D11.3 | Inception Report

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Grant Agreement N°: 645884
Starting Date: 01/03/2015
Duration: 36 months

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List of Abbreviations

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<tr>
<td>EPSS</td>
<td>Electronic Proposal Submission Service</td>
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<td>REA</td>
<td>Research Executive Agency</td>
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1. Background and objectives

1.1 Summary of “project history”

I3U “Investigating the Impact of the Innovation Union” is a three-year project commissioned by Research Executive Agency (REA), under the power delegated by the European Commission. The project covers the research Topic “INSO-3-2014 - The economic impact of the Innovation Union”. The proposal was submitted via the Electronic Proposal Submission Service (EPSS) on April 29th, 2014. Upon favourable evaluation by the Commission services, the consortium was invited to enter into negotiation which was successfully concluded on February 2015.

Below some general information about the project:
- Starting date: 1st March 2015;
- Duration: 36 months;
- Estimated eligible costs: EUR 2,931,486.00
- Maximum financial contribution: EUR 2,931,486.00
- List of project participants:

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<th>No.</th>
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<tr>
<td>1</td>
<td>UNIVERSITEIT MAASTRICHT</td>
<td>UN-MERIT</td>
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<tr>
<td>2</td>
<td>ISTITUTO DI STUDI PER L'INTEGRAZIONE DEI SISTEMI SCRL</td>
<td>ISIS</td>
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<td>UNIVERSITE LIBRE DE BRUXELLES</td>
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<td>ZENTRUM FUER EUROPAEISCHE WIRTSCHAFTSFORSCHUNG GmbH</td>
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<td>8</td>
<td>EKONOMSKI INSTITUT ZAGREB</td>
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Innovation has been placed at the heart of the Europe 2020 strategy aimed at facing major structural changes, the increase of global competition and the current crisis, and to tackle major societal challenges such as climate change, energy and resource scarcity, health and ageing. The Innovation Union’s main objective is to strengthen European innovative potential, and sets 13 general objectives and 34 specific (policy) commitments (C) associated with these objectives, aimed at stimulating innovation. The objective of this project is to deliver a system of assessment for the commitments. The approach starts from the evaluation of the state of achievement of the individual commitments, but puts crucial emphasis on their effects in the innovation system as a whole, as well as on the economy-wide effects of innovation. The basic idea is to retrace the entire chain of effects of the commitments, from their implementation to their final impact in terms of competitiveness, growth and employment. The specific tasks that the project sets out to undertake are:

1) Data collection and identification of mechanisms;
2) Developing theoretical and econometric models in order to estimate the impact of the commitments;
3) Developing a conceptual model of the innovation system, leading to a reference tool on which the impact analysis of the commitments individually and as a whole will be based, and
which will also act as an interface between the assessments of the commitments’ impact and the macro sectoral econometric work;

4) A quantitative analysis of the commitments through the use of the NEMESIS model, which is an existing macro-structural econometric model, but which will be modified and extended for the tasks at hand;

5) An ex-ante and ex-post policy assessment of the economic effects of the Innovation Union at the European, national and regional levels;

6) To present policy conclusions and recommendations on the validation or the efficiency of the policies implemented.

I3U is coordinated by UN-MERIT (Project Coordinator – PC), supported in the management aspects by ISIS (Project Manager – PM) and includes a consortium of 9 prestigious universities and research institutions in Europe.

1.2 Objectives of the inception report

This Inception Report is the first integrated basic document of the I3U project, which aims to:

- Summarise the scope of the project, the general methodological approach and the objectives of the 11 work packages as described in details in the Description of Work (DoW);
- Point out all the modifications to the work plan agreed so far among the consortium;
- Report all progress within each work package.

According to the workplan, this document constitutes Deliverable 11.3 and it is submitted to the Commission via the Research Participant Portal.

2. Progress so far and preliminary achievements

2.1 Kickoff meeting

I3U first official meeting was held on March 10th at ISIS (Rome - Italy).

a) Audience

This event was attended by representatives from each institution involved in the project. The encounter was a unique occasion for them to meet each other at the beginning of the project.

Members who attended the kick-off meeting were:

- Andrea Ricci, Carlo Sessa, Loredana Marmora, Margaret Pesuit - ISIS
- Pierre Mohnen, Bart Verspagen - UN-MERIT
- Paul Zagamé, Pierre Le Mouël, Boris Le Hir - SEURECO
- Georg Licht, Bettina Peters - ZEW
- Andrea Mervar, Nevenka Ćučković - EIZ
- Marzenna Weresa, Arkadiusz Kowalski - WERI-SGH
- Sandra Leitner, Veronika Janyrova, Sandor Richter, Hermine Vidovic - WIW
- Michele Cincera – ULB
- Magnus Gulbrandsen, Fulvio Castellacci - UiO-Tik

The meeting was only for I3U members and no external audience was invited.
b) Contents
The I3U work plan was discussed and, as reported in this document, no major changes were brought to the negotiated DoW.

The following points were addressed:

- Update on the Grant Agreement (GA) and Consortium Agreement (CA) signature processes including a recap of state of play and immediate actions concerning administrative issues and kick-off of the activities;
- Each leader gave a short overview of its work package, outlining i) Objectives, tasks, deliverables and resources; ii) Timing and deliverables; iii) Interrelation between WPs; iv) other open points for discussions. This considerably improved working relations among partners;
- Proposal for I3U logo.

It was decided to organise the second project meeting in September 2015 in Vienna according to the availability of the partners.

Detailed minutes of the Kick off meeting, of the thematic workshops and PowerPoint presentations for each WP have been circulated among the consortium and are available in the private section of the I3U Website.

2.2 Project meeting n.1
I3U project meeting was held on September 14th and 15th at WIIW (Vienna - Austria).

a) Audience
This event gathered representatives from each institution involved in the project. This encounter was an occasion to discuss the progress achieved so far and to plan future actions.

Members attending the project meeting were:

- Andrea Ricci, Carlo Sessa, Loredana Marmora - ISIS
- Pierre Mohnen, Bart Verspagen - UN-MERIT
- Paul Zagamé, Pierre Le Mouël, Boris Le Hir - SEURECO
- Georg Licht, Bettina Peters - ZEW
- Andrea Mervar, Nevenka Ćučković - EIZ
- Arkadiusz Kowalski - WERI-SGH
- Sandra Leitner, Veronika Janyrova, Sandor Richter, Hermine Vidovic, Rumen Dobrinsky, Berenike Ecker, Johannes Pöschl, Roman Römisch, Isilda Mara, Robert Stehrer, Michael Landesmann - WIIW
- Michele Cincera, Anabela Santos - ULB
- Magnus Gulbrandsen, Fulvio Castellacci, Thune Taran - UiO-Tik

The meeting was only for I3U members and no external audience was invited.

b) Contents
The following points were addressed:
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- Update on the administrative and financial aspects of the project including immediate actions concerning the expected deliverables to be submitted under WP11 (D11.3 Inception Report and D11.4 Data Management Plan);
- Each leader gave a short overview of its work package, outlining i) Objectives, tasks, deliverables; ii) Results achieved so far; iii) next actions; iv) other open points for discussions.

