

# DELIVERABLE REPORT

## D1.1.6 (revised)

### “Final Progress Report and Management Summary”

#### MASELTOV

Mobile Assistance for Social Inclusion and Empowerment of Immigrants with Persuasive Learning Technologies and Social Network Services

Grant Agreement No. 288587 / ICT for Inclusion

Collaborative project co-funded by the  
European Commission - Information Society and Media Directorate-General  
Information and Communication Technologies - Seventh Framework Programme (2007-2013)

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<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	



# PROJECT PERIODIC REPORT

**Grant Agreement number: 288587**

**Project acronym: MASELTOV**

**Project title: Mobile Assistance for Social Inclusion and Empowerment of Immigrants with Persuasive Learning Technologies and Social Network Services**

**Funding Scheme: FP7-ICT-2011-7 Collaborative Project**

**Date of latest version of Annex I against which the assessment will be made: 13.01.2015**

**Periodic report:** 1<sup>st</sup> ☐ 2<sup>nd</sup> ☐ 3<sup>rd</sup> ☒ 4<sup>th</sup> ☐

**Period covered:** from 01.01.2014 to 31.03.2015

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## Declaration by the project coordinator

I, as co-ordinator of this project and in line with my obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):
  - ☒ has fully achieved its objectives and technical goals for the period;
  - ☐ has achieved most of its objectives and technical goals for the period with relatively minor deviations<sup>1</sup>;
  - ☐ has failed to achieve critical objectives and/or is not at all on schedule.
- The public Website is up to date, if applicable.
- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (Chapter 11. ) and if applicable with the certificate on financial statement.
- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under the Chapter on [Project Management](#) in accordance with Article II.3.f of the Grant Agreement.

Name of Coordinator: DI Dr. Lucas Paletta.....

Date: .October 7, 2015.....

Signature of Coordinator: .....

<sup>1</sup> If either of these boxes is ticked, the report should reflect these and any remedial actions taken.

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02	CUR		CURE CENTRUM FUR DIE UNTERSUCHUNG UND REALISIERUNG ENDBENUTZER-ORIENTIERTER INTERAKTIVER SYSTEME	AT
03	AIT		RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES	EL
04	UOC		FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA	ES
05	OU		THE OPEN UNIVERSITY	UK
06	COV		COVENTRY UNIVERSITY	UK
07	CTU		CESKE VYSOKE UCENI TECHNICKE V PRAZE	CZ
08	FHJ		FH JOANNEUM GESELLSCHAFT M.B.H.	AT
09	TI		TELECOM ITALIA S.p.A	IT
10	FLU		FLUIDTIME DATA SERVICES GMBH	AT
11	BUS		BUSUU ONLINE S.L	ES
12	BUS_UK		BUSUU ONLINE Ltd.	UK
13	FUN		FUNDACION DESARROLLO SOSTENIDO	ES
14	DAN		VEREIN DANAIDA	AT
15	MRC		THE MIGRANTS' RESOURCE CENTRE	UK
16	PP		PEARSON PUBLISHING	UK
17	ATE		AUSTRIAN INSTITUTE OF TECHNOLOGY	AT

At reporting time, organisations marked gray in the table above were not official partners of MASELTOV anymore.

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## 1. EXECUTIVE SUMMARY

### 1.1 CONSORTIUM

Participant no.	Participant organisation name	Participant short name	Country
1	JOANNEUM RESEARCH Forschungsgesellschaft mbH	JR	Austria
2	Center for Usability Research and Engineering (left on 31.03.2014)	CUR	Austria
3	Athens Information Technology	AIT	Greece
4	Fundació per a la Universitat Oberta de Catalunya (left on 31.10.2014)	UOC	Spain
5	The Open University	OU	United Kingdom
6	Coventry University	COV	United Kingdom
7	Czech Technical University	CTU	Czech Republic
8	FH JOANNEUM – Univ. of Applied Sciences	FHJ	Austria
9	Telecom Italia	TI	Italy
10	Fluidtime Data Services GmbH	FLT	Austria
12	Fundación Desarrollo Sostenido (left on 30.09.2014)	FUN	Spain
13	Verein DANAIDA	DAN	Austria
14	Migrants Resource Centre	MRC	United Kingdom
15	Pearson Publishing Ltd. (started on 01.01.2014)	PP	United Kingdom
16	AIT Austrian Institute of Technology GmbH (started on 01.04.2014)	ATE	Austria

### 1.2 WEBSITE

	Mobile Assistance for Social Inclusion and Empowerment of Immigrants with Persuasive Learning Technologies and Social Network Services
	<a href="http://www.maseltov.eu">www.maseltov.eu</a> <a href="http://www.facebook.com/MASELTOV.EU">http://www.facebook.com/MASELTOV.EU</a> :: @MASELTOV_EU

### 1.3 CONTACT DETAILS

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#### 1.4 MAJOR PROJECTS AIMS AND OBJECTIVES –GENERAL PROJECT PERSPECTIVE

MASELTOV recognises the major risks for social exclusion of immigrants from the European information society and identifies mobile – everywhere/everytime - persuasive assistance as being crucial for more efficient and sustainable support. MASELTOV researches and develops novel ICT instruments in an interdisciplinary consortium with the **key objective** to facilitate and foster **local community building and bridging of cultural differences**. MASELTOV realises this project goal via the development of *innovative social computing services* that principally support *informal learning*. A mobile assistant embeds these novel services in order to support activities for the social inclusion of immigrants in a persuasive and intuitive manner which is highlighted in MASELTOV with a representative application of some of the most essential *information and learning services*.

Social computing is intensively used by immigrants in order to stay connected with family members and friends in their home country. MASELTOV makes use of social computing in order to motivate immigrants to become increasingly engaged in the local community, increasingly pragmatically applying their newly attained knowledge on how to access information, on how use the second language and how to understand the host country's culture. By "*community*" here, we refer to more open, informal, flexible, dynamic, "emergent" (rather than pre-identified) social interactions and social networking, and to the services, tools, actions etc. that can prompt, support, enrich such processes.



**Figure 1.** Typical scenario for the application of MASELTOV service.

## 1.5 ROADMAP FOR THE COMPLETE PROJECT DURATION

The following overview presents the major milestones of the project and the corresponding major contributions.

- Milestone **MS1** (month 6): “**Interaction Design**”
- Literature studies
- Use cases and usability engineering
- Interaction concept
- Milestone **MS2** (month 12): “**Context Awareness**”
- System architecture and interface specifications
- First functional components
- Mobile text lens
- Milestone **MS3** (month 18): “**Mobile Assistance**”
- Bureaucratic advisor service
- Content abstraction and user profiling
- Feedback and progress indicators
- Geosocial network service first version
- Milestone **MS4** (month 24): “**Learning Services**”
- Privacy and trust components
- Persuasive assistance
- Playful cultural learning first version
- First field trial
- Milestone **MS5** (month 33): “**Community Building Services**”
- Mobile assistance and information services
- Local community building services
- Geo-social network service final version
- Health care service
- Milestone **MS6** (month 36): “**Field Trials and Evaluation**”
- International conference on ICT & migration
- Finalisation of service components

## 1.6 SUMMARY OF WORK PERFORMED AND SO FAR ACHIEVED RESULTS – THIRD PROJECT PERIOD

Work performed within the **first project year** had focused on the development of individual components that were supposed to finally feed into an integrated proto-demonstrator in more advanced stages of the project. A very **first, seminal integration step** had been achieved, and that core service structure was further continuously augmented with every of the upcoming milestone based deliveries. As a starting point for the development of the user-centred design approach, user requirements of the immigrant target group were profoundly collected and processed with the outcome of a **common scenario** that been agreed with the purpose to lead further developments and interfacing between the individual functional components of the suite of services, such as, language learning, serious game, community building services, geo-contextual awareness as well as integration supporting components, and recommender system as well as mixed reality game aspects, respectively, that tie the components together.

In the **second project year**, the objective was to attain an **advanced integrated version** that would already incorporate some functional aspects of the **Recommender Service**, and including services that process recommender conditions as well as those who provide resulting actions, such as, linking to appropriate **Language Lessons**. In particular, the **Serious Game** version was advanced to a fully integrated, independent service that was then available for further evaluation, feedback and updates. Persuasive assistance was provided by the development of **intuitive navigation services** through the mobile Augmented Reality app. Due to delays, caused through the replacement of the critical beneficiary BUS, the first field trial could not be launched in time and it was agreed with the reviewers to extend the project duration and have it performed in the third project period.

To summarize the results that MASELTOV achieved before the last project period (01/2012 – 12/2013), we note that we have reached the following state:

- Organization of six **plenary meetings** (including the kick-off meeting in Graz (Austria)), the second (Brussels), third (Athens), fourth (Rome), fifth (Chania) and sixth (Milton Keynes) plenary meetings; development of an ethical manual for the full consideration of ethics issues over project time (WP1). **Coordination activities** for the continuous monitoring of project progress, identification of progress congestion at an early phase, supporting the harmonization of work packages, such as the bridging between WP2 (user related) and WP3 (system related) aspects, and setting of appropriate management activities through the development of **contingency plans** in the face of risk. Organization of the first year review meeting including the rehearsal meeting in Luxembourg (Luxembourg), the exploitation strategy meeting (Torino, Italy). Definition of an **ethical strategy and monitoring** of ethical issues over project time (WP1).
- Literature study and identification of current stakeholders in Europe and on an international scope on immigration and ICT. Organization of an **international workshop with stakeholders on immigration and ICT in Barcelona**, Spain, with important results. **Analysis of user requirements** (extensive amount of interviews and focus groups) towards the definition of MASELTOV services, definition of use cases and service scenarios. Particularities of **cultural-diverse user interfaces** have been researched (literature and participatory design sessions) and taken into account for the interaction concept (WP2). Organization of an **international user interface workshop in Vienna** (October 2012) with the goal to adjust the process of creating a common look and feel of all MASELTOV services. Until the June 2013 the user

interface has been elaborated in three iterations starting from basic mock-ups ending up in the **final graphical user interface** (D2.5.1-D2.5.3). In between the design iterations the concepts and its updates have been evaluated in WP9.

- After the intensive requirements analysis that has been conducted in the first reporting period the focus of WP2 in the second project year laid on the **management and creation of the user interfaces** of the MASELTOV services. They have been created in an iterative process based on three rounds of feedback by experts and end users (see WP9). Towards the end of year 2, WP2 updated the **MASELTOV scenarios** and started the detailed planning of the affordability study.
- The specified **integration process** (see WP3) was executed several times and constantly improved. Based on this, it was possible to have the current development status integrated in one application – integrated MApp application. Additionally, all the structure and content of the information platform was defined. Furthermore, several technical concepts and prototypes were implemented. The services Navigation and POI were specified (interaction design and technical specification) and first versions were implemented.
- Definition of **technical scenarios and use cases**, organization of an international technical meeting in Torino (Italy) for the work towards the definition of system components, in particular the system interfaces (WP3). Continuous monitoring and contribution to the development of the system specification, and first steps toward the system integration into a common service platform and demonstrator prototypes.
- Development of a first system component, i.e., the **augmented reality based navigation** component for intuitive navigation service, development of a seminal component for test purposes. Conceptual outline of usability studies with development of completely **innovative human factors technologies** for the investigation of usability in the context of cultural diversity. Development beyond the state-of-the-art towards the implementation of the **mobile Text Lens** component (WP4).
- First conceptual outline of the mechanisms of the **recommendation engine** (WP5). Initiated discussion on the definition of a context recognition engine that maps towards recommendation for the personalized use of service components and the emergence of individually learning and development of migration expert styles (see Figure 2 (c)).
- First implementation of **information service** component (XWiki) and setup of a common portal dashboard design (WP6) (see Figure 2 (d)). Mobile assistance service set up in terms of identifying the functionality and the interfaces that will set up the complete MASELTOV service (MApp) portal. First concepts and prototype implementation of the innovative navigation service (WP6). The concept of the navigation service was evaluated within WP9 and the concept was further developed further in order to enable an easy usage and to ensure the very best user experience for the immigrants. Furthermore the interaction concept for the POI search service was created (WP6). First **integration runs** with the MASELTOV services were successfully carried out (WP6). Within the conducted runs, the technological concept for the integration was proven.
- First outline of the **incidental learning framework** (WP7). The framework is intended to help users of the framework produce adaptive services that take account of individual learner's characteristics and contexts. The framework is configured to be used by the partners implementing software and content within the MASELTOV

project. The framework should provide an indication of facilities that the MASELTOV system should provide.

