle as an organizing framework should be a good departure point. Finally, we are reaching the 25 years of New Economy Geography (NEG) but what is the position of NEG now (in relation to project assessment) is something to discuss further.

**M. Ponti:** First, the main mission on evaluation is to educate the decision makers in order to implement good CBA. However, we are also still far from the existence of a good CBA guidelines. Financial aspects become more important and it has an important impact on CBA. The debate is now between Keynesian versus non-Keynesian which depends more or less on the austerity policy implemented so far in Europe. Second, in relation to competitiveness in transport: reducing transport costs for firms, how we do that? We have invested heavily to stimulate modal change, but how big is the modal shift magnitude? Very limited in terms of quantities: for example: shift of 10% of road transport demand into rail only means a shift of 3% of money to the rail. Added value? We invest a lot in transport infrastructure in order to reduce the overall transport costs, but at the same time we have high taxes and also on fuels. How will we then reduce transport costs for firms? This is inefficient.

**A. Grzelakowski:** First, the project has delivered positive outcomes. The research team has focused on particular infrastructure projects but rather less on infrastructure projects in term of transport mode coverage. Competitiveness between the transportation modes are changing and market commodities using these modes are influenced by this competitiveness.

**A. Grzelakowski** pointed out that we need to properly address external effects which relate to such projects. We should look to effects between the transport sector and the other sectors that are influenced by it and to transfer the results of transport infrastructure development results to the labour market and so on. Finally, **A. Grzelakowski** reminded the consortium that we should tackle the problem of the logistics supply chains. We should show the spreading of the transport infrastructure development effects to competitiveness in this chain. Transport markets & charging for their services are two issues related to two markets: network industry market – services of general economics interest and its connection to the development of the transport policy. Infrastructure development may influence the change in the network industry and have impact on the charging practices in Europe. Transport infrastructure assessment should take into account the outcomes produced within this sector of networking industry.

**T. Venables:** It is fundamental to understand the mechanisms. One seized fits all technique is not going to work. Different projects and cases could mean different methodologies. There are lots of micro foundations that we believe in, we know the mechanisms but it is difficult to get them translated into full equilibrium models.

With appraisals we should be able to produce better scenarios. With respect to other policies/sectors - it is not a sensitivity analysis, but scenarios. **T. Venables** added that our work on data collection should focus on the use of bottom up data as well as getting feedbacks from the possibly affected players, i.e. talk to local people/local business department of companies/industries.

Question **H. de Groot:** There is a need for narrative. How do you look at the model like Rhomolo, are there ways to improve the narrative part? Possibilities to further develop them? In relation to supply chain: how we could distinguish the different tasks? What will be the role of micro data?

**T. Venables:** There is no perfect solution. **T. Venables'** personal preference: use models that focus on a particular issue and use smaller models that tell narrative.

**P. Monfort:** Models are not meant to provide numbers, but to help to structure reflection on the impact on something. A single model will never be comprehensive. You must make some choices when building and using the model. It is there to tell a story. Rhomolo is there to help improve the design of cohesion policy. Cohesion policy affects the location of economic activity. The context is important in order to understand the way that cohesion policy is working. We need to remain realistic. There is no way we can integrate all aspects. Rhomolo is already a quite large model. In the future, different types of instruments to analyse infrastructure investments would be developed depending on which feature you want to highlight in the assessment. You need to guide the choice at project level. CBA's are helpful for that but you need to answer micro economic questions first.

**F. Bruinsma:** Ask the policy makers what they expect, what they want to see proven. You should know the background, why there is the question, policy context.

**C. Corposanto:** Operational remarks from DG RTD perspective: we want to try to make the most out of project results. This project has valuable results; it is DG RTD's role that these results will be used. Revision of the transport White Paper opens a door to reflections on a number of dimensions of the transport sector including transport investments.

Topics on financing mechanism on transport infrastructure have been launched. The public budgets are no longer in a position to finance infrastructure indefinitely. The aim is not only to shed some light on alternative funding schemes (PPP in mind) but also to explore other innovative instruments. First having an overview of what is being done/best practices/reflections on lessons learnt. We also want to reflect on what funding schemes are suitable; will they provide the necessary flexibility, the risk contingency? The current framework is the economic and financial crisis. Overview of advantages and pitfalls of alternative funding schemes should be done this year.