ISIS will investigate the opportunity of organising the next project meeting in February 2016 in Brussels according to the availability of the partners.

Detailed minutes of the meeting and PowerPoint presentations have been circulated among the consortium and are available in the dropbox folder and private section of the I3U Website.
2.3 WP1 Promoting excellence in education and skills development

a) Review of the workpackage objectives
WP1 will investigate the direct and the dynamic effects of the EU policy instruments that promote the development of excellent human capital in the public and private R&D system. Specifically, Commitment 1 intends to develop national strategies to train enough researchers to meet national R&D targets and to promote attractive employment conditions in public research institutions. Commitment 2 seeks to set up an independent multi-dimensional international ranking system to benchmark university performance, so that the best performing European universities will be identified. And Commitment 3 proposes the development of an integrated framework for the development and promotion of e-skills for innovation and competitiveness, based on partnerships with stakeholders. What will be the direct and indirect effects of these policy actions; what impacts will they have on innovation and economic performance; how will these impacts differ across EU countries and among different sectors? To answer these questions, WP1 will focus on three specific objectives:

- Assessment of indirect and direct effects of policies that promote the training of R&D personnel and that aim to create attractive work conditions for such personnel (C1).
- Analysis of the effects of the multidimensional university ranking system as well as the effects of new knowledge alliances promoting university-business relationships specifically targeting innovation skills gaps and cross-disciplinary training (C2).
- Evaluation of the effects of frameworks for e-skills for innovation and competitiveness in Europe (C3).

b) Change with respect to the text of the DoW
None to report.

c) Progress so far
As initially planned, WP1 has started its work by carrying out a literature review in relation to the three commitments noted above. A systematic search of the literature in all main existing scientific databases, and eventually collected around 300 papers (scientific articles as well policy reports), have been carried out by the WP1 team. During this literature review, the team focused on the main definitions, conceptual aspects, theoretical framework, available data sources and indicators, and previous empirical results. The WP1 team is now in the phase of writing a paper summarizing the literature analysis, which is expected to be delivered in M10 as planned in the project’s outline.

d) List of deliverables

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2.4 WP2 ERA-EU Funds – EIT

a) Review of the workpackage objectives

The main objective of WP2 is to evaluate direct and the dynamic effects of the EU policy instruments that promote a stronger European dimension of R&D base in individual Member States, and the EU as a whole. This objective can be split into five specific objectives:

- Assessment of direct and indirect effects of the European Research Area with regard to the quality of doctoral training, cross-border mobility and cooperation of researchers including sharing research infrastructures as well as transfer and use of research results across Europe;
- Evaluation of the advancement in the construction of the priority European research infrastructures and their contribution to innovation performance in the EU identifying whether the EU R&I programmes have industry-driven priorities and address societal challenges, how they impact innovation and to what extent SMEs are involved in these programmes;
- Assessment of the contribution of Joint Research Centre and European Forum on Forward Looking Activities to devising comprehensive and pro-active European research & innovation policies;
- Evaluation of the role of European Institute of Innovation and Technology in stimulating innovation in Europe by integration of education, research and innovation and contribution to excellence of European science through introduction of the “EIT Degree”.

b) Change with respect to the text of the DoW

None to report

c) Progress so far

Initial commitment maps and preliminary literature reviews were prepared for particular commitments 4 to 9. The literature reviews focus on broad scope of economic mechanisms involved in each of these commitments and their relation to many parts of the innovation process. In general, the impact of all commitments is analysed at four levels of social analysis, following new institutional economics approach of Williamson (2000), including: embeddedness, institutional environment, governance, and resource allocation. The research results typically cover the following types of impact assessment: economic, environmental, and social. A preliminary analysis was conducted in order to identify the indicators reflecting the impact of the commitments.

In particular, preliminary literature reviews have been conducted for the following commitments:

**C4. Delivering the European Research Area where the aim is to promote measures to remove obstacles to mobility and cross-border cooperation in research.**

This commitment consists of two parts and so far the results of the literature review related to commitment's impact are as follows:

a) C4.1: International research cooperation. Findings:
- A lot of descriptive studies of research collaboration, but also some more conceptual and analytical works
- Data suggest that international research cooperation is increasing in Europe, and that mobile/migrant researchers are more likely to cooperate internationally
Analyses indicate that research cooperation is positive for research productivity and impact of research publications.

b) C4.2: Research mobility, academic mobility
This commitment is about making cross-border mobility easier by inducing open recruitment, comparable research career structures and the creation of European supplementary pension funds.

Findings:
- Policies for mobility: general (fifth freedom) and positive view (criticised) but have not come very far except for (controversial) “elite initiatives”; many policy areas involved
- Motives behind mobility: more often unattractive career prospects and substandard working conditions in the home country than great opportunities abroad
- Barriers to mobility: many practical barriers and high degree of complexity, EU coordination regulations, employment statuses, pension arrangements, lack of information, lack of time and funding, family obligations, weakened opportunities for permanent jobs at home; “less mobility in Europe than in the US”
- Effects of mobility: generally positive on individual publication productivity and collaboration patterns, negative on opportunities for permanent positions in academia (!), “mixed blessing”

C5. Construct the priority European Research Infrastructures (SGH-WERI)
The starting point in the conceptual framework for the study is connected with identification of the problems behind the Commitment 5, mainly: fragmentation of European investments in research infrastructures (material or financial aspect), and lack of cooperation and interactions between research teams within and between different disciplines of science (intangible or interpersonal aspect). Corresponding two factors (pooling resources, and enhancing partnerships) are recognised as crucial for achieving critical mass needed to operate research infrastructures, taking into account their high complexity (technical, scale and costs) and increasing capital-intensity of modern research. The impact of the investments in priority European research infrastructures on overcoming identified two problems may be explained by three theoretical concepts: social capital, innovation system and economic networks. They provide explanation for the need of pooling resources, and partnership in constructing European priority research infrastructures. According to these theoretical concepts, Commitment 5 has an impact on increased cooperation and raising resources needed for key research infrastructures, leading to higher knowledge creation and technological advancement of the economy, consequently resulting in greater productivity, and finally contributing to faster economic growth (GDP).

C6. EU Research and Innovation Programmes (SGH-WERI)
The key area of focus of programmes under C6 is an increase in the level of innovation in Europe, which it aims to stimulated by increasing investments in research and innovation activities and in human capital; be it by focusing on funding and / or by increasing efficiency by better allocation of existing resources.
The aim of this study was to answer the following questions:
1. What is C6, the problems it addresses, its objectives and proposed solutions?
2. What is the economic theory that supports the tools of programmes under C6?
3. Do the tools of programmes under C6 find backing in empirical studies?
These questions were answered with the use of various source documents and theoretical and
empirical works on the topic of growth, innovation, human capital, investment in R&D and cooperation. The positive aspects of human capital development and interaction between various agents in the innovation eco-system appears to be unquestioned, but the support for public R&D investments or R&D subsidies appears to be mixed. What appears to be the key solution to the arguments undertaken in this issue is to assure the correct allocation of funds by, e.g., focusing on small firms and looking for projects that (if successful) would bring the biggest social benefit as opposite to allocating funds in big firms (some who do not need it) and minimizing the risk of an investment. It needs to be said that these are some of the elements addressed by programmes under C6.