- First conceptual outline of the **language learning in social networks** (WP8). Development of a **geo-social radar** component for the supportive application of volunteer services into the daily skill problem dimension. First version (MS3: June 2013) of GeoRadar service (WP 8.2) and Local Community Building services (WP 8.1: Social Network, Social Network Analysis & Sentiment Analysis) have been released.
- An evaluation plan for the **iterative user interface evaluations** has been created (D9.1.1). The first two iterations of evaluating the user interfaces took place. In D9.2.1 we reported the results of the expert reviews and in D9.2.2 the procedure and the results of the **first usability testing with immigrants** are described.
- Finalization of D10.4.2 “Exploitation strategy I” document containing a first collection of contributions and ideas for the **exploitation** of MASELTOV services. Meeting in Torino with WP10 partners for working on second issues of document and discussing open issues included in D10.4.2 to be solved and described in D10.4.3. Drafting “Exploitation Strategy II” document containing possible stakeholder’s in the exploitation of the MASELTOV application and potential business model to adopt.
- Project web site and dissemination via social networks implemented. First clustering activities including **DGEI clustering workshop in Brussels** (Belgium) including the development of a roadmap towards an international active DGEI (Digital Games for Empowerment and Inclusion) initiative (WP10). Organization of an international **workshop for stakeholders in the context of migration services in Rome** (December 2012). “Industry Day” deliverable (D10.4.1) has been released; it contains report from the International stakeholders’ workshop held in Rome (December 2012). “Exploitation strategy I” document (D10.4.2) has been released; it contains the definition of the MASELTOV services stakeholders, their potential role and some hints on potential actions in order to deliver MASELTOV services to users. Organization of the **First International Workshop on Intelligent Games for Empowerment and Inclusion** (IDGEI 2013) in Chania, Greece (see Figure 2 (a)), including the presentation of a MASELTOV article on the serious game aspects.
- With the creation of the first designs for the user interfaces the evaluation activities of WP9 started as well. The interface concepts have been evaluated three times: expert-based for rough mock-ups, first usability testing of low-fidelity prototypes with users, second usability-testing of high-fidelity prototypes with users. At the end of year 2 we started to plan the first field trials.

Published results:

- See Section 7.



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## 2. PROJECT OBJECTIVES FOR THE PERIOD

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### 2.1 DETAILED OVERALL PROJECT OBJECTIVES AND CONTINUOUSLY UPDATED STATE-OF-THE-ART

For the detailed description of the overall project objectives see the DoW and deliverable D1.1.2.

### 2.2 OBJECTIVES FOR THE REPORTING PERIOD, PERFORMED WORK, AND MAIN ACHIEVEMENTS – DETAILED REPORT

#### 2.2.1 SCIENTIFIC OBJECTIVES – GENERAL OVERVIEW

The activities during the third project period were aiming at several goals in parallel. Besides continuing to coordinate the activities for the convergence of work towards the goals of the predefined milestones (WP1),

the **scientific objectives** were to

- Extend the scientific investigation on the **mobile incidental learning framework** in the frame of progress indicators (WP7).
- Extend the state-of-the-art on **text detection** in the frame of the Text Lens service (WP4),
- Investigate **mobile navigation** from the viewpoint of cultural differences, based on the evaluation of **attentive processes** (WP4 & WP9)

the **technological objectives** were to

- **Finalize the system integration**, in two major iterations of user feedback (WP3 & WP9)
- Extend the range of mobile **contextual events** (WP4)
- **Finalize the Text Lens** implementation (WP4).
- Implement the full extent of the **Recommendation Engine to connect the ecology of services** with targeted logical condition-recommendation pairs (WP5)
- Provide **technological framework for mobile context sensing** using MApp (WP5)
- Finalise the Serious Game “Split” and provide a Google Play version for free download (WP7)
- Finalise the **Language Learning** service (WP7)
- Apply the **smartphone eye tracking toolbox** (SMET) for interaction analysis in mobile navigation (WP4 & WP9).
- Implement the **field trials and analyse the usage** from the mobile context sensing (WP9).

### 2.2.2 WORKPACKAGE OBJECTIVES – GENERAL OVERVIEW

As pointed out in Annex I,

- WP2 investigates the full potential of user requirements, determines the translation into use cases and service scenarios, and hence prepares the translation into the technical implementation.
- WP3 transforms the user defined scenarios into technical scenarios and the definition of a system architecture that finally leads into the outline of system component descriptions and detailed system specifications.
- WP4 takes the technical preparatory role in implementing a first kernel mobile service component in terms of the augmented reality based navigation service. Furthermore, innovation in the context of human factors is prepared in order to enable more profound investigations of learning progress and extract aspects of cultural diversity in the frame of the service. Finally, the Text Lens service is developed.
- WP5 basically implements the recommendation engine that connects the ecology of services for immigrants with a proposition service that targets at the immigrant's daily employment in necessary exercises and knowledge acquisition in its host country.
- WP6 provides basic information services that represent a fundamental kernel of the ecology of MASELTOV services.
- WP7 develops a general learning framework for the implementation of learning essentials in MApp, firstly among all the implementation of the serious game, and progressing a first important step in the development of a novel framework of incidental learning with respect to the language acquisition.
- WP8 prepares a concept for the language learning in social networks.
- WP9 is on evaluation of the mobile service components.
- WP10 brings up the important dissemination channels such as homepage, social media and an international workshop for stakeholders in ICT and migration.

More detailed descriptions of the objectives are given in the individual work package descriptions and in Annex I.

The performed work stands in general in direct relation to its objectives given I Annex I.

### 2.2.3 ACHIEVEMENTS OF THIRD YEAR - SUMMARY

The following overview presents the major milestones of the **third project period** and the corresponding major expected contributions, as follows

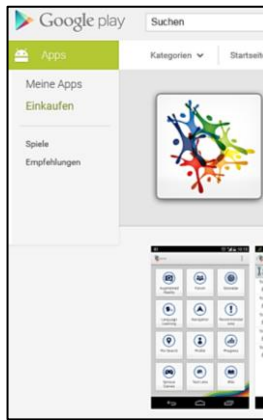
- Milestone MS5 (month 33): “Community Building Services”
  - Mobile assistance and information services
  - Local community building services
  - Geo-social network service final version
  - Health care service
- Milestone MS6 (month 36): “Field Trials and Evaluation”
  - International conference on ICT & migration
  - Finalisation of service components



Milestone MS5 was met in month 33, and presented a **fully integrated version of the mobile portal** and the updated information services, final versions of the **community building services**, including the geo-social network service, and also the selective consideration of health care relevant information in the language learning service. The work in the last year was characterised by fulfilling the requirements for a **2-step process of system development, integration and user driven evaluation**. Firstly, the system integration step as preparation for the first field trial was performed, followed by a user-driven evaluation. Secondly, the feedback from the users was informing another major iteration in system development, including an update and integration step, and consequently, the use of this app in the final field trials for evaluation. The **final field trials** took place in Graz (Austria), London and Milton Keynes (United Kingdom) with increasing maturity of the mobile integrated services. The app that had been applied to the positive evaluation at Milton Keynes was finally presented at the **International MASELTOV Conference** in London and was able to earn full respect of the expert audience.

To summarize the achievements, we have reached the following state within the **whole duration of the project (now as achieved within the third project period)**:

- Management of the project team: Organization of the Eighth (Madrid, Spain), Ninth (Prague, Czech Republic) and Tenth (London, United Kingdom) plenary meeting, management of two major contract amendments (amendment no. 2: replacement of language learning company, participation of PP; amendment no. 3: leave of FUN and UOC and transfer of tasks). Coordination of two major iteration steps in system development and user based evaluation. Collaboration in the preparation of the MASELTOV Conference in London (WP1).
- Requirement analysis in terms of Affordability Study: Perform a study about basic usage factors and related affordability aspects of mobile phones by immigrants. The study was conducted in Austria, Spain and United Kingdom, both via print and digital channels. The study represents an exploratory, cross-country, middle-scale quantitative analysis to determine whether immigrants would be able to afford the MASELTOV mobile application according to both demographic differences and external market factors (WP2).
- Final system specification and integration: Continuous monitoring and final contributions to the development of the system specification, next iterative steps toward the system integration into a common service platform and demonstrator prototypes. Two major system updates were coordinated: (i) preparation of the system update for the first field trials and, (ii) taking into consideration the user feedback into a final system update as preparation of the final field trials. Finally, a demonstrator (full version) and a version for free download from the Google Play app store were developed (WP3).
- Mobile application development and multisensory usability technologies: Implementation of further context awareness features for use of the recommendation engine. Application of innovative human factors technologies for the investigation of mobile interaction in the context of cultural diversity, in cooperation with WP9. Development beyond the state-of-the-art and service implementation of the mobile Text Lens component (WP4).
- Development of the final implementation of the recommendation engine including a substantial set of condition-action rules to connect MASELTOV services in a persuasive way. (WP5).



(a) Free MApp version for download from Google Play (left) and dashboard (right)



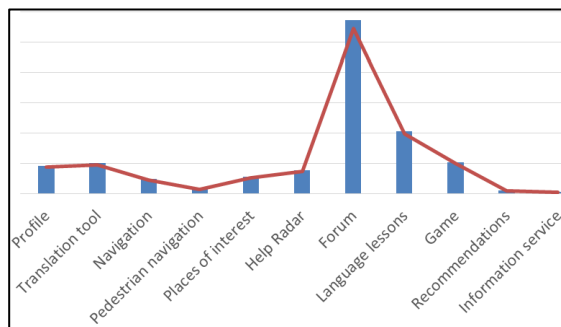
(b) Serious game



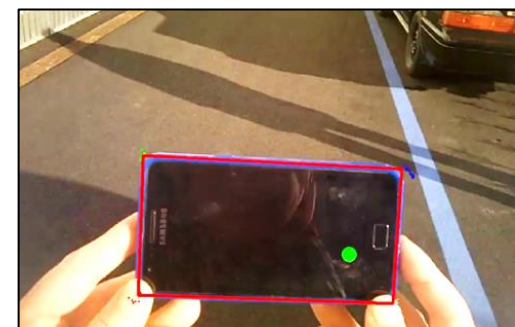
(c) Field Trial participants (Milton Keynes)



(d) MASELTOV Conference, London



(d) MApp usage times during field trial



(e) Eye tracking based evaluation of mobile interaction

**Figure 2.** Individual relevant progress indicators during the final reporting period (01/2014-03/2015). (a) Free version for download in Google Play app store and dashboard, indicating the suite of services. (b) Serious Game for the experience of cultural differences and social inclusion. (c) Field Trial participants (in Milton Keynes) who evaluated the MApp very positive. (d) MASELTOV Conference in London with international experts in mobile applications for immigrants. (e) Automated logging of usage time and activities during the final field trial which enables to derive quantitative analysis of mobile application usage. (f) Eye tracking based evaluation and automated annotation of attention processes of a mobile service component enables to understand cultural differences from human factors analysis.