Next years' topics on this axe of research:

- How to spread innovative solutions in transport infrastructure.
- How to make the public aware of them.
- How to overcome demand that is often quite fragmented.
- How to spread good practices and favour innovation in transport.

**C. Marolda:** Transport infrastructure investment does contribute to growth and jobs. We need a lot of innovation in transport infrastructure. At the moment with the lack of funding we need to increase the productivity in the industry sector. Procurement rules are hindering the possibility to implement innovation. New instrument for the incoming years: public procurement of innovation. Public authorities have to be aware and we need to support them in changing their mind. We need arguments to help them move into that direction. Definition of competitiveness is a good one. We are aiming at the wellbeing of citizens. This is high in a competitive region. Clean air, no congestion, mobility, time, accessibility these aspects are the external benefits of investing in infrastructure. Models become more and more complex, we should include relations between different actions.

Social dimension/acceptance by the people that live in that region. This quantifies the benefit of new infrastructure.

Users behaviour: unknown in 20 years. Passenger transport is changing drastically. Electro mobility will destroy the big car manufacturer plants. Leisure time will be longer and longer, so this should also been taken into consideration. We have more problems with ‘maintaining’ existing infrastructure – 80% of the problem, only 20% new infrastructure.

DG region only has funding for construction, not for maintenance.

**D. Smith:** How the framework could be applied to the aviation sector, how this kind of analysis can focus on international transport in general?

**T. Venables:** What would we want to get out of these global links? If there are enough increasing returns to scale, you need the international trade and you need the support of those business links.

**D. Smith:** private actors like airlines, that interaction is not thought of.

**P. Mackie:** This does not change things, even private sector actors: crucial decision is for the minister of transport to stand on behalf of a infrastructure planning commission.

## 5. Closing & summary

**C. Corposanto:** I-C-EU is a successful project. Triangle between transport infrastructure investments – competitiveness -economic growth. The linkages between the three were well investigated. And the enhancement of the methodology was good.

**J. Purwanto:** Several points: first, there is a need for an integrated story in our final report. Relation of the impacts with the investments itself. Second, there is no unified formula to solve the issues. We need to understand the mechanism of all the approaches we are using/will use. Educate the policy makers on to understand and use these tools. Third, we need to review what should be the used indicators: depending on the context of situation: conventional indicators from a good CBA is a must, economic indicators (simple on welfare, financial indicators, added values, opportunity costs, etc).

Minutes will be given to you within two weeks. End of October: final report that summarizes the whole project.

**C. Heyndrickx:** Think beyond Europe and learn from other countries. Future is uncertain. External factors are also important, as well as the role of maintenance. New research is necessary to include maintenance in the transport infrastructure investments.