C7. SMEs in Research and Innovation Programmes (EIZ)

The economic rationale of the commitment is to ensure an integrated EU funding scheme tailored to the innovation needs of SMEs to limit market failure in access to finance. The empirical evidence points towards significant positive effects of participation in EU on innovation performance of SMEs. The SMEs are considered here as an important innovation drivers but also as an important conduits for knowledge spillovers.

Research Progress: The C7 map was created and Draft Literature Review was conducted as a starting point of the Impact Analyses. So far about 50 empirical studies and published articles were analysed for a draft Literature Review to focus on main economic and social impact channels that would be most useful for both NEMESIS and CMIS models of analyses. Four channels of impact were analysed: 1) participation in innovation investments (input); Spillovers (throughput); Innovation Production (Output) and Innovation Performance (Outcome). Data Collection so far included an identification of list and data sources of potential quantitative and qualitative indicators useful for the both NEMESIS and CMIS. Some indicators would face a problem of limitation to certain countries and years (CIS, OECD). The workshop in Vienna helped in clarification which indicators might be useful for econometric model. Further bilateral technical workshops would be needed with SEURECO to estimate the extent of exogenous impact on the main variables of the model (via estimation of slack variables). Potential aggregated data overlapping were identified with WP1 (C2.2) on business-academy knowledge partnerships and co-publications; C4 (WP2) on academy-business researchers mobility and firms collaborations with publicly funded universities and institutes; and with WP3 (C13) on well targeted public support for R&D in SMEs.

C8. Strength. science base for policy making through JRC; Forum on FLA (SGH-WERI)

JRC and EFFLA have been committed by the EU Member States in the Innovation Union strategy in order to strengthen a science base for policy-making. Therefore, the main research questions asked in the impact analysis of C8 was: what is the theoretical framework for assessing the impact of science-based policies? This analysis shows that an effective policy development requires a high quality and effective system of scientific policy advice as well as appropriate use of evidence and advice by policy makers. There are at least two strands of scientific advice that can improve policy making. The first one is related to solving current economic and societal problems, and is often named as evidence-based policy. The second one foresight exercise, which is aimed at foreseeing future development trends, identifying future problems and addressing them by appropriate policy tools. Both strands can viewed as a broad category of science-based policy. Furthermore, there is a growing recognition in the literature that identifying solutions to policy challenges often requires research going beyond one discipline. In such cases multidisciplinary or interdisciplinary approach to science-based policy is needed.
Theory of public policy underlines the following factors that can determine the impact of science-based policies on innovation:

- Content of scientific input (quality of evidence and its relevance),
- The appropriate use of scientific evidence and rationality of its application,
- The organisational aspects of the policy advice process: the stage of policy cycle in which science input is used, the model of policy—science interface, the size, type and power of scientific advisory body and the nature of advisory body mandate.

Majority of scholars agree there is no linear relationship between research results and policy outcomes. The role of science in policy making and the impact on innovation or competitiveness should be based on the assumption of non-linearity interrelationships between them.

C9. Set out EIT strategic agenda (SGH-WERI)

The elaborated review of relevant theoretical and empirical literature suggests that collaboration (coordinated by EIT actions) between higher education and research institutions and industry enhances innovation performance in Europe. The EIT actions are expected to appropriately address European long-lasting knowledge policy concerns, i.e.:

- the need to focus on key societal challenges,
- the need to better exploit synergies between innovation, research and education,
- limited current capacity to convert knowledge into commercial opportunities,
- difficulties in promoting an innovation culture in research and education,
- difficulties in developing critical masses of resources in innovation,
- difficulties in rewarding excellence in research and education.

The highlighted problems can be effectively solved by (1) integrating all three sides of the knowledge triangle, (2) supporting Knowledge and Innovation Communities (KICs) and the EIT Regional Innovation Scheme (EIT RIS) as well as (3) embedding entrepreneurship in the EU education and research through EIT labelled degree programs and EIT awards.

Main impact channel of EIT actions corresponds to Williamson’s (2000) governance level of social analysis. New management and control methods (e.g. EIT Performance Measurement System) as well as new business model for knowledge triangle in Europe (KICs and EIT RIS) enable successful contribution to economic, social and environmental objectives of the Innovation Union.

d) List of deliverables

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2.5 WP3 Innovation and Access to Finance

a) Review of the workpackage objectives
The objective of WP3 is to carry out an impact assessment of the enhanced access to finance for innovation activities (C10 to C13). This will be done through by macro-sectoral econometric methods and aimed at the EU28 Member states over the last 5 years. In order to undertake the evaluation of the policies aimed at increased access to finance, the workpackage will:

- define what is the nature of the direct impacts of each (group of) commitment in this area,
- collect the relevant data,
- assess the direct impact of the commitments by econometric method or other,
- define how to integrate the commitments in models in order to assess the indirect dynamic impact in the innovation ecosystem.

b) Change with respect to the text of the DoW
None to report.

c) Progress so far
WP3 partners prepared a ‘commitment’ map for the four commitments included in the WP. These documents illustrate the mechanisms behind each commitment, namely as regards the following dimension:

- Commitment’s rationale (where is the problem?),
- Solution for the problem,
- Main impact channels,
- Results (some indicators),
- Outcome.

So far, about 60 scientific articles and reports related to the WP’s thematic were identified: innovation and access to finance, through several electronic platforms, such as, ScienceDirect, SpringerLink, Taylor & Francis, Wiley Online Library and JSTOR. The drawing up of the literature review is in progress. The main conclusions of the articles analysed are the following:

- According to the Community Innovation Survey (CIS) and the Survey on the Access to Finance of Enterprises (SAFE), ‘access to finance’ is in the top 5 of the main obstacles of EU innovative enterprises.
- “Innovative SMEs have a higher probability to apply for funding than other firms (higher demand), but they are also more likely to find it difficult to access to finance (restricted supply)”.
- According to the European Commission, financial markets and financial institutions are traditionally reluctant to invest in R&D projects, because they have a higher uncertainty/risk, compared to more traditional business projects. Firms need to find alternative ways to traditional bank loans, in order to finance creation or expansion investments. Furthermore besides this debt financing instrument, these entities could used private sources or apply to Venture Capital (VC) or Business Angels (BA) investors’ funds.

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V Venture Capital is linked to innovation. “The more innovative firms select venture capitalists for financing rather VC causing firms to be more innovative”.²

² Venture Capital backed firms outperform non VC backed firms in terms of profitability, labor productivity, sales growth and R&D investment.³

³ Public instruments are used to correct market failure (e.g. difficulty to access to finance) and facilitate innovation through lowering the cost of R&D.⁴ However, “Granting financial advantages to selected undertakings can distort competition and affect trade between Member States. For this reason, state aid is defined in the EU Treaties as being incompatible with the internal market”.⁵

The first analysis performed, allows WP3 partners to divide some of the papers at the country-level or at the firm-level. In order to facilitate the sharing of information between the other consortium members, the more relevant papers were summarized in tables with a brief description of i) the methodology and variables used; ii) the country and period studied; iii) the main contributions and conclusions.