- Implementation of information service component: Final implementation of information service component and of a common portal dashboard design. Mobile assistance service implemented in terms of identifying the functionality and the interfaces that will set up the complete MASELTOV service (MApp) portal. (WP6)
- Final implementation of the serious game for playful learning of cultural diversity. (WP7)
- Outline of the concept for progress indication within the incidental learning framework (WP7)
- Final implementation of Geo-social Radar service and Local Community Building services (i.e., forum), application of social network analysis in the field trials (WP8).
- The decisive two iterations of user feedback on the functional prototype within the field trials (first, final), evaluating the user interfaces. The field trials were realised at three locations, (i) Graz (Austria), (ii) London (United Kingdom) and (iii) Milton Keynes (United Kingdom) (WP9).
- Exploitation strategy issues have been designed in a final version and discussed at the MASELTOV conference (see below) in March 2015. Development of the DGEI clustering initiative's research roadmap (white paper). The Second (IDGEI 2014, Haifa, Israel) as well as the Third (IDGEI 2015, Atlanta, GA) International Workshop on Intelligent Games for Empowerment and Inclusion had been chaired by MASELTOV. Development of deliverable D10.3 with an outline of on-going efforts in the standardisation on the accessibility of interfaces, in particular, concerning mobility and learning aspects. Preparation of the International MASELTOV Conference in London and organisation of a complete conference session on the actual status of the MASELTOV project and its innovations (WP10).
- Integrated, consistent MApp application: Final integrated MApp application with mixed reality game concept - virtual coins are distributed for social inclusion activities. (WP6)

**Key scientific publications** within third project period:

- Lucas Paletta, Agnes Kukulska-Hulme, Ian Dunwell, Stephanie Schwarz and Sofoklis Efremidis (2014). MASELTOV – Empowering Recent Immigrants with Mixed Reality Gaming Using a Mobile Ecology of Services. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM.
- Kukulska-Hulme, A., Brasher, A., Gaved, M., Scanlon, E., Jones, A., Paletta, L. (2015) Mobile Incidental Learning to Support the Inclusion of Recent Immigrants, *The Technology Collection*, 2015, in print.
- Dunwell, I., Petridis, P., Lameris, P., Hendrix, M., Doukianou, S., and Gaved, M. (2015). Addressing Cultural Competency and Integration through a Serious Game: The Role of Narrative, Empowerment and Abstraction. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM
- Nemann, Lukas and Matas, Jiri (2014). Text Reading in the Wild - How to make it useful? Asian Conference on Computer Vision – *Proc. First International Workshop on Robust Reading*, Singapore, November 2014.

- Neumann, L., Busta, M., Matas, J. (2015). Efficient Scene Text Localization and Recognition with Local Character Refinement. *Proc. International Conference on Document Analysis and Recognition*, Gammarth, Tunisia, August 2015, submitted.
- Sabouret, N., Schuller, B., Paletta, L., Marchi, E., Jones, H., and Ben Youssef, Atif (2015), Intelligent User Interfaces in Digital Games for Empowerment and Inclusion: Experience from three EU projects, *Proc. 12th International ACE 2015*, November 2015, Malaysia, to be submitted.
- Paletta, L., Schuller, B., Robinson, P., and Sabouret, N. (2015). IDGEI 2015 – 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion; Proc. IUI Companion '15; *Proceedings of the Companion Publication of the 20th International Conference on Intelligent User Interfaces*; in print; Atlanta, GA, March 29, 2015. ACM.
- Schwarz, S., Bobeth, J., Tscheligi, M., Schwarz, M. and Paletta, L. (2015), Culture Affects Wayfinding Styles: Attention and Preference in Navigation, *Proc. International Conference on Multimodal Interfaces*, ICMI 2015, to be submitted.

## 2.3 RECOMMENDATIONS FROM SECOND REVIEW (2014) AND SOLUTIONS

### Recommendation 1

D1.1.4, Periodic Annual Progress Report and Management Summary was rejected. It should have been resubmitted and be “fit for purpose”. It needed to report transparently on the year’s activities from January to December 2013 and the perceived implications for the final period.

The report should include the following:

- (a) A detailed appraisal of the impact of the change of language partner. This appraisal should include: budgetary changes including sub-contracting and reallocations in terms of both finance and personnel; deviations in both content and timing of work packages; justification concerning services that will not be fully implemented (if any); details concerning what contribution the new partner (PP) has made during the second period.
- (b) A detailed explanation and justification of the deviations in the use of resources. These need to be transparent. A summative table should be included for each workpackage and overall. Any reallocation of resources both in year 2 and year 3 should be identified and justified. Overspend for FLU (by 17% in person months) should be justified. See also Sec. 2b for other details.
- (c) A detailed appraisal of the overall project plan and whether good quality deliverables can be achieved in the remaining time. Rescheduling of some deliverables could be considered. The Consortium may wish to consider negotiating a brief extension with the Commission. A 3-month project extension is suggested to facilitate more in-depth tools evaluation if the Commission also accepts such an amendment.
- (d) An explanation in the form of an appendix of how the Consortium intend to deal with the potential for the exploitation of vulnerable groups when using some of the Maseltov Services, such as Georadar.
- (e) D9.1.2. - During the review, it was stated that the focus of the evaluation concerns users’ perception and that certain components such as those on the backend of the system (eg the Sentiment Analysis module) are not to be evaluated in this deliverable. Please state this clearly in the relevant section of the Management report.



- (f) There continues to be serious concern about the research. Targeting of the user group in studies to date is not satisfactory (D9.2.2 and D9.2.3). There is a serious risk that the final Maseltov Services will not be fit for purpose. A contingency plan is required to ensure that the correct group is targeted in the field trials. It should indicate how the Consortium plan to resource and manage further trials should it be unable to adequately reflect the target group in the planned trials. Furthermore, it needs to consider how it will resource potential changes to Maseltov services that might arise through the deficiencies of the earlier trials. This needs to be addressed before commencement of trials. Timing of trials may need to be adjusted accordingly. This needs to be addressed in the form of an appendix.
- (g) Dissemination and exploitation needs to be reconsidered in the light of the replacement of the Language partner. It appears that different strengths and opportunities will be added to the Consortium whilst other methods of dissemination, such as the BUSUU network, will no longer be available. This needs to be addressed in the form of an appendix.
- (h) A statement needs to be added to the Management report clarifying the status of IPR and the previous language partner, BUSUU.
- (i) Augmented reality and image annotation mentioned in DoW have not been considered" in 4.1.2. This should be addressed in the appropriate section of the revised Management Report.

### ***Solution for Recommendation 1***

All details were handled with the updated version of D1.1.4 that was finally submitted on the 27.08.2014. Deviations in the project and how they were handled were described and all necessary financial detail provided.

- (a) Section 6.4.1 (Change of Partners) was revised and an Appendix (Description of work done by BUS and work left to be performed by PP) added in order to give a detailed appraisal of the impact of the change of language partner. This includes budgetary changes, deviations in both content and timing of work packages, description of services that will not be implemented as promised in the DoW.
- (b) For the newly added section "Overspending and underspending of resources" all deviations from the planned budget were discussed with the related partners and the critical ones also agreed on with the financial officer. Descriptions of these agreements are also added the management section.
- (c) The planned extension of the project for 3 months was added to Section 8.2 (Impact of Possible Deviations from the Planned Milestones and Deliverables). An according rescheduling of the deliverables was implemented with the approval of the whole consortium. This additional time will ensure a high quality of the field trials and a clear benefit for the target group.
- (d) An ethics code of practice was developed and added as an appendix. With this procedure and the implementation of several security aspects in the MApp it is ensured that vulnerable groups cannot be exploited in any negative way.
- (e) An explanation where the asked for evaluation of backend components can be found was added to Section 5.9.1 (WP9: Objectives)
- (f) An overview of the planned field trials with regard to the changed circumstances was presented as an appendix (Target Group for Field Trials). It follows an explanation how it can be guaranteed that the target group is met with the outcome of the project. Finally the timing of the trials based on the project extension of 3 months is adapted.

- (g) Changes between the business model of BUS and the one of PP and the resulting influence on the projects exploitation plan are depicted in an Appendix (Adaption of dissemination and exploitation needs).
- (h) A rough description of IPR was given in the DoW already. Details were regulated in the CA. The corresponding sections were copied to D1.1.4 into the subsection 6.4.1.3 (Impact on the Project: Status of IPR and the Previous Language Partner).
- (i) An explanation that the augmented reality and image annotation was already handled in D4.1.1 was added to Section 5.4.2 (WP4: Progress).

### **Recommendation 2**

Although social network and sentiment analysis (D8.1.1) are potentially valuable system components, the potential for continuation of this work following the exit of the principle partner involved (BUSU) should be reconsidered since the main social data provider is not involved any more. According to the evaluation and exploitation plan no significant social or opinion data will be collected to make any analysis feasible. A decision needs to be communicated in the Management Report and reflected in the reallocation of resources if appropriate. If the work on SNA and sentiment analysis is continued, the clear relevance to the main MASELTOV objectives should be provided.

### **Solution for Recommendation 2**

In the updated version of D1.1.4 several paragraphs on this topic were added. On the one hand there was presented a table to show left over work for the new partner and on the other hand competencies of the new partner were pointed out. Deviations between the two language partners are mentioned and adapted accordingly in the DoW as well. These changes of content and dissemination possibilities were already considered during the distribution of PMs for the new partner PP. This decision was presented in detail in Section 6.4.1 (Change of Partners).

### **Recommendation 3**

Deliverables submitted from Workpackage 5 are not convincing. Detail is lacking and reporting poor. Deliverables 5.1 and 5.2 should be extended, revised and resubmitted within two months.

### **Solution for Recommendation 3**

Deliverables D5.1 and D5.2 were completely overworked providing a lot of details and presenting the results in a more convincing way. The documents were finalized on the 07.08.2015.

### **Recommendation 4**

The Bureaucratic Advisor Service (D6.2) is simplistic and does not cover the functionality described in DoW. Deliverable 6.2 should be extended, revised and resubmitted within two months.

### **Solution for Recommendation 4:**

Deliverable D6.2 was improved by focusing the content on the DoW in order to show that planned content and work done coincide. The new version was finalized on the 29.07.2015.

### **Recommendation 5**

Deliverable 4.3.2 Mobile Text Detection and Recognition is poorly presented. It needs to be restructured and represented within two months.

***Solution for Recommendation 5***

The new document D4.3.2 was submitted on the 28.07.2014 where the desired restructuring was performed and results were represented more clearly.

***Recommendation 6***

D6.2 (Bureaucratic Advisor Service) and D6.4.1, (Health Care Services) should be resubmitted. These documents lack a sense of purpose and would benefit from some restructuring and the removal of extraneous descriptive text and referencing.

***Solution for Recommendation 6***

The text of D6.2 and D6.4.1 was rewritten and newly structured in order to show the real purpose of this work. In order to keep the documents consistent, parts of the text were extracted and are newly presented as an appendix.

***Recommendation 7***

The table submitted by the Consortium for consideration following the review should be submitted as an integral part of the revised Management Report (R1) as part of their overall review of the allocation of resources in year 3.

***Solution for Recommendation 1***

Remaining Resources for the final period of the project were stated more clearly. That is, tables were added that show in detail planned PMs, already spent PMs and the left over effort for the final period. These details were given in the individual WP descriptions but also as general overview in the Consortium Management Section (Subsection 6.4.3, Overspending and Underspending of Resources).

***Other concerns***

- (a) No coherent explanation is given as to why the target group is not consistent over deliverables.
- (b) This report is intended to summarize project progress in Period 2. Instead, it restates all the activity of the entire 2 years at some length. This makes it difficult to understand the real achievements of Period 2. The difficulties that have arisen and how they have been resolved are given scant attention.
- (c) The report clarifies that the Arabic group will not be addressed in the language applications although the DOW states that MASELTOV will primarily concentrate on immigrants of Arab mother tongue (p.63).

***Solution to other concerns:***

- (i) Section 6 (Management Section) was enlarged by a section about Consistency of Target Group Definition and Reference where a description how the continuing inattention on the critical definition of the target group will be emphasized in period three to ensure the awareness of all partners on this topic is provided.
- (ii) Section 2 (Executive Summary) was shortened and newly focused. Section 3 (Project Objectives) was revised and Sections 5 (Progress of the period) and 6 (Consortium Management) were extended such that the description of results from period 1 is shortened and the progress of period 2 is given more emphasis (achievements are depicted more clearly). Difficulties encountered and how they were handled were described in detail.
- (iii) In Section 3.3.2 (Translation of User Interface Content) an explaining paragraph was inserted that the change regarding services that will be available in Arabic is already part of the currently pending Amendment.