## 6. Annex 1: Agenda

<i>Programme</i>	<i>Speaker</i>	<i>Time</i>
<i>Registration</i>		<i>09:00 – 09:20</i>
<i>Welcoming &amp; Workshop Introduction</i>	<i>Joko Purwanto (TML)</i>	<i>09:20 – 09:30</i>
<i>Session 1: I-C-EU project &amp; its most important results</i> <i>Moderator: Ralf Fiedler (CML Fraunhofer)</i>		<i>09:30 – 11:00</i>
<i>The I-C-EU project: overview and methodology</i>	<i>Christophe Heyndrickx (TML)</i>	<i>09:30 – 09:45</i>
<i>What are we missing in project assessment?</i>	<i>Joko Purwanto (TML)</i>	<i>09:45 – 10:00</i>
<i>Improvement to the understanding of relation between transport infrastructure investment, indirect effects and wider economic impacts</i>	<i>Martijn J. Smit (VU)</i>	<i>10:00 – 10:15</i>
<i>Integration of approaches for project assessment</i>	<i>Ofelia Betancor (FEDEA)</i>	<i>10:15 – 10:30</i>
<i>Translating the approaches into models and tools</i>	<i>Jan Kiel (Panteia)</i>	<i>10:30 – 10:45</i>
<i>New policy approaches to capture wider economic benefits for improving competitiveness</i>	<i>Przemyslaw Borkowski &amp; Barbara Pawlowska (UG)</i>	<i>10:45 – 11:00</i>
<i>Coffee break</i>		<i>11:00 – 11:10</i>
<i>Plenary discussion</i>		<i>11:10 – 12:00</i>
<i>Lunch</i>		<i>12:00 – 12:45</i>
<i>Session 2: Keynote Speakers</i> <i>Moderator: Martijn J. Smit (VU)</i>		<i>12:45 – 14:30</i>
<i>Transport investment and economic performance: implications for project appraisal</i>	<i>Tony Venables (University of Oxford, UK)</i>	<i>12:45 – 13:15</i>
<i>Questions &amp; answers</i>		<i>13:15 – 13:25</i>
<i>How to deal with “soft factors” in the case of infrastructure and regional economic development?</i>	<i>Frank Bruinsma, (VU University Amsterdam, The</i>	<i>13:25 – 13:55</i>



	<i>Netherlands)</i>	
<i>Questions &amp; answers</i>		<i>13:55 – 14:05</i>
<i>The impact of Cohesion Policy interventions in infrastructure – A model based simulation using Rhomolo</i>	<i>Philippe Montfort (European Commission – DG Regio)</i>	<i>14:05 – 14:35</i>
<i>Questions &amp; answers</i>		<i>14:35 – 14:45</i>
<i>Coffee break</i>		<i>14:45 – 15:00</i>
<i>Session 3: Round table: determining future needs</i>		<i>15:00 – 16:10</i>
<i>Panellists:</i>		
<ul style="list-style-type: none"> <li>• <i>3 speakers from the previous session</i></li> <li>• <i>Carlo Corposanto, Cristina Marolda – European Commission</i></li> <li>• <i>Advisory Board: Peter Mackie (ITS-Leeds), Marco Ponti (TRT), Andrzej Grzelakowski (Gdynia Maritime University)</i></li> </ul>		
<i>Moderator: Henri de Groot</i>		
<i>Closing &amp; summary</i>		<i>16:10 – 16:30</i>
<i>European Commission</i>	<i>Carlo Corposanto (DG RTD)</i>	<i>16:10 – 16:20</i>
	<i>Cristina Marolda (DG Mobility and Transport)</i>	<i>16:20 – 16:30</i>
<i>I-C-EU Consortium</i>	<i>Joko Purwanto (TML)</i>	<i>16:30 – 16:40</i>

## 7. Annex 2: Participants

Marc Ribo	Abertis infraestructuras
Damien Smith	Cabinet Office (UK)
Ralf Fiedler	CML Fraunhofer
Maciej Grzeszczyk	European Commission
Martin Zeitler	European Commission
Carlo Corposanto	European Commission
Cristina Marolda	European Commission
Jakub Siwinski	European Commission
Menno Van Der Kamp	European Commission
Phillipe Monfort	European Commission
Ofelia Betancor	FEDEA
Adrej Stanislaw Grzelakowski	Gdnya Maritime Academy
James Wiltshire	IATA
Peter Mackie	ITS Leeds
Johan G.S.N. Visser	Kennisinstituut voor Mobiliteitsbeleid (KIM)
Jan Kiel	Panteia
Olga Ivanova	TNO
Christophe Heyndrickx	Transport & Mobility Leuven
Joko Purwanto	Transport & Mobility Leuven
Veerle Vranckx	Transport & Mobility Leuven
Marco Ponti	TRT
Angelo Martino	TRT Trasporti e Territorio
Barbara Pawlowska	University of Gdansk
Przemyslaw Borkowski	University of Gdansk
Tony Venables	University of Oxford
Frank Bruinsma	Vrije Universiteit Amsterdam
Martijn J. Smit	Vrije Universiteit Amsterdam
Henri de Groot	Vrije Universiteit Amsterdam