In terms of data, at the moment, more than 40 potential quantitative and qualitative indicators to evaluate the impact of the enhanced access to finance for innovation activities were identified: i) SME Access to Finance (SMAF) index; ii) Investment (€) under RSFF; iii) Venture capital availability; iv) Amount (€) of private equity investment by stage; v) Joint venture/strategic alliance deals; vi) Capacity for innovation; vii) Business expenditure on R&D; viii) Government expenditure on R&D; ix) Higher Education Expenditure on R&D; x) Private and public funding of R&D Activity, among others.

A list with data characteristics was also carried out, covering the following features:

- Indicator description,
- Data period,
- Countries include in the data,
- Level of information desegregation: available at regional level (NUTS II) and/or for activity sectors (NACE code rev. 2.0),
- Remarks with the limitations of data.

One main limitation of the data collected rests in the low level of desegregation. Most of them are only available at macro/country-level and sometimes not for the same period of time. On the other hand, practically no data are available at regional level (NUTS II or III) and by NACE code.

ULB contacted personally some entities, such as the European Investment Bank (EIB) and European Private Equity and Venture Capital Association (EVCA), in order to overcome these limitations but they confirmed us that, for the information for which they are responsible, data are not available of more desegregate levels than the country-level.

⁶ Especially grateful to the EIB, namely Marc D’hooge, Sarah McCann and Maria Koeva, for the statistical information about RSFF that they provide us.
Furthermore, another issue is the different classification used for the activity sector. Not all entities use the NACE code nomenclature, because they have their own classification table.

In the next steps, the focus will be put on:

1) Continue the data collection exercise, not only additional indicators, such as, Business Angels investments and the evolution of start-ups in the EU, but also try to have statistical information at regional level, by requesting it to the entities not yet contacted in charge of these data.

2) Complete the working paper on the literature review.

d) List of deliverables

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2.6 WP4 Creating a single innovation market

a) Review of the workpackage objectives

WP4 will look at five distinct commitments of the Innovation Union.

- Introducing the Unitary Patent (EU Patent) and a unified system of dispute settlement (C14)
- Screening the smart regulatory framework in key areas (C15) and modernisation of the standard-setting procedures in Europe (C16)
- Innovative Public Procurement (C17) and
- the Eco-innovation action plan (C18).

For each of the four themes the partners will highlight their link to the drivers of growth, well-being, and employment. In addition, the deliveries will provide an assessment how they can be linked to macro-analytical level of NEMESIS.

b) Change with respect to the text of the DoW

Task 4.1 Unitary Patent and the Unified Dispute Settlement System (C14):

The original DoW proposes analysing differences in application behaviour of SME and large firms with regard to unitary patents. Unitary patent regulations entered into force 2013. However, they will apply from the date of entry into force on the Agreement of a Unitary Patent Court. Up to now not all member states have ratified on the Unitary Patent Court. Hence, effects on the outcome of this commitment can only be estimated using EPO or PCT patent application behaviour as reference.

Task 4.2 Regulatory Framework and Standardisation (C15 and C16):

The original DoW proposes using the CIS data to look at standardisation as a source of information for innovation. Further investigation has shown that this information is only available for some European countries in the CIS and hence the analysis will be restricted to these countries.

Task 4.3 Innovative Public Procurement (C17):

No changes.

Task 4.4 Bottlenecks, Challenges and Opportunities for Eco-Innovation (C18):

No changes.

c) Progress so far

Concerning C14, C15, C16 and C17, the work was devoted to investigate for each commitment the motives, impact channels and initially expected results as well as the actual progress of these commitments. Furthermore, WP4 team started to identify and read the relevant literature related to contents of these commitments. A literature reviews and collection of information about relevant data sources and variables in ongoing.

Concerning eco-innovations (C18), the first period of project activities was devoted to (i) the identification of relevant and useful data sources to capture eco-innovative activities in the EU-28 and to (ii) the identification of the related literature on drivers and barriers as well as effects of eco-innovations. As to (i), a tentative list of potential indicators has been identified, ranging from input-related measures and intermediate measures to output-related measures. Their availability, usefulness, advantages and disadvantages, time horizon, country coverage and level of
disaggregation have been identified. As to (ii), a rich firm-level based literature on drivers and barriers of eco-innovations, on the one hand, and their effects, on the other, has been identified. A first cursory reading of this literature points to differences in drivers and barriers of eco-innovations relative to other innovations as well as in relative effects on different indicators of firm performance. Preliminary findings of both data availability and the literature were presented for all commitments at the project meeting on September 14th and 15th at the Vienna Institute for International Economic Studies (WIIW), Vienna.

d) List of deliverables

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2.7 WP5 Promoting openness and capitalizing on Europe’s creative potential

a) Review of the workpackage objectives
WP5 will look at five distinct commitments of the Innovation Union:
- Creative industries (C19)
- Open Access to Research Results / Research Information Services (C20)
- Facilitating Effective Collaborative Research and Knowledge Transfer (C21)
- Develop a European knowledge market for patents and licensing (C22)
- Safeguard against the use of IPRs for anti-competitive purposes (C23)

This work package aims at:
- increasing the knowledge about the broader set of knowledge assets which are used to generate new product and processes;
- improve the understanding of knowledge circulation within the public, within the private and between the public and private;
- the outlining the trade-off between stronger and weaker IPR rights and the link between IPR and competition policy.

b) Change with respect to the text of the DoW
With respect to the DoW, task 5.1 and 5.2 descriptions (below) have been better detailed, as regards contents there are no changes.

Task 5.1: The role of Design in Creative Industries (ULB) (C19)
In recent years, a large number of studies increased our knowledge of creative industries and also highlight the process of innovation and impact of innovation in creative industries (see Potts 2009). However, creative industries are a quite heterogeneous group of industries where each industry demands special treatment to arrive at meaningful policy implications. Hence, the first step in the WP5 analysis will highlight the innovative core of creative industries. In a second step the work will focus on design-based innovation. For both topics, the relevant literature will be reviewed. Furthermore it will be discussed the report and the recommendations of the European Design Leadership Board to then critically assess whether at all and which government intervention will spur the European Design industries.

Task 5.2: Open Access to Research Results and Research Information Services (EIZ) (C20)
The goal of this task is firstly to review the literature related to commitment 20. Furthermore, the task will inquire the status and usage of open access journals as well as open access portals and databases in order to provide recommendations on supporting and promoting open access and recommendations on (and possibly implementations of) joint information systems supporting open access such as EU level portals/databases. In the second step a comprehensive database of EU peer reviewed open access journals will be constructed by using information from national and international portals and databases. This database supports further research and may be the basis for a joint portal to EU open access publications. Finally, the use of open access sources in SMEs will be explored by means of a qualitative study on information collecting habits of a few highly innovative firms in Croatia.
Task 5.3: Facilitating the Effective Collaborative Research and Knowledge Transfer (EIZ) (C21)
No changes.