## 2.4 RECOMMENDATIONS FROM THE FINAL REVIEW (2015) AND SOLUTIONS

### Recommendation 1

Deliverables D1.1.5, D2.2.2, D3.3.3, D5.3, D5.4.2, D6.1.2, D6.3.2, D6.4.2, D7.4.2, D7.5.2, D8.1.2, D8.2.2, D8.3.2, D9.1.3, D10.2.3, D10.4.4 are accepted

Deliverables D1.1.6, D9.3, D9.4, D10.3 are rejected

### Solution for Recommendation 1

Deliverables **D1.1.6, D9.3, D9.4, D10.3** are submitted as revised versions, details see below, as follows:

- *D1.1.6: see details in Solutions for Recommendation 2,*
- *D9.3, D9.4: see details in Solutions for Recommendation 3,*
- *D10.3: see details in Solutions for Recommendation 4.*

In addition,

- *D1.6, the deliverable which was “accepted with caveat” by the reviewers is submitted as well as revised version.*
- *D10.2.3 was updated as well with the camera ready version of the publication of the white paper report has been accepted for presentation at ACE 2015 conference.*

### Recommendation 2

The management report is rejected and should be resubmitted to include the following:

- (i) A section describing the contribution of Maseltov to State of the Art and Innovation. Although this is alluded to in the report, it needs further detail and a clear statement so that there is no doubt about the contribution of Maseltov (see second year review).
- (ii) Data is missing from the Management report and from a number of deliverables (eg: D7.4.2, and D8.3.2) concerning the final three months of the project (M37-39). Full reporting on final 3 months of Maseltov in all respects in all relevant deliverables as appropriate is required.
- (iii) D1.6 needs to be strengthened. A paragraph needs to be added to the Management report with a clear statement concerning the requirements for facilitators and volunteers to have adequate checks in place to ensure the safeguarding of vulnerable groups (eg EDBS clearance in the UK).
- (iv) Missing data for the final 3 months of the project (M36-39) should be provided.
- (v) Relevant sections of the report should address the matter of the participant group who do not meet the criteria set out in the DoW. (See Recommendation 3 below).

Additionally, errors of repetition (cut and paste), missing references etc. should be rectified.

### Solution for Recommendation 2

D1.1.6 (identical with the management report that is submitted with NEF) worked on the feedback of the reviewers along the following lines:

- (i) The [contribution of MASELTOV to State of the Art and Innovation](#) is described in **Section 6**.
- (ii) Partners COV (responsible for D7.4.2) and PP (responsible for D8.3.2) **responded to the inquiry about missing data** concerning the final three months of the project (M37-39) in Section 2.6.2.



- (iii) Firstly, **D1.6 has been revised** along the recommendations of the reviewers: a paragraph has been added (“Section 3.5 Facilitator and volunteer involvement”) with a clear statement concerning the requirements for facilitators and volunteers and about how the checks took place to ensure the safeguarding of vulnerable groups. Secondly, this paragraph has been added to the management report (i.e., D1.1.6, this document) in terms of **Section 2.5**, “Facilitator and volunteer involvement”, in order to clarify these facts for all readers of the final report as well.
- (iv) **Missing data** for the final 3 months of the project (M36-39) **were provided** wherever necessary: (a) in the use of person months (PM) resources within the chapter of each work package (for example, in Table 2 for WP1), (b) in the use of person months (PM) resources for the complete project: planned resources in Table 22, reported use of resources for the complete project (M1-M39) in Table 23, reported use of resources for the final reporting period (PP3; M25-M39) in Table 24, and reported over- and underspending for the complete project in Table 25.
- (v) A relevant section in the report addresses the [matter of the participant group](#) who do not meet the criteria set out in the DoW, as described in **Section 2.6** in D1.1.6.

### **Recommendation 3**

Serious questions remain about the validity of the field trials given both the size of the sample and the un-representative target group. It is fully recognised that challenges existed in this domain, however the associated reporting (D9.3 and D9.4) needs to be re-submitted so as to clearly account for the challenges encountered. There needs to be a thorough explanation with regard to how project objectives are met given that participants in the trials detailed are not consistent with the DoW. If necessary, findings and conclusions will need to be revisited and revised on ALL relevant deliverables to ensure findings and conclusions accurately reflect the characteristics of participants in the field trials, specifically: age; gender, education and time spent in the host country.

### **Solution for Recommendation 3**

In the revised **Deliverable D9.3** - which describes the first and more experimental stage of the field trials - we added an Appendix (9.1) containing the explanation of target groups refinements done in the project with reference to corresponding reports, justification for finally involved study participants, implications of sample characteristics for further project progress. References in Introduction and conclusion have been added. In the revised **Deliverable D9.4** - which describes the second and fully evaluative stage of the field trials – we added Section 2.3.1 “Demographics”, a detailed description of the Graz and London samples, including clarifications in case of mismatch; Sections 3.2.2.1, 3.2.2.2 and 3.2.2.3 have been added for clarification of the user group of the Milton Keynes (MK) Trial and accordant implications; Finally, Section 4 “General Discussion” has been restructured and revised, it now contains an extra description with respect to each user group.

### **Recommendation 4**

Deliverable D10.3 Standardisation is confusing and does not address the expectations of the DoW. It needs to be properly aligned with the DoW and resubmitted.

### **Solution for Recommendation 4**

The MASELTOV consortium consulted the **National Standards Body (NSB) in Austria**, the Austrian Standards Institute in Vienna. ASI is founding member of CEN (European Committee for Standardization) and ISO (International Organization for Standardization) in Vienna, Austria, who is expert in all aspects of standardization on a European level and

consulting European research projects integrating knowledge on access to national, European and international standards as well as to support an appropriate match to innovation procedures. In particular, ASI is a center for providing services of standardization in Austria and provides access to national, European and international standardization. ASI itself does not work on standardization but it provides consulting by advising the specific technical committees. The ASI kindly agreed to provide major consulting to the issues of MASELTOV in the frame of standardization. The scope of Committee 001 is the development of standards for information technology to improve the efficiency and quality of IT systems, to increase the security of IT systems and data, to support portability of application programs and to ensure the interoperability of IT products and systems and to harmonize development environments. With the support of ASI, **Deliverable D10.3** was completely re-structured:

Firstly, the report now **addresses all standards**, norming requirements and actual standardization endeavors that are **relevant to the specific aspect of the MASELTOV project**, i.e., the specific requirements of the recent immigrant user group.

Secondly, the report includes now **concrete considerations towards a new standard** of privacy, in the context of the most vulnerable user group of recent immigrants.

Thirdly, based on the efforts made in the Task and due to the successful contact with the ASI, the ASI offered to consult the national Committee on Information technology (ASI K-001), a Committee that mirrors standardization in the field of IT and in which the content and results are presented to and discussed by nominated experts. A potential result of that procedure that still is in operation could be a **first step towards the generation of a national standard** (in Austria called ÖNORM) with the working title “Requirements on web applications for the social inclusion of recent immigrants” - or even focused on the target user group of refugees, following the most recent developments in Central and Southeastern Europe. As a second step, this national standard **could provide the basis for a CEN or ISO project application** in order to create a CEN or ISO standard. All these steps are described in the Deliverable in more detail.

Furthermore, MASELTOV has set up a Table (Table 1 in revised D10.3) that matches the requirements in the DoW with the contributions made in the revised D10.3, in order to **address the expectations of the DoW** in detail.

## 2.5 FACILITATOR AND VOLUNTEER INVOLVEMENT IN THE FIELD STUDIES

To be able to communicate with immigrants having different mother tongues i.e. Turkish, Spanish and Arabic a network of local supporters and volunteers with according language skills had to be built up in the test cities i.e.

- Graz, London and Madrid in the first field trials (T9.3)
- Graz, London, and Milton Keynes in the final field trials (T9.4)

As direct communication was not possible due to the language barrier each cultural group was supported by a facilitator who acted as a liaison officer between the leading researchers at ATE and recruitment coordinators at NGOs. As for the evaluation of the Help Radar service under real world conditions, in addition two volunteers were acquired for the first field trial (T9.3). Both facilitators and volunteers were introduced in using the MApp services. They were instructed by ATE and NGOs about the purpose and functionality of each service to

make sure that they would be able to provide support to participants in case of problems at any moment of the field phase.

For the realisation of the final field trials (T9.4), again the involvement of additional key personnel was necessary, as stated in detail in Deliverable D1.6, Section 3.1. One facilitator and two to three volunteers per user group were involved. Facilitators and volunteers were recruited to conduct the workshops and the field phase in the language of the participants, as well as to act as volunteers and support givers during the field phase. D9.1.3 contains the overview of the main tasks and responsibilities of the involved personnel in more detail.

**Table 1. MASELTOV initial and refined target group criteria**

	Original target group definition (DoW, Part B, page 7)	Final target group definition as reported in D2.3.2, page 7.
Nationalities	Immigrants from North Africa (Moroccan, Algerian) of Arab mother tongue and Turkish immigrants; Immigrants from Latin America and South Asia are considered interesting target groups with respect to local community building and cultural understanding.	Third Country Nationals (i.e. with non-EU nationality) having Arabic, Turkish or Spanish as maternal language
Age	Specifically young immigrants (<25 years of age) who are in danger of social exclusion by cultural hyper-ghettoisation	Between 18 and 60 years old, in order to enable the project to evaluate if older immigrants will also benefit from the MASELTOV services (as they might face similar barriers as the younger immigrants population).
Length of stay	Newly arrived immigrants in the European Union	up to 5 years in the host country (i.e. not limited to newly arrived immigrants but still to distinguish from second generation immigrants)
Education	Low education with cases of functionally illiterate / digitally illiterate	Rather low education by excluding illiterates as they are out of scope of the three NGOs (for many self-initiated integration processes a certain level of education is required)
Gender	Focus on female immigrants, such as where wives join their husbands in the new country and are in danger of social exclusion due to missing friends, lacking a job, and not speaking the language of the host country.	No focus on female immigrants (DAN with female immigrants as main target group is striving for a cooperation with another NGO to acquire male participants for the user evaluation studies to be conducted in Austria).

The selection of the personnel was done by local NGOs in collaboration with scientific partners in Austria and United Kingdom. A description on the selection procedures for the volunteer involvement is provided in the Section 3.5 in the D1.6 (Final Strategy on Ethic Issues) report. Details are given from the part of each NGO involved in participant and volunteer acquisition.

## **2.6 PARTICIPANT GROUPS IN THE FIELD TRIALS AND CRITERIA OF DOW**

Three user groups originating from various completely different cultural areas were targeted in the project. High heterogeneity within these groups due to the immense diversity (demography, individual migration history, personality) had to be addressed in the most possible pragmatic way in order to attain the maximum meaningful progress in the project.

Although results from project activities might not be regarded as being valid for every kind of immigrants (e.g. male Turkish immigrants, different age groups), qualitative findings from participants with a wide range of characteristics provided valuable insights regarding functional and affective aspects of the interactions with the MASELTOV prototypes. Aspects regarding the design had been tested in earlier phases (T9.2). The fact that the first integrated system was evaluated with the involved participants is not in conflict with the general aim of this task (T9.3), i.e. to evaluate the functionality of the first integrated system and selected services. More details of the participants and how they relate to the user groups specified in the Description of Work are presented the Appendix Section of the D9.3 First Field Trials report, containing a reflection on the coincidences and mismatches between the MASELTOV User Group Definition and the final study sample in the first field trials.

Similarly the report D9.4 Evaluation of the final Prototype was revised by adding a detailed argumentation for the actually involved study sample in the final field trials (T9.4) accomplished by an elaborated reflection on the gathered results with respect to impact and generalisability toward and beyond the MASELTOV target groups.

### **2.6.1 MASELTOV USER GROUP DEFINITION**

Considering immigrants as a highly heterogeneous group, MASELTOV had to define concrete target groups in order to develop concrete requirements, to design accordant user interfaces and to evaluate them with specific end users. Based on the initial objectives for user involvement in the MASELTOV project, target groups had been defined in the Description of Work (DoW). These characteristics comprised mother tongue, age, gender, length of stay in the EU and education level (see Table 1).