Task 5.4. Develop a European Knowledge Market for Patents and Licensing (ZEW) (C22)
No changes.

Task 5.5. Safeguard against the Use of IPRs for Ant-Competitive Purposes (ZEW) (C23)
No changes.

c) Progress so far
Concerning C19, the team is working on the literature reviews and collection of information about relevant data sources and variables. About 20 studies investigating creative industries have been identified in the academic literature. These studies can be classified into three groups according to whether they i) assess the contribution of creative industries to the economy, particularly in terms of employment, regional development and urban dynamics; ii) analyze the role of innovation in the creative industries; and, iii) the role of creative industries in contributing to innovation in the wider economy, particularly with regard to inputs from the creative industries that may be used in innovation processes in other industries. Data on creative industries and firms are not very developed. The Department for Culture, Media and Sport in the UK proposes a list of six sectors. At the micro level, financial information can be retrieved from the AMADEUS database. The 4th edition of the Community Innovation Survey also contains some questions on firms’ innovative and creative activities. Related to design-based innovation, also about 20 studies have been identified in the academic literature. Indicators on the importance of design for maintaining or increasing competitiveness in product and/or process innovative enterprises are also provided in the 2012 edition of the CIS survey.

For C20, the team has worked on the summarizing the sources for open access journals.

For C21, the team has also started to identify on the motives, channels and likely impacts of the commitment.

Related to C22 and the development of a European knowledge market for patents and technologies, the main focus in the previous months was to review the literature on technology trading platforms and their evaluation. A first draft of the literature review has been written.

Related to C23, the WP5 team has investigate the motives, impact channels and initially expected results as well as the actual progress of the commitment. Furthermore, a review activity to identify and read the relevant literature related to contents of these commitments is currently ongoing. The next step will be the preparation of the literature review to draft the deliverable at M10.

d) List of deliverables
Originally, the structure of deliverables of WP5 was different than for the other WPs. In order to make this WP coherent with the other WPs and the inputs needed for WP9 and WP10 the partners suggest rearranging the content of the deliverables and changing the number and list of deliverables
according to the table below.
The new deliverable D5.1 will contain a literature review related to the commitments of the WP5. It will furthermore comprise the collection of relevant data and indicators. Since originally the deliverables of the WP5 had later delivery month, WP5 team suggests deviating from the other WP and use M12 as delivery month. As for the open access C20, it should be noted that data collection is not possible with the first deliverable (M12). In M12 only sources for open access journals can be listed.
As for the other WPs new deliverable D5.2 will assess the state of the implementation and the direct impact assessment and new deliverables D5.3 will make suggestion for the integration in the eco-system.

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2.8 WP6 Social and territorial cohesion

a) Review of the workpackage objectives
The main objective of this WP is to evaluate the direct and dynamic effects of the EU policy instruments on the involvement of social partners in the development of knowledge economy. This broad approach can be split into four specific areas, which are defined as follows:

- **C24/25** Assessment of changes in the philosophy, institutional system, and the practice of allocation of expenditures for research, technical development and innovation from the Structural Funds over the last one and half decade and in the current Multiannual Financial Framework (2014-2020). Mapping these changes both at Member State and regional level. Analysis of efforts to improve the efficiency of these policies, especially the spreading of Smart Specialization Strategies for Member States and their regions with the promotion of the Commission’s 2012 established tool, the Smart Specialization Platform.

- **C26** The ESF programmes of the Member States are currently at the beginning of its implementation. Besides concrete funding opportunities for “Social Innovation” the SI Pilot initiative also includes the support of the establishment of a “European Social Innovation culture”. Concrete actions comprise e.g. “The Social Innovation Europe Platform” and “The European Social Innovation Competition”. Furthermore the “SI pilot initiative” includes the (further) development of networking policies and programmes (e.g. COSME) in the field of SI in EU-Member States (MS), regions and municipalities, and linking these with activities in civil society, such as social entrepreneurs, the third sector, the social economy, business networks, universities (e.g. FP7 – networks of incubators for SI). In the light of the above developments the main research objective is the identification of the basic channels for the learning process, best and suboptimal practice and the investigation of the reasons for the delay in the start of activities hoped to involve social partners more intensively and efficiently in enhancing the knowledge economy.

- **C27** This commitment consists of 2 parts – one related to the new learning incentives for public sectors in the Member States and one related to removing barriers for the development processes through a research programme. The first part of the commitment is related to a creation of the European Public Sector Innovation Scoreboard (EPSIS). The pilot Scoreboard was published in 2013. The identification of the basic channels for the learning processes in the public sector is essential to evaluate the impact of benchmarking on innovation. The EPSIS allows for comparisons between countries, therefore it will rise competition and inspire or motivate countries presenting poor performance in areas covered by the Scoreboard. The objective of the study is to verify whether the use of good practice and benchmarking result in a better performance of institutions and organisations. The second objective of the evaluation study is to examine the potential impact of financing research on social innovation and public sector innovation and investigate whether the implemented research and innovation funding programmes facilitated the dissemination of know-how and good practice. In the first step the literature review will help to identify and describe the main impact channels:

  (i) for C27a - European Public Sector Innovation Scoreboard: need for learning: naming and shaming, public pressure as a driver for reforms; easier learning: benchmarking, identification of best practices and what should be avoided;
(ii) for C27b - supporting a research program on public sector and social innovation: transfer of good practice, promotion of effective instruments; guiding by common principles, dissemination of the now-how needed for innovation and policy-making.

- C28 Investigation of the reasons for the delay in the start of activities hoped to involve social partners more intensively and efficiently in enhancing the knowledge economy. C28 is in an early stage of implementation. The European social partners - via the social dialogue committee at cross industry level and the sectoral social dialogue committees - were contacted by the Commission (DG Employment) in 2013 to agree on a schedule for discussion around the Innovation Union in 2013. Two sectors have integrated the topic into their work programme and eight social partner’s organizations confirmed their interest in participating in such dialogue. Social partners represent a broad variety of sectors (43) and are autonomous in their decisions whether or not to discuss specific themes. So far European social partners did not respond to repeated requests about the obstacles delaying the commitment. In view of the complexity of the topic an impact assessment appears to be very difficult.

b) Change with respect to the text of the DoW

With respect to the DoW, the section “objectives” (above) is more detailed, as regards contents there are no changes.

c) Progress so far

1. Finalization of WP 6 team

After a thorough search and consultation period, an excellent partner for the work on C26, the Vienna based Centre for Social Innovation (ZSI) was identified.

2. Telephone conference with WP 6 team members, June 30, 2015.

Aim: interpretation of the resolutions of the Project kick-off meeting concerning important parameters of research cooperation (deadlines, definitions, contents, contacts).