Early in the project the consortium faced difficulties to find and invite people matching the target group definition as formulated in the DoW. Due to the ambitious amount of target groups and recruitment criteria the involved NGOs stressed that not all criteria could be met when recruiting participants for user involving activities. Further the recommendations from the first year review Meeting held on 21<sup>st</sup> of March 2013 in Luxembourg (review report page 6, recommendation 1a) stated:

*“Immigrants and Migrants represent different and very broad racial and cultural groups. There is a lack of clarity within the Consortium concerning which group and sub groups they are targeting in terms of age, gender, background, level of education and time in host country. The consortium should clearly identify which group(s) they are targeting”.*

As a consequence the Consortium decided to concretize the target group definition and adapt some of the criteria in order to agree on the target group characteristics as well as to support further User Centred Design activities in the remaining duration of the project. Explanations

regarding the refinement of the target group characteristics - as listed in Table 1 - were presented in the report D2.3.2 Use Cases and Service Scenarios in December 2013, which was accepted in the course of the second year review in March 2014.

For example excluding illiteracy (see Table 1) as a target group criteria facilitated the trials activities twofold. Illiterate immigrants would have needed different kinds of support during study recruiting and conduction phase (i.e. support to understand study purpose and provided materials by NGOs (textual easy to read information sheets) and researchers (interrogation instruments such as diaries and questionnaires), which would have needed to be adapted for all groups.

For the detailed explanations regarding the adaptation of the target group characteristics the reader is referred to the D2.3.2 report.

## **2.6.2 RESPONSE TO RECOMMENDATION 2 (II)**

### **(a) Missing data in the frame of D7.4.2**

This task primarily covers the creation of the serious game, and accompanying documentation of the concept, design, and implementation in D7.4.2. Reviewers felt that data was missing from D7.4.2 concerning the final three months of the extended project.

It should be noted that D7.4.2 was produced on time and submitted to the commission prior to M37, therefore material on the final three months was not included in the deliverable as it was already with the commission. Minimal person time was claimed by COV in M37-39, principally to cover attendance at the MASELTOV conference in London, and final review meeting in Brussels. However, COV did undertake additional work relevant to the task in the process of supporting exploitation by uploading the game to Google Play. A summary of this person-effort and impact on D7.4.2 is provided below.

Prior to uploading the game in M37, an optimisation pass was conducted, taking into account usability and user experience feedback from the final field trials. Many UI elements were adjusted to streamline interaction, and scripts for the English version refined and adapted (in lieu of additional person time being available for a second localisation pass after the field trials). An Google Play store presence was created and the game provided for review in order for its suitability and age rating to be assessed. This required supplementary documentation alongside the built APK. The game was retitled "Split" to avoid any future naming conflicts with the MApp. It retains functionality as an integrated component if the user has the MApp installed, but can also be played separately; this was necessary to avoid access to the game being restricted by components which could not be immediately exploited, such as the forums (due to the ongoing costs of moderation and safety concerns in its absence) The game was accepted for inclusion on Google Play as a free-to-play game following review and can be found at <https://play.google.com/store/apps/details?id=com.sgi.maseltov>. Following its upload, COV promoted usage via events, including internal University events such as the SGI's "Second Wednesday" event series and seminars, and through attendance on related projects at IMCL2014 (Thessaloniki, Greece), and VS-Games 2014 (Malta) resulting in 100+ downloads. The game has 8 player reviews giving the game an average ranking of 4.5/5\*.

In terms of direct impact on D7.4.2, the overall game design remains consistent with the delivered report. Similarly, the characters used and their portraits have not been modified, though as noted above some adjustments to dialogues in the English version were made to accommodate feedback from the final field trials. As the deliverable is not specified to include field trial results, these remain in an independent deliverable submitted after the delivery of



D7.4.2. However, some points can be reached from user feedback via Google Play that relate to the validation of the design and implementation: notably that tablet support requires further investment in exploitation, as the game was designed for deployment on immigrant's smartphones, whilst a wider Google Play audience has downloaded the game with both tablets and smartphones. On the one hand it is encouraging that a user played sufficiently far to experience (and was frustrated by) the scaling issue; on the other hand wider support for devices should be a consideration for future work that seeks to maximise potential reach. In terms of impact on D7.4.2, were the deliverable due following this exploitation action, some affordance would be given to the need to design a UI suitable for both smaller and larger screens, though this has an obvious impact on resource requirements.

**(a) Missing data in the frame of D8.3.2 (statement by PP)**

Reviewers recommend that data was missing for Task 8.3 concerning M37-39. It should be noted that Deliverables 8.3.2 and 8.3.3 for this Task were submitted on schedule prior to M37. They fully describe how the objectives of the task were met but obviously do not include information relating to the final quarter.

To clarify activity in the final quarter, no further work was carried out by PP during M37-39 in relation to Task 8.3. Only 0.05PM was spent on attending a Plenary meeting and the final review meeting.

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### **3. WORK PROGRESS AND ACHIEVEMENTS DURING THE PERIOD - ORGANISATIONS**

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**JR:** JR was occupied with the coordination, i.e., in the scientific, technical and also administrative aspects of the project management. Key management operations included the processing and finalization of contract amendments: amendment no.2 replacing participants BUS/BUS\_UK by participant PP, and amendment no. 3 for transferring remaining work load from leaving participants FUN and UOC to other participants (such as, ATE, JR, and MRC), as well as changing partner CUR into partner AIT (just switched to another research center in total). Additional activities of the management team were to assist and organize the 7<sup>th</sup> (Vienna, February 2014), 8<sup>th</sup> (Madrid, May 2014), 9<sup>th</sup> (Prague, September 2014) and 10<sup>th</sup> (London, March 2015) plenary meeting. Furthermore, the coordination team had to support and overview the management of the International MASELTOV Conference (London, March 2015) as well as to prepare and to chair the scientific workshops IDGEI 2014 (Haifa, Israel; February 2014) and IDGEI 2015 (Atlanta, GA; March 2015) as satellite workshops of the ACM International Conference on Intelligent User Interfaces. In WP2, JR has been employed in the provision of a fully laid out statistical analysis of the affordability study. As a leader of WP3, JR has continuously and intensively been employed in the system integration processes, with major operations being the preparation of the system into a working demonstrator prototype before the first field trials (April/May 2014) as well as leading the complete system wrap-up on the basis of the user feedback on the first field trial, in preparation of the final field trials that came into operations in October-December 2014. Finally, an additional integration step had been launched in order to prepare the Milton Keynes trials in January 2015. Eventually, a free version was integrated and installed for free download in the Google Play app store. Furthermore, the development of the mobile assistant (WP6) as well as the development of the geo-contextual services (WP4) were finalised. The study on the mobile navigation service on cultural differences between Austrian local and Turkish immigrant persons was extensively investigated and reported in cooperation with WP9, especially partner ATE. Finally, JR was contributing to the dissemination and the exploitation work in

WP10, in the frame of the IDGEI 2014 and IDGEI 2015 workshops, as well as in setting up the MASELTOV Conference in London, and finally, publishing at several prestigious conferences (ETRA 2014, CHI 2014, etc.). Work on the standardization, dissemination, training and exploitation led to contributions to several WP10 deliverables.

**(CUR till 03/2014) ATE** (from 04/2014): ATE has led the user involving activities conducted in WP2 (User Requirements and Interaction design) and WP9 (Evaluation and Trials) based on a user-centered design process. It is a methodology to guide designers and developers through the software development process with the goal to make applications that meet the needs of their users. The idea is to involve users from the start of a project by researching their needs and presenting them concepts and designs frequently instead just at the end. Thus, the information architecture, interaction concept and graphical layout are based on feedback of users. After the finalization of the iterative designs (D2.5.1-D2.5.2) and further improvements based on the feedback from iterative evaluations in the lab (D9.2.1-D9.2.3), the first integrated system was evaluated with all target groups in the field. In collaboration with NGOs and the scientific partner UOC, ATE's activities focused on the planning, conduction and reporting of the first field trials in UK, Spain and Austria (D9.3). After final improvements of the prototypes final field trials were planned and conducted by ATE in collaboration with NGOs DAN and MRC in Graz (AT) and London (UK), as well as by OU in Milton Keynes (UK) (D9.4). Final field trials involved immigrants from Arabic and Latin American countries in London (UK), Immigrants from Latin American countries in Milton Keynes (UK) as well as Turkish immigrants in Graz (AT).

**AIT:** AIT has led the activities of WP5 and also participated in the integration and reporting tasks. In particular, AIT has defined the overall architecture of the User Profile and the Recommender system and their interfaces to other MApp components. Moreover, the designs of these two components have been finalized and a prototype implementation has been completed and integrated to the MASELTOV platform. Both prototypes are multilingual, supporting five languages. In addition to the development of these two components, WP5 foresees the collection of the user context for personalizing recommendations and other services. AIT has defined the concept of event for capturing the user context, which includes user location, activities, usage statistics and progress. Events have been systematically listed and categorized. A number of sensors are responsible for generating events that are sent to the User Profile for further logging and processing. As part of the work that has been carried out in WP5, the various events that are communicated by other MApp applications to the User Profile have been defined and classified. In addition to events that carry the user context by monitoring the user location and activities, usage statistics and progress indicators are collected for further processing that aims at providing feedback to the user regarding the relative use of MApp applications and how much they have progressed towards learning and social inclusion targets. Moreover, work in WP5 has focused on privacy and security issues. For instance, for privacy purposes users are given the option to control the contextual information that is collected by the User Profile. In addition, users are provided with statements related to the handling of private information, e.g., the use of the collected contextual information. The security between the client Android application and the back end server has been strengthened making impossible the eavesdropping and stealing personal data that are communicated over the network. Finally, AIT has spent some effort to support the project's trials. In particular, a reporting tool has been developed for scanning the back end database where user profile and contextual information is stored and generating reports in a human readable form for further analysis.

**UOC:** After conducting intense fieldwork with recently arrived Spanish-speaking immigrants in London in the second semester of 2013, UOC dedicated to analyse the data collected in

order to produce the first drafts of Deliverable 2.2.2 on Social and Cultural Needs. This document also includes the results of the affordability study, an exploratory quantitative analysis of whether immigrants count on the technological requirements to run the MApp. The study was the result of joint efforts between various partners in the MASELTOV Consortium. UOC participated in the design of the survey, its translation in Spanish/English and the elaboration of the final report. During this period, UOC also contributed with various dissemination activities, presenting preliminary and more final results of its qualitative research at several international conferences. Finally, regarding its role as ethical advisor, UOC elaborated a draft document with suggestions to include a User Code of Practice that covered various concerns on the protection of vulnerable users and promoted a responsible and respectful behaviour among potential users. UOC left the consortium end of October 2014.

**OU:** Effort was focused on using the Incidental Learning Framework (D7.1.1 & D7.1.2) to ensure that Feedback and Progress Indicators (D7.2) were integrated with the final system architecture, i.e. MApp (WP3). Two documents concerning EU regulation on privacy, security and trust were produced and included in D5.3. (WP5). As part of our role as WP7 Lead Partner we assisted with the recruitment and induction of PP, the partner organisation who replaced busuu.com at the start of Year 3. Good progress was made with the joint development of language learning lessons between the OU and PP, and the final WP7 deliverable was submitted on schedule. Less effort than anticipated has been spent on WP8. In WP8, the new Task 8.3 Lead (PP) was advised by Year 2 Reviewers to focus effort on Task 7.5, and as a result, less OU effort than anticipated was undertaken on D8.3.2. An effort re-allocation request to compensate for this change is in Amendment No.3. Up until M33 the OU's research efforts were spread widely across WP2, WP3, WP5, WP7, WP8, WP9 and WP10. Our contribution to discussions and preparation of the final field trials in London, fulfilling tasks as requested by ATE (WP9 and D9.3/4 Task Lead) informed the Milton Keynes (UK) Field Trial which was the focus of OU effort since M33. The emphasis of this trial was to investigate user experiences of the MApp for language and cultural learning, and a report on the trial can be found in D9.4 Section 3. In WP2 contributions have been made to discussions on interaction concepts. We quality reviewed D10.4.3 and D10.4.4 for TI. The OU has also attended the 2<sup>nd</sup> Year Review Meeting, all Plenaries, and we have been regular contributors to MASELTOV-All Skype meetings and other Skype meetings called by Work Package leaders as appropriate. Details of OU dissemination activities in Year, can be found in the WP10 dissemination log; these include a number of academic publications and conference presentations.

**COV** has completed T7.3 and T7.4, delivering a serious game for cultural awareness and learning. As documented in D7.3 and D7.4.2, this game focuses on the application of playful and persuasive cultural learning, though interactions between player and virtual characters. Moreover, the environment is designed to allow for exploration of cultural themes under a framework for empowerment, abstraction, experience, and narrative. COV has also led the implementation of a currency-based reward system within the MASELTOV platform, which, though a central value in the user profile, allows coins to be earned by using services, and rewarded through the game. In order to engage the user, effort has been spent on the visual aesthetic of the game, as well as its functionality, creating a 3D virtual world within the mobile platform. Work up to M33 therefore ranged from the creation of 2D and 3D content, to animation, and scripted behaviours for objects and characters within the game. Working with Turkish and Spanish native-speakers, the dialogues were completed in 3 languages applying an understanding from native speakers of their respective cultures to inform the design. Integrating the game into the MApp dashboard and user profile, COV have



also contributed to WP3, integrating the currency system within the game, and WP8. From M33 onwards, COV has finalised a version of the game made publicly available on Google Play, providing debugging and support to end-users. They also co-organised the final MASELTOV conference and plenary in partnership with OU, presenting the developed game to a wide audience of experts and practitioners. Making the game available on Google Play also involved reverse-engineering several integrated components and features to ensure the game is capable of functioning in both integrated and standalone versions, with a view towards reaching immigrants who may find it as a game, and transitioning them to using wider MApp services when these are publicly available.

**CTU:** CTU has spent nearly all its effort on improving the performance of the Text Lens (WP4, Task 4.3) and adding additional functionalities and improvements to the User Interface, as per initial feedback of MASELTOV partners and results from the early field trials. The OCR accuracy was further improved, by using more advanced metrics for classification, by clustering similar fonts together and by adding more supported characters and fonts. The user interface was further enhanced with a phrase suggestion tool, which automatically suggests phrases which are relevant to the text which the user had captured. Additionally, the Text Lens application was integrated with the coins functionality shared by all MASELTOV apps, in order to improve user adoption. The user interface was also completed and tested for all supported languages (English, German, Spanish, Turkish and Arabic). At last but not least, a full user documentation including tutorial videos was created to demonstrate Text Lens capabilities and explain its potential to the users. To make the Text Lens usable with a broader range of mobile devices, CTU has worked on increasing the efficiency of the methods supporting the Text Lens application. Changing algorithmic cores of certain critical components, a speed-up by a factor of five to ten was achieved. The new algorithms were implemented on mobile phones. Significant effort was aimed at testing the software implementation. A number of activities were related to publishing the result of the project. CTU has been co-opted into the team that carries out the regular standard evaluation in text spotting: The Robust Reading Competition at ICDAR, the Int. Conf. on Document Analysis and Recognition, the top conference in the field. CTU submitted baseline algorithms to the ICDAR Robust Reading competition, achieving the best score in the "text in video" detection and recognition task.

**FHJ:** The contribution of FHJ summarises as follows: In WP2 use cases and service scenarios FHJ were described in the context of scenarios for the utilization of health facilities and health services by immigrants. In particular FHJ contributed to WP2 with health related use cases and scenarios. For WP6 FHJ provided health related information concerning access to health services, relevant legislation and important health providers for immigrants. As basis for further project work FHJ investigated on relevant information on the basis of the project countries United Kingdom, Austria and Spain regarding social security and medical access in legislation and in practice; epidemiological information about the principal groups of immigrants to the pilot's countries and the coverage of medical services regarding ailments specific to the target group of immigrants. FHJ developed the deliverables D6.4.1 (revision) and D6.4.2 on "Health Care Services" and provided the health care and health legislative input for D6.2 "Bureaucratic Advisor Service".

**TI:** TI has been contributing in WP3 and leading WP8 and WP10. In WP3 TI has been supporting integration phases. The contribution TI provided in WP8 (Community Building Services) is related to Forum and Help Radar UIs translations in the different languages envisioned by the field trials, to components adaptation of Forum and Help Radar according to field trials users' feedback and according to ethical issues; Social Network Analysis components have been finalized and used to monitor several field trials phases. With respect

to the work done in WP10 TI has been working in particular on exploitation issues. D10.4.3 “Exploitation Strategy II” document was officially released in the middle of February with the definition of some possible exploitation strategy to be followed by the Consortium in order to deploy MASELTOV services. Market trends have been considered in the study and some potential alternative business models have been proposed. The final version of exploitation strategy document D10.4.4 “Final Exploitation Strategy” has been finalized in March 2015. The document is an improved version of the previous one as some sections have been updated and new chapters have been added, containing the IPR definition, the Technology Readiness Level assessment of MASELTOV services, some highlights of meetings with different stakeholders. During the last period of the project contacts with stakeholders have become more intense and a focus group with Gruppo Abele has been organized in order to collect feedbacks about MASELTOV services. Results have been reported in the D10.4.4. document.

**FLU:** FLU participated in WP3, WP9 and leads the WP6. Within WP3 was involved in the specification of the inter-linkage with other modules. Additionally, the start-up process was defined with other project partners. FLU provided therefore input for the deliverable D3.3.2 Iterative System Design. Within WP6, the updated dashboard as well as the specified start-up process (see WP3 for more details). Additionally, several integration runs were executed in order to have the current development status of the individual components within an integrative MApp application. The integration runs was executed on the monthly basis. Furthermore, FLU finalized the development phase for the POI search and navigation service, including server and client development. Additionally, the info service was as well finalized, including the development as well as the content definition and preparation. The interface with other MApp service played for all three services an important role during the development phase as well as the support of multi-language. FLU provided input for the following deliverables: update of the D6.2 Bureaucratic Advisor Service, D6.1.2 and D6.4.2 Health Care Service. Additionally, an update D6.3.2 POI Navigation service was prepared.

**FUN** was contributing to WP2 user requirements and WP9 evaluation with the main on-going activity to link the project to the target group and integrate the immigrants’ background, needs, problems to the project partners. A field trial was organised with Arabic immigrants in May. FUN also supported to conduct the affordability study in February with the organisation of test persons, i.e., Arabic immigrants. Partners’ ideas and suggestions were discussed and feedback and additional proposals were given to force the elaboration of innovation that will be as helpful as possible for the target group - as the end users of MASELTOV apps. FUN took part in MASELTOV meetings via Skype and attended the plenary meetings in February, and May. FUN organized the Plenary Meeting in Madrid in May 2014. FUN left the consortium in July 2014.

**DAN:** DAN was contributing to WP2 user requirements and WP 9 evaluation with the main on-going activity to link the project to the target group and integrate the immigrants’ background, needs, problems and wishes to the project partners as a basis of innovation and technical development. For this reason a field trial with Turkish immigrants was prepared in October 2014. Danaida also supported to conduct the affordability study in February with the organization of test persons, i.e., Turkish immigrants. Partners’ ideas and suggestions were discussed and feedback and additional proposals were given to force the elaboration of innovation that will be as helpful as possible for the target group - as the end users of MASELTOV apps. Therefore Danaida took part in MASELTOV meetings via Skype and attended the plenary meetings in February 2014, May 2014, September 2014 and March 2015. Danaida as well was involved in WP10 dissemination activities by giving information about the project to other NGOs and relevant groups working for or with immigrants and was part

of the discussion process within the MASELTOV partnership. DAN contributed to the collection of pictures for dissemination purposes as well.

**MRC:** MRC has been involved in initial testing of the MApp with Latin American and Arabic-speaking immigrants. MRC also provided feedback on the MASELTOV serious game by arranging for immigrants to attend the plenary in Milton Keynes and then facilitating an additional meeting with MRC staff and volunteers and Coventry University. For WP 9 MRC organised the first field trial in London in June 2014 and was involved in the preparation of these trials as well as monitoring and providing data to ATE (CURE). For WP6 MRC created and reviewed content for the information service. As part of WP 10 MRC has liaised with other organisations about MApp, posted about MASELTOV activities on MRC's website and social media, participated in a conference organised by UOC in October 2013 and begun preparations for promoting MApp during training sessions with MRC service users. MRC has also been involved in MASELTOV plenary meetings, Skype calls and the 2<sup>nd</sup> year review meeting in Luxembourg. MRC was as well intensively involved in the final field trials and in the training activities in London during October 2014-December 2015.

**PP:** Having joined the project informally in January 2014, PP worked for the most part to deliver mobile situated language learning material as part of WP7. These materials were planned and structured in collaboration with the OU and were written especially for the project. They were designed to sit within the parameters of the incidental learning framework and were delivered for the field trials with native language translation for native speakers of Spanish and Arabic (learning English) and Turkish (learning German). In total, 6 multimedia modules were prepared on language topics relevant to immigrants (eg. transport, healthcare, administration etc). PP has also led Task 8.3. Some emphasis was removed from this task due to the loss of the busuu.com social network, but PP worked to enable social interaction for the purposes of language learning through other tools. These included the MASELTOV social forum, Facebook, and social activities built into the language lessons. In WP3, PP contributed to deliverable documents and, more indirectly, worked on system integration by linking its language learning service to the User Profile, the Recommendation system and social forum. PP was formally admitted as a project partner in October 2014.

## 4. PROGRESS OF THE PERIOD - WORK PACKAGES

Note that in the following WP description the tables for the use of resources cover only the period of 01.01.2014-31.12.2015 since there was no final internal reporting after the last quarter. Nevertheless, this overview should provide enough details to see that resources were spent (mostly) according to plan.

### 4.1 WORK PACKAGE 1 – MANAGEMENT

Presented in full detail in Section 5.

#### 4.1.1 USE OF RESOURCES IN WP1

**Table 2:** PMs of partners working in WP1. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 1	25,00	3,45	0,00	3,00	4,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,00	0,00	0,00	0,71
1.1	20,00	2,45			4,00												0,60
1.2	5,00	1,00		3,00	0,50									1,00			0,11

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 1	29,89	3,45	0,00	3,25	6,22	0,00	0,00	0,00	0,00	0,00		0,00	0,00	1,09	0,00	0,00	0,37
1.1	24,89	2,80	0,00	0,00	5,93	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,13
1.2	5,00	0,65	0,00	3,25	0,29	0,00	0,00	0,00	0,00	0,00		0,00	0,00	1,09	0,00	0,00	0,24

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 1	12,73	0,65	0,00	0,00	2,99	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,37
1.1	10,48	0,65	0,00	0,00	2,99	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,13
1.2	2,25	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,24

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 1	4,89	0,00	0,00	0,25	1,72	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,09	0,00	0,00	-0,34
1.1	4,89	0,35	0,00	0,00	1,93	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	-0,47
1.2	0,00	-0,35	0,00	0,25	-0,21	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,09	0,00	0,00	0,13

(d)

## 4.2 WORK PACKAGE 2 – USER REQUIREMENTS & INTERACTION DESIGN

Work Package 2 is the work package where user requirements for the MASELTOV services are investigated and where the basic interaction design is elaborated. The main issues include:

- To gain a broad knowledge base about how ICT can support the integration of immigrants into the host country and how social exclusion of immigrants can be avoided.
- To perform an extensive user research by accessing related projects and NGOs experience but also involving immigrants directly in the requirements analysis (qualitatively and quantitatively).
- To define concrete target groups for the MASELTOV project.
- To revise the services already defined in this proposal in form of use cases and scenarios based on the elicited user requirements.
- To prevent to design an offensive user interface for some groups of immigrants by investigating cultural particularities of the defined target groups.
- To design the interactive behaviour and the user interfaces of the MASELTOV services.
- To investigate quantitatively the basic usage of mobile phones and related affordability aspects for immigrants

Most of the work in WP2 was done within the first and second year, where the focus laid on the management and creation of the user interfaces of the MASELTOV services. As final activity in this WP the affordability study was conducted and analysed in the final year of the project. The study substituted the initially planned large-scale study on requirement analysis to be developed at the beginning of the project, as described in Task 2.2 in the DOW.

### 3.2.1 PROGRESS OF WP2

#### *Task 2.1 Immigration and ICT in Europe*

This task started in month 1 and ended in month 3. It was led by UOC.