Identifying overlaps

In the case of C24/25 no overlaps were found with other Commitments in the WP 6. Concerning the whole project with all the 34 commitments there is an overlap in a broader sense, since Structural Funds provide the main financial resources for nearly all targets and there is a competition for these resources. The team came to the conclusion that there is a significant overlap between C26 and C27. Rationale of C26 and C27, respectively, is very similar, while policy instruments and data not. However, impact measurement might be inter-related. Involved researchers should work together and agree on common definition of Social Innovation. Meanwhile, target conflict between C26 and C27 should not be exaggerated. Focus of C26 are vulnerable groups, C27 is rather research focused. C28 is very different from all other commitments in the WP or the whole project therefore no overlaps were identified.

Data collection

C24/25 Member State level data and regional data on share of Research, Technical Development and Innovation spending in total SF expenditures are available but regional data are still part of a running research project.
C26 Focus on European Social Fund (data on implemented projects), also Progress (monitoring/evaluation data), will also look at impacts of particular projects. DG EMPL was contacted for possible data for C26.

C27 Data on spending on SI-research programs (Horizon, Framework Programs, other research projects) by DG Research. Data on Poland (innovation-testing projects financed by ESF) available. No financial data on Public Sector Innovation Scoreboard available. Will focus on some indices and show change in comparative position of countries in international rankings after implementation of Public sector innovation scoreboard (e.g. with respect to competitiveness).

C28 Data: it is difficult to suggest data on this commitment. It is at a very early stage of implementation, least developed from all C’s.

3. I3U Project Meeting & Technical Workshop, September 14-15, 2015, Vienna

The meeting helped create a unified approach to the whole project via a consequently structured display of work on individual commitments, and that indirectly helped tailor research on WP 6 commitments. Team members had the opportunity to systematically go through the rationale, potential solutions, main impact channels and impact areas, and finally the results and indicators for individual commitments. The interconnection of these various approaches was visualized with the help of a commitment map for each individual commitment. These presentations were followed by feedback both from WP6 team members and other participants of the I3U project. The project meeting provided an opportunity to clear some missing details of data collection and discuss the wishful framework of literature review, the two immediate task to be fulfilled.

d) List of deliverables

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2.9 WP7 EIP and leveraging policies externally

a) Review of the workpackage objectives

The main objective of WP7 is to evaluate the direct and dynamic effects of the EU policy actions that promote stronger cooperation in innovation activities, both internal cooperation (among partners from EU countries) and external (with third countries). Below the four specific objectives:

- Identifying the effect of the European Innovation Partnerships (EIPs) on accelerated research, development and commercialisation of innovations aiming to tackle major societal challenges.
- Assessment of the effects of integrated policies of the European Union and its Member States on attracting highly skilled academics, researchers and innovators from third countries to stay in Europe. Specifically, the objective is to establish whether and to what extent firms benefit from a culturally diverse pool of employees, and what is the relative contribution of domestic versus foreign skilled workers to corporate performance.
- Assessment if European Union’s scientific cooperation with third countries enables Europe to access foreign sources of knowledge in order to tackle global challenges, with particular focus on research and innovation initiatives developed between the EU and Brazil, China, India and the USA, as well as EU cooperation with Western Balkans candidate countries.
- Evaluation of the short-term, direct impacts and medium to longer-term indirect impacts of the development of Global Research Infrastructures (GRI).

b) Change with respect to the text of the DoW

None to report.

c) Progress so far

Initial commitment maps and preliminary literature reviews were prepared for particular C29 to C32. The literature reviews focus on broad scope of economic mechanisms involved in each of these commitments and their relation to many parts of the innovation process. In general, the impact of all commitments is analysed at four levels of social analysis, following new institutional economics approach of Williamson (2000), including: embeddedness, institutional environment, governance, and resource allocation. The research results typically cover the following types of impact assessment: economic, environmental, and social. A preliminary analysis was conducted in order to identify the indicators reflecting the impact of the commitments.

In particular, preliminary literature reviews have been conducted for the following commitments:

C29. Pooling internal EU resources and efforts through European Innovation Partnerships (WIIW)

Work during the reporting period was devoted to preparing inputs for D7.1 Literature Review and Data Collection. The outline of the review on C29 is structured in three main parts: Review of the theoretical literature; Review of the empirical literature and Date issues (measuring the EIPs impact). The purpose of the review is to put EIP initiative of the EU into a perspective, to compare it with similar experiences undertaken by other countries and bodies and, based on that, to draw some conclusions with practical relevance for the next steps in the I3U project, namely the state of implementation of the EIPs and the direct impact assessment. The review also draws some conclusions based on both theoretical considerations and practical experiences in designing and
implementing partnership arrangements. Thus empirical evidence suggests that successful partnerships require clear objectives, industry leadership, public commitments that are limited and defined, cost sharing, and effective evaluation processes. The empirical literature also formulates some negative lessons and experiences of R&D and innovation partnerships, which also merit being taken into account in the next phases of EIP implementation.

C30. Retaining and Attracting International Talent (TIK)
Main findings:
- Attraction factors related to institutional prestige (and lack of home country opportunities); country factors found more important than institutional factors
- Blue card policy may be positive but several critical articles
- Retaining may be related to good on-the-job policies and practices such as team work, training, career management, skill building; but may be difficult for many universities to compete with their traditional organisations and salary levels
- “Global war for talent”, “Global race for talent”, competition US/Europe

C31. Scientific Cooperation with Third Countries (EIZ)
With respect to C31, which refers to developing a common approach of EU member states towards the scientific cooperation with third countries, progress so far includes: identification of economic rationale behind the commitment; draft of the literature review; draft of the commitment map aimed at identifying impact channels; as well as the list of tentative indicators for the direct impact assessment including their sources.

The economic rationale behind C31 is identified as threefold. EU must further deepen its international scientific and technological cooperation and thus increase spillovers from outside the EU. Scientific cooperation with third countries is also intended to address global societal challenges as well as support EU external policies by increasing spillovers to certain countries/regions outside the EU. In 2012, a new strategy for international cooperation in research and innovation was adopted, in particular with a view to implementing Horizon 2020, while in 2014 EC provided extensive progress report on the implementation of the strategy accompanied by multi-annual roadmaps for international cooperation with eleven key partner countries and regions. There are two major sets of impact channels related to this commitment. One refers to general opening allowing partners from third countries to participate in various research programmes and activities financed by the EU. The other set relates to more targeted international cooperation initiatives. The literature review aims at looking over the main economic concepts and ideas behind the commitment #31. It focuses on the strand of literature that deals with the international R&D spillovers but also tackles the growing body of studies on the internationalisation of R&D as well as related business literature dealing with the ‘global innovation paradigm’. Tentative list of indicators includes indicators on international cooperation in framework programmes; indicators on international cooperation of the member states and associated countries; as well as indicators on internationalisation of research and innovation. During the September project meeting in Vienna some overlaps with C30 within the WP7 were identified.

C32. Roll-out global research infrastructures (WERI-SGH)
One of the elements of UE strategy of development of R&D activities is the optimisation of use of Europe's research infrastructure and the improvement of large-scale facilities. Rationale and objectives of C32 are: addressing global challenges; implementation of projects that
exceed the funding capacity of individual countries; optimisation of the global inventory of scientific facilities; access to unique geographical locations and resources distributed world-wide.

Proposed solutions and main impact channels are: Group of Senior Officials for Global Research Infrastructures (GRI); European Roadmap for ESFRI; European Expert Group on Cost Control and Management Issues; increased investment in R&D.

Main impact channels will tackle institutional environment: setting common data policies and standards, governance: new management system for GRI and resource allocation and employment. Main area or impact are: economic: advanced fundamental knowledge; improved R&D efficiency; stimulated cooperation; promoted scientific excellence; trained scientists; social: solved key Grand Challenges; provided international experience for young scientists; environmental: knowledge about the underlying principles of the global climate change and its effects.

Economics of network; the Concept of Critical Mass and Common Pool Resources Theory will be used for explaining the interlinkages and their expected results.

Up till now the preliminary version of the 15 pages report covering the above mentioned issues is prepared.

d) List of deliverables

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2.10 WP8 Making it happen

a) Review of the workpackage objectives
Transforming the EU into a genuine Innovation Union requires sustained effort, close cooperation and effective implementation at all levels (EU, national, regional) over a considerable number of years. The roles and responsibilities of each actor in the Innovation Union must therefore be clearly defined and strong monitoring mechanisms put in place to avoid slippage. In a nutshell, this is the “making it happen” Innovation Union goal. The main objective of this WP will be therefore to evaluate the direct and indirect dynamics effects of reforming the research and innovation systems, in the EU as a whole and in individual Member States. This objective will be split into three specific objectives:

- Analysis of the self-assessment of Member States Reform Programmes.
- Overall analysis of the progress towards the Innovation Union as measured through the Research and Innovation Union scoreboard, and assessment of the direct and indirect effects of such progress.
- Qualitative assessment of the institutional reforms and effectiveness of the Innovation governance gear, at the whole EU level and for the individual Member States.

b) Change with respect to the text of the DoW
None to report.

c) Progress so far
The relationships between the C33 and C34 focused in WP8 - aiming respectively the implementation of the whole Innovation Union in the Member States and to benchmark the EU’s innovation performance against its main trading partners by using the Innovation Scoreboard and new versions of the Innovation Headline indicator - and the analysis of the other commitments undertaken in WP1 to WP7 has been discussed in the Vienna meeting on 15th September, and is illustrated in the following conceptual graph:
The graph shows 3 dimensions:

- The stakeholder categories – research institution and networks, research funding organizations, SMEs, large corporations, civil society organizations and policy makers. About 3 key stakeholders representatives will be interviewed in each category while assessing the quality of the Innovation Union multi-governance system (Task 8.3).

- The innovation Union commitments 1 to 32, as grouped by I3U work-packages, whose level of implementation in the Member States will be analysed firstly on the basis of the European Commission State of the Art reports (in Task 8.1) and after, towards the end of the project, based on EC reports updates and the results of the analyses undertaken in the I3U WPs.

- The work of review and assessment of the whole governance system which is undertaken in WP8 properly, as planned in the DoW.

d) List of deliverables

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2.11 WP9 Integration – The European Innovation System

a) Review of the workpackage objectives
This WP integrates and coordinates the work of the previous WPs, and provides the overall view of the European innovation system. Its specific objectives are as follows.

- To develop an analytical description of the European innovation system that describes the main innovation and knowledge actors in the Member States, their interactions, and the role of policy in the innovation system (both at the regional, national and international level).
- To provide directions and guidelines for empirical work in the other WPs with regard to indirect effects and interaction effects between the 34 Innovation Union commitments. Such indirect effects are particularly important in the assessment, monitoring and evaluation of innovation-related policies. Innovation has important indirect effects, or externalities, which constitute an important part of the total economic and social impact.
- To provide an assessment of how the 34 commitments work together towards a unified and holistic European innovation policy, and what their joint impact on European competitiveness is. In this part of the WP, the results from the individual WPs 1-8 will be combined and related to each other. This involves both the quantitative results and the qualitative assessments. In relating these results, the aim is to provide an overall assessment of the Innovation Union policy effort, and to provide recommendations for optimizing the policy mix in the future.
- To provide guidance for further quantitative work using the NEMESIS model, specifically with regard to how the NEMESIS model can be modified in order to obtain a more realistic representation of innovation. The analysis using the NEMESIS model, in WP10, is the main way that project proposes for coming to an overall assessment of the economic effects of the Innovation Union policies. For this purpose, the NEMESIS model needs to be fed with the results from the individual WPs 1 – 8. This objective will provide the “translation” that is necessary to use and adapt the model for this purpose.

b) Change with respect to the text of the DoW
In the description of task 9.1:

- For the sake of comprehensive coverage, the team strongly supports the idea of relying on secondary literature instead of carry out the interviews with experts. Therefore, the team proposes to cut the following sentence: “A number of up to 30 interviews is foreseen with experts on specific parts of the European innovation system”
- To add the following sentence right after “(Srholec and Verspagen, 2013)”: “At the macro level, we will make use of R&D data to map the broad institutional sectors in the innovation system”.

c) Progress so far
Work has focused so far on data collection and the preparation of a conceptual framework to present and analyze the data. Most efforts have been directed at the collection of the qualitative data. Quantitative data (including CIS and R&D) will follow soon. For the conceptual framework, a number of available frameworks have been reviewed, and these are now being combined into a proposal for the current work.
### d) List of deliverables

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<td>D9.2 - Report on proposals for modifying the NEMESIS model, based on the analysis of the European innovation system and the analysis of the 34 commitments</td>
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<td>D9.3 – Report on how the 34 IU commitments relate to the European Innovation system, including guidelines on which specific indirect and interaction effects to include in the evaluation of the individual commitments</td>
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<td>D9.4 - Report on the state of the European Innovation Union, including an analysis of the 34 commitments, and the working of the European innovation systems</td>
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2.12 WP10 Macro-sectoral economic modelling

a) Review of the workpackage objectives
The objective of this work-package is to implement in the macro sectoral modelling the results of the preceding work packages, in order to arrive at an assessment of the different commitments together in terms of overall economic effects.
All the results and indicators obtained in WP1 to WP8 will be put together in WP9 leading to a detailed description of the European Innovation system. A first objective of this WP is to specify several tasks that are necessary to implement the assessments of the objectives and the way in which they relate to each other in a large scale macro-sectoral econometric model (NEMESIS). This includes a summary of all the mechanisms in the model that should be modified, in terms of the innovation mechanisms and the behavioural equations. Then the assessment will be conducted using the modified NEMESIS model for the commitments or group of commitments, and for the whole set of commitments simultaneously in order to make an evaluation of the Innovation Union. These evaluations will encompass ex-post and ex-ante specifications. For that purpose, a benchmark scenario will be defined for every country, up to 2030, taking into account at the beginning of the period the extent to which the different commitments have been already implemented. Then, for the beginning of the period an ex-post assessment is implemented by simulations showing what would have been the macro-economic track without the implementation of the commitments. For the rest of the period, the ex-ante evaluation will be processed in the same way, the benchmark scenario will incorporate all the commitments as if they were achieved, then the assessment will be conducted by suppressing the implementation of the commitments. Finally, the assessment needs activities with regard to the benchmark scenario building, the assessment of the commitments, and a sensitivity analysis in order to evaluate the impacts of the methodological choices and indicators on the results.