#### *Task 2.2 Stating the frame of social and cultural needs*

In the third year of the project the deliverable D2.2.1 was updated in order to present setup and results of the so called affordability study. At the end of the second year, the planning of this study took place and a questionnaire was created to learn about basic usage factors and related affordability aspects of mobile phones by immigrants. The study was conducted in Austria, Spain and United Kingdom, both via print and digital channels. Finally the updated deliverable (D2.2.2) presented the results of the affordability study: an exploratory, cross-country, middle-scale quantitative study to determine whether immigrants would be able to afford the MASELTOV mobile application according to both demographic differences and external market factors.

This task started in month 1 and ended in month 30. It was led by UOC.

#### *Task 2.3 Use cases and service scenarios*

This task started in month 1 and ended in month 24. It was led by ATE.

#### *Task 2.4 Participatory Design and Interaction Concept*

This task started in month 1 and ended in month 6. It was led by CURE.

### ***Task 2.5 Iterative User Interface Design***

This task started in month 1 and ended in month 18. It was led by ATE

#### **3.2.2 HIGHLIGHTS OF WP2**

The most important outcome of WP2 was the conduction and analysis of the affordability study in task 2.2. as a quantitative piece of research with the aim of providing a general picture of contemporary immigrants' reality in terms of access to and use of smartphones, taking into account influential factors such as differences in users' gender, age, income and educational level, as well as external factors such as telecom market differences in each national context.

#### **Research questions**

The first part of the affordability study focuses on users, addressing two key issues (with their corresponding research questions) as follows:

a) Immigrants' access to the technical requirements needed to run the MApp

- Do immigrants access to mobile internet with smartphone?

b) Immigrants' current use of specific MASELTOV-related services:

- What do immigrants use smartphones for?
- Do immigrants use smartphones for translating texts, finding their way around the city and/or looking for information, among other uses?

#### **Methodology**

The study based on a survey distributed to 248 immigrants in the main cities where the MASELTOV project focuses on: London, Madrid and Graz/Vienna. Since there were specific difficulties to reach the Turkish-speaking respondents in Graz, the consultation also extended to Vienna. For the same reason, the final sample in Austria also presented slight differences in the distribution of gender (more women) and length of stay (including respondents with more than 5 years of stay).

NGO partners MRC (London), Fundeso (Madrid) and Danaida (Graz) worked as points of entry to the realities of the MASELTOV target users in each city. In this sense, it did not rely on a representative sample but on a group of respondents purposively addressed according to the project' definition of its target users, based on the following criteria:

- Gender: Men and women
- Origin: Third country nationals
- Native language and place of residence: Arab in Madrid, Turkish in Graz and Spanish in London
- Time of arrival: less than 5 years
- Working age: 18-65

UOC elaborated the questionnaire for the survey in Spanish (for respondents living in London) and translated it into English in order to facilitate its translation in Arabic and Turkish. The questionnaire consisted of multiple-option questions on the following topics:

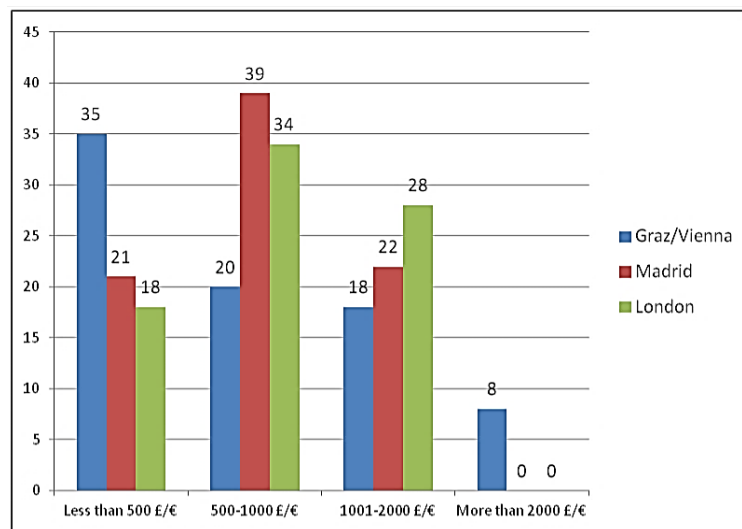
- Connectivity from the mobile phone.



- Type of mobile phone (smartphone? What kind?).
- Contract with service provider (postpaid/prepaid subscription, flat rate, etc.).
- Monthly expenses on mobile phone use/telecommunications.
- Usage of specific MASELTOV-related services (e.g. navigation, translation and job search, etc.).

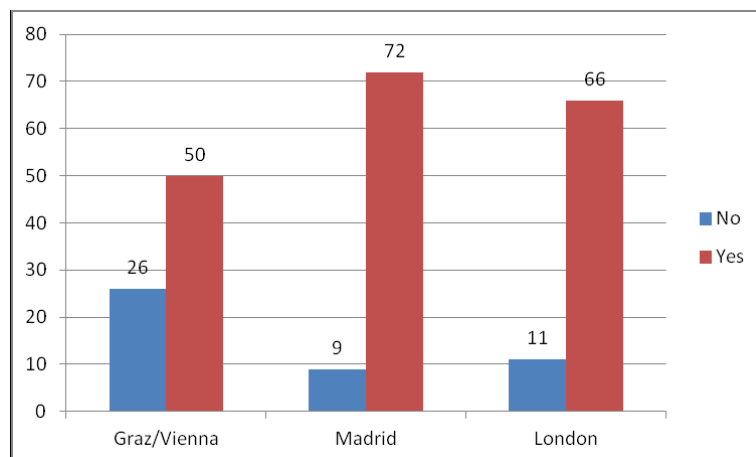
## Results

Regarding monthly income, Figure 1 shows that the great **majority of respondents earned less than 2000 £/€**, what outlines a population profile with quite limited resources to afford a decent living in the European capital cities.



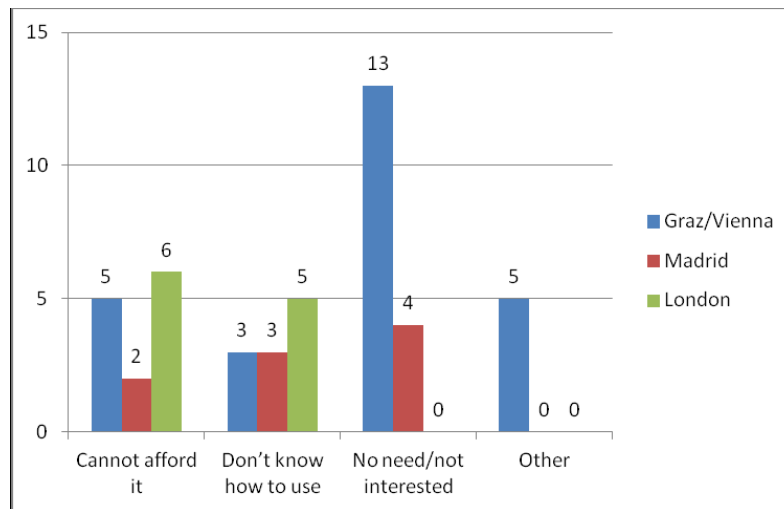
**Figure 3.** Monthly income of the questioned immigrants (N=234).

Among the respondents **80% owned a smartphone**. There were no big differences in smartphone ownership between cities of residence, except from the case of Graz, where there was a higher proportion of respondents without one, as shown in Figure 4.



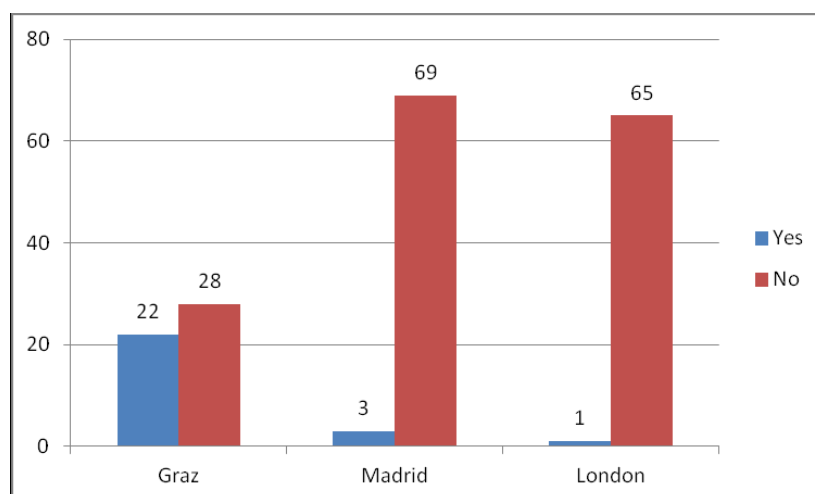
**Figure 4.** Ownership of smartphone across cities of residency.

Although smartphones were widespread among informants in the three cities of enquiry, mobile phones are still the most common device immigrants have, especially for Turkish-speaking immigrants in Graz/Vienna. The causes for this phenomenon are multiple but we can outline some of them by taking into account other questions. First, we asked the 20% of respondents of the whole sample who did not have a smartphone what their main reasons for not having one were. Figure 5 summarizes the answers of these 46 observations, according to their city of residence.



**Figure 5.** Reasons for not owning a smartphone.

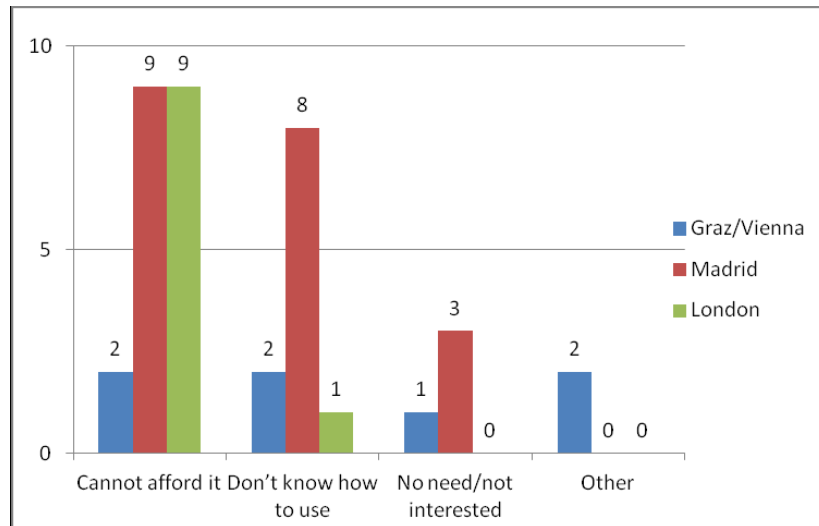
Interestingly informants from Graz/Vienna i.e. **Turkish immigrants** presented a significantly high number of **people who shared the smartphone with others**, as summarized in the **Figure 6** below. This suggests that since in this particular context smartphones are not used as individual devices but in a joint way with someone else (probably a close relative or friend), there is a lower perception of its need (see Figure 4 above) in comparison with the other city-based respondents. The causes, however, escape the scope of the current study.



**Figure 6.** Sharing of smartphones.

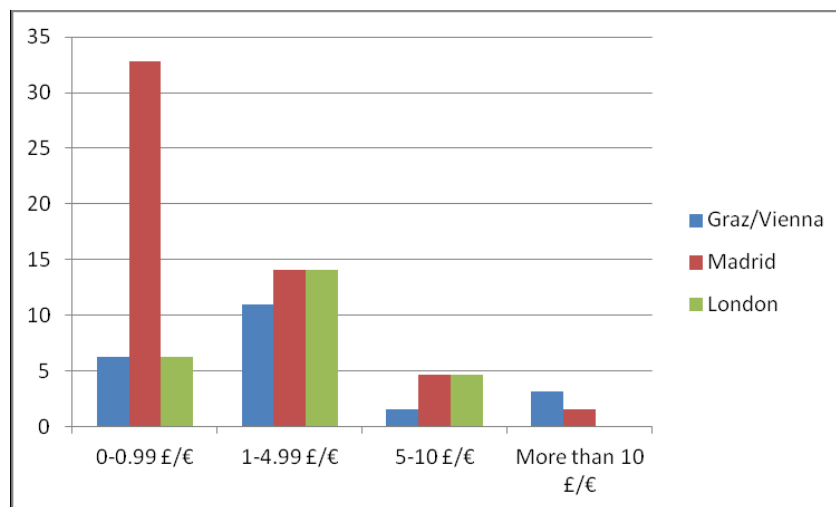
The major proportion of people who owned a smartphone (80%), repeats in the access to mobile internet subscription (n=188). The 20% who did not access mobile internet gave different reasons for it, especially the inability to afford these services, as shown in **Figure 7**.