b) Change with respect to the text of the DoW
None to report.

c) Progress so far
The progress realized so far are, in line with the workplan, related to the first task. The main objective of this task is to identify the ways in which the analysis of the 34 commitments can be implemented in the NEMESIS model. For that purpose a description of the NEMESIS model including its new mechanisms has been written and provided to all partners in order that all teams understand how the NEMESIS model works. In addition, a first draft describing the potential actions of each commitment on the innovation determinants in NEMESIS has been provided under the form of an excel file and a first list of potential indicators that could be needed for modelling the commitments has been established.
On the other side, in order to grasp the true action of the commitments in the innovation system, each team in charge of the WP 1 to 8 has drawn commitments’ maps describing the way of action of each commitment and has established a list of indicators to quantify their action.
On the basis of the description of these two approaches, the one of modellers and the one of WP1 to 8, the team is currently determining:

- Which mechanisms in NEMESIS might reflect the commitments’ action;
- Which mechanisms related to the commitments are not taken into account in NEMESIS and have to be introduced (access to finance for instance);
The exchanges between the different teams during the second meeting have raised several issues: First, the implementation of the commitments cannot follow a systematic procedure and must be considered with caution. In particular the commitments cannot all be implemented in NEMESIS notably when we expect either purely qualitative impacts or no significant quantitative effects in terms of economic performance (such as for instance in the case of the C2A about ranking of universities or in the case of the commitments dealing with the monitoring of the Innovation Union such as the 34 aiming at developing an Innovation Headline Indicator and the Innovation Union Scoreboard).

In addition, several commitments are strongly overlapping and they should be grouped together for NEMESIS simulations. For instance all commitments aiming at increasing the mobility of human capital could be taken together as well as all commitments aiming at making a unified European IPR.

Second, the implementation of commitments in NEMESIS might imply three levels of modification in NEMESIS:

1. In the simplest case, the implementation of a commitment will consist only in a variation of exogenous variables such as the supply of high skill; of public R&D investments, etc.
2. In other cases the implementation of a commitment will imply a variation of parameters. In particular a central parameter of the innovation process reflecting the productivity of innovation efforts might be influenced by several commitments (for instance one can wonder whether increasing SME’s involvement increases the R&D productivity of the sector or not.)
3. Finally some commitments may need an improvement of the behavioural equations of the model. In particular two fields of the innovation system are poorly described in NEMESIS. The first is the link between finance and innovation and the second is related to the heterogeneity of firms. However, since such modifications can be very heavy, further investigation must be done to be sure that these commitments cannot be approximated through the modification of exogenous variables or of parameters only.

On the basis of the commitments maps, the features of NEMESIS and the discussions between partners, a second proposition of the potential actions of the commitment on the innovation determinants in NEMESIS will be provided and strong iterations will be implemented between Seureco and the teams of WP 1 to 8 in order to identify the best way to model the commitments in NEMESIS.

d) List of deliverables

<table>
<thead>
<tr>
<th>Deliverable number and name</th>
<th>Delivery month</th>
<th>Delivery date</th>
</tr>
</thead>
<tbody>
<tr>
<td>D10.1 - Sum up the effects to take into account</td>
<td>M12</td>
<td>28/02/2016</td>
</tr>
<tr>
<td>D10.2 - Implementation in Macro-sectoral model</td>
<td>M22</td>
<td>31/12/2016</td>
</tr>
<tr>
<td>D10.3 - Definition of a reference scenario</td>
<td>M24</td>
<td>28/02/2017</td>
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<tr>
<td>D10.4 - Impact assessment of commitments individually and/or by group</td>
<td>M30</td>
<td>31/08/2017</td>
</tr>
<tr>
<td>D10.5 - Impact assessment of commitments as a whole</td>
<td>M36</td>
<td>28/02/2018</td>
</tr>
<tr>
<td>D10.6 - Sensitivity Analysis</td>
<td>M36</td>
<td>28/02/2018</td>
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2.13 WP11 Management, Dissemination, Exploitation and Communication

a) Review of the workpackage objectives

- Project and contract management, including financial management, production of progress/management reports, coordination of sub-contracting, so as to ensure effective delivery of project objectives within time, cost and resource constraints, with high quality standards;
- Internal and external project representation, including contacts with the EC and all other relevant stakeholders;
- Dissemination of the I3U project results to the scientific community, to policy makers and to a wider public by means of a wide range of dissemination tools showing the impacts of the EU innovation policy on growth and job.

All activities related to the operative management, dissemination and exploitation will take place for the duration of the project.

b) Change with respect to the text of the DoW

None to report.

c) Progress so far

With reference to the Management activities, the Project Coordinator and Project Manager implemented the following activities:

- Monitoring of administrative, financial and technical aspects of the project;
- Production and periodic update of a project contact list, with relative responsibilities;
- Follow-up and collection of bank account information of the partners for the distribution of the pre-financing received by the Commission;
- Organisation and management of the kick off meeting in Rome and the first project meeting in Vienna (with production of relative minutes shared with all partners);
- Finalisation of the Consortium Agreement;
- Internal review and delivery to the Commission (in attachment to this report) of the following project deliverables:
  - D11.1 Plan for the dissemination and exploitation of the project’s results
  - D11.2 the project presentation, including the project leaflet
- Assistance to partners regarding contractual deliverables and EC budgetary rules;
- Maintenance of a continuous communication channel with the EC, with regular provision of updates on the status of work.

With reference to the Dissemination, Exploitation and Communication activities, so far, two deliverables, D11.1, the Plan for the dissemination and exploitation of the project’s results and D11.2, the project presentation, including the project leaflet, have been submitted to the EC for approval. The visual identity guidelines along with the document and presentation templates were submitted as part of the Dissemination and Exploitation Plan and are available for download in the private section of the I3U website.

In addition, the project website was launched on July 20, 2015, and contains information on I3U’s
partners, objectives, commitments, clusters, deliverables, news and events. There is also a reserved area where partners can view and download project documents. The site will be used to provide information and promote the project.

Also used to promote the project is the I3U LinkedIn group. This group was created on September 1, 2015. It provides a space where partners can share and publicise news, events, conferences and calls for papers as well as other research, information and articles that are relevant to the project.

d) List of deliverables

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<td>D11.2 - Project presentation, including leaflet</td>
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<td>31/05/2015</td>
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<td>D11.3 – Inception report</td>
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<td>31/08/2015</td>
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<td>D11.4 – Data Management Plan</td>
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<td>D11.5 – Conference minutes</td>
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<tr>
<td>D11.6 – Electronic newsletters</td>
<td>M34</td>
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