**Figure 7.** Reasons for not having access to mobile internet services (N=37).

Regarding mobile applications (apps), a 94% of respondents had downloaded one but only 41% had paid for it, while a 58% had not paid anything. When informants had spent some money on apps, this was at minimum costs, as shown in the **Figure 8** below. On the one hand, this result confirms **users' preferences to try free apps**. On the other hand, it also shows that quite an important percentage of respondents have also **paid something for an app they considered it was worthy**. This might leave an open door to consider the business model of the MApp, since both options – paid and free – would arouse interest among potential users.



**Figure 8.** Maximum money to spend for a mobile app (Frequencies).

To sum up, there was not a unique statistical model for each country, since in each one there were different explanatory variables. The logistic regression analysis served to confirm as well as reject the initial hypothesis in this study, as shown in **Table 3**.

## Conclusions

All together the conducted study revealed following main results:

- Despite having quite limited economic resources, a 80% of respondents were not deprived of investing in modern mobile devices and mobile connectivity.

- The reasons for not having a smartphone and/or mobile internet connection varied across cultural groups and their respective cities of destination, but it was remarkable that in the case of mobile internet the main reason was, for all informants, their inability to afford such service.
- Many people within the target user group are still using mobile devices in a basic way, for traditional telecommunication services such as making/receiving phone calls and messages. In this context, Wi-Fi connections proved to be an important resource in the light of limited (prepaid) or absent mobile internet subscriptions among users.
- There were not significant differences between men and women in the tenure of smartphones and mobile internet connections.
- Access to these technical requirements necessary to run the MApp was limited by two main variables: age and level of education.
- Mobile devices are used for checking social network sites, make pictures and search for addresses

**Table 3.** Determinants of mobile affordability (mobile phone, smartphone, mobile internet).

<i>Independent Variables</i>	<i>Hypotheses</i>
Gender (V1)	Men have higher possibilities than women to have a smartphone --> No. There seems to be no significant difference between men and women in this regard.
Age (V2)	Age decreases affordability --> Yes. There is a significantly negative coefficient in the model that confirms that elder people have more difficulties to afford their mobile devices and services.
Language (V4)	Some cultural origins lead to higher usage of smartphones than others --> The realisations of variable V4 (Language) are concentrated in one category dependent on the city of residence. So it makes no sense to include this variable into the models. Based on this data situation we are not able to answer this question.
Length of stay in the destination country (V5)	The longer the residence in the country, the higher the probability to have a smartphone --> No. No significant influence of duration.
Education (V6)	The higher the education level, the higher the probability to have a smartphone --> Correct, there is a significantly positive coefficient in the model.
Income (V9)	The higher the economic level, the higher the probability to have a smartphone --> It is city specific: in Vienna there is no significant influence of income. In Madrid and London: the higher the income the higher the possibility to own a Smartphone.
Place of residence (V10)	Some countries of residence lead to higher probabilities of having a smartphone --> Yes, for example respondents living in London had a significant higher probability of having a smartphone than those living in Vienna and Madrid.

In general, there was not a unique statistical model for each city, since in each one there were different explanatory variables. Apart from the specificities in each city of destination, immigrants' experiences with mobile devices in a new society are highly conditioned by the particularities of their cultural backgrounds.

### 3.2.3 USE OF RESOURCES IN WP2

**Table 4:** PMs of partners working in WP2. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 2	0,00	20,10	0,00	13,00	1,00	2,00	0,00	1,00	5,00	5,00		0,00	2,00	2,00	2,00	0,00	0,50
2.1				3,00													
2.2		2,00		8,00				1,00									0,50
2.3		5,00		2,00		1,00			3,00	2,00							
2.4		4,00			1,00				1,00	2,00			1,00	1,00	1,00		
2.5		9,10				1,00			1,00	1,00			1,00	1,00	1,00		

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 2	0,00	20,10	0,00	12,92	0,36	1,87	0,00	0,91	3,93	8,07		0,00	2,00	2,09	2,25	0,00	0,13
2.1	0,00	0,00	0,00	2,92	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.2	0,00	2,85	0,00	8,00	0,02	0,00	0,00	0,91	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,13
2.3	0,00	9,65	0,00	2,00	0,00	0,99	0,00	0,00	1,93	2,00		0,00	0,00	0,00	0,00	0,00	0,00
2.4	0,00	4,25	0,00	0,00	0,34	0,00	0,00	0,00	0,90	2,18		0,00	0,84	1,69	1,00	0,00	0,00
2.5	0,00	3,35	0,00	0,00	0,00	0,88	0,00	0,00	1,10	3,89		0,00	1,16	0,40	1,25	0,00	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 2	0,00	0,60	0,00	1,00	0,19	0,10	0,00	0,16	0,20	1,43		0,00	0,00	0,40	0,00	0,00	0,13
2.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.2	0,00	0,60	0,00	1,00	0,00	0,00	0,00	0,16	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,13
2.3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.4	0,00	0,00	0,00	0,00	0,19	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.5	0,00	0,00	0,00	0,00	0,00	0,10	0,00	0,00	0,20	1,43		0,00	0,00	0,40	0,00	0,00	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 2	0,00	0,00	0,00	-0,08	-0,64	-0,13	0,00	-0,09	-1,07	3,07		0,00	0,00	0,09	0,25	0,00	-0,37
2.1	0,00	0,00	0,00	-0,08	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.2	0,00	0,85	0,00	0,00	0,02	0,00	0,00	-0,09	0,00	0,00		0,00	0,00	0,00	0,00	0,00	-0,37
2.3	0,00	4,65	0,00	0,00	-0,01	0,00	0,00	-1,07	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
2.4	0,00	0,25	0,00	0,00	-0,66	0,00	0,00	0,00	-0,10	0,18		0,00	-0,16	0,69	0,00	0,00	0,00
2.5	0,00	-5,75	0,00	0,00	0,00	-0,12	0,00	0,00	0,10	2,89		0,00	0,16	-0,60	0,25	0,00	0,00

(d)

### 3.2.4 DEVIATIONS IN WP2

The affordability study substituted the initially planned large-scale study on requirement analysis to be developed at the beginning of the project, as described in Task 2.2 in the DOW. This substitution implied that Task 2.2 was developed at a later moment in the calendar of the project and with a smaller (medium) scale. However, it did maintain the general aim and main characteristics of the task, namely, to get a better understanding of potential MApp users through a quantitative approach.

### 4.3 WORK PACKAGE 3 – SYSTEM SPECIFICATIONS & INTEGRATION

#### 3.3.1 OBJECTIVES OF WP3

WP3 tackles the challenges as follows, (i) to define the technical scenarios and use cases, (ii) to define system interfaces and from this derive the system architecture, (iii) to specify all hardware and software components, and (iv) to make concepts for system integration and iteratively evaluate the performance of system prototypes.

It is structured in three tasks:

- *Task 3.1* deals with the definition of technical use-cases and workflows to finally deduce single technical requirements for the MASELTOV system. Technical requirements have to be assigned to certain software components which are, beside identified interdependencies, defined in the overall system architecture.
- *Task 3.2* performs the detailed specification procedure for each identified system component to define technical requirements, functionalities, dependencies, interfaces, storage demands, workflows and responsibilities.
- *Task 3.3* performs the planning, the controlling and the administrating of the system integration in iterative cycles. Evaluation is here targeted in terms of quantitative performance. Especially in decentralized software development scenarios, with many technical partners distributed all over Europe, it is very important to develop well thought of integration plans and continuous controlling.

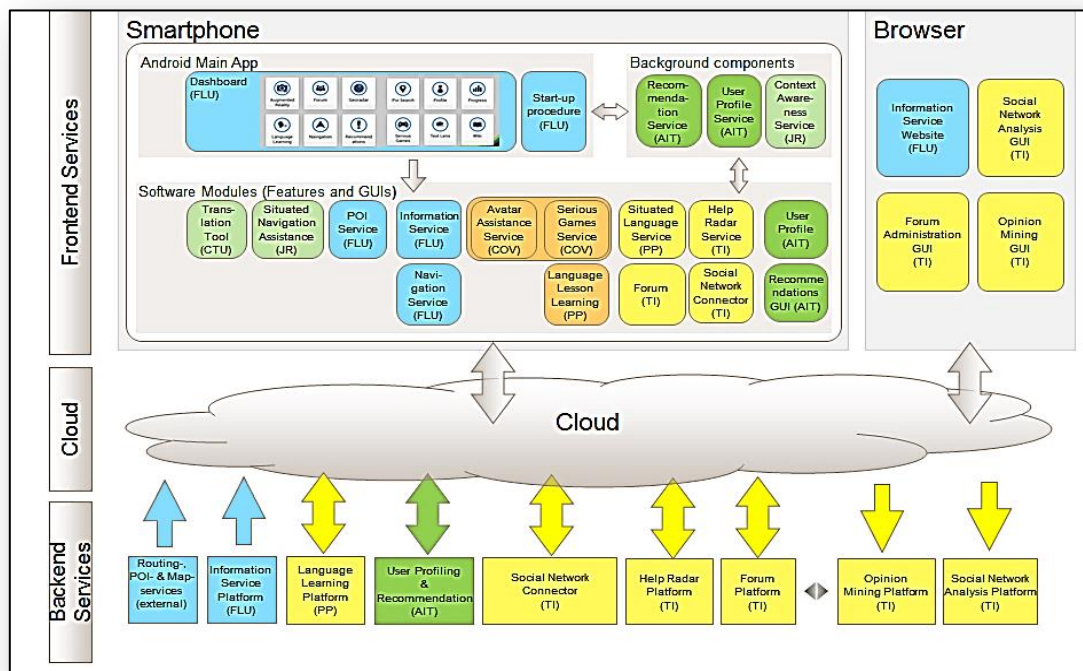
The efforts in WP3 lead to a common starting point for the technical implementation in the initial phase of the project and to a detailed system architecture and technical specification to be used as a reference for all development and integration tasks. Furthermore, WP3 manages the system integration process in terms of planning, controlling and evaluation. Concepts for decentralized development but central compilation of an integrated mobile application had to be developed. Further topics are the integration of all software components in a container application, inter-components communication, data exchange and the management of common properties to achieve a seamless integration into one MASELTOV application (MApp).

#### 3.3.2 PROGRESS OF WP3

##### *Task 3.1 Technical Scenarios and System Architecture*

WP3 related its first outline of the technical scenarios being motivated from both the definition of the use cases and service scenarios as defined in WP2. The use cases, as defined in the international workshop hosted by TI in YR1, have been revised at the end of Y2 incorporating experiences from the first field trials.

The system architecture was updated according to new requirements, which led to the introduction of the recommendations and notifications component as module of their own (see Figure 9). All changes to the system architecture have been documented in D3.1.2, which was due by the end of Y2 and was actually submitted by the 15th of January 2014. Task 3.1 was completed with the end of Y2 by submission of the final deliverable D3.1.2.



**Figure 9.** Schematic view on the components of the final MASELTOV system architecture (final version no. 16).

### Task 3.2 System Specifications

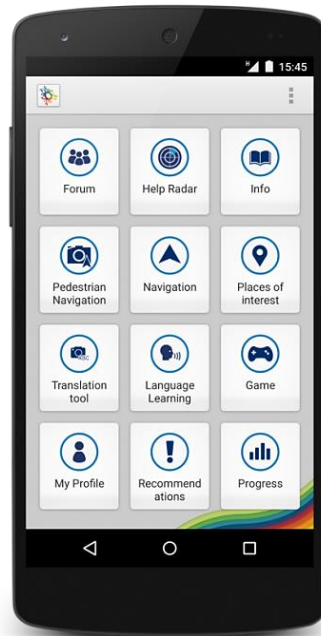
The major result of this task was a detailed documentation of the MASELTOV software components and their interfaces covering the functional main modules for assistance, learning and social computing. Furthermore, it developed a detailed outline of the specific interdependencies between technical components and their prerequisites and demands. The final outline of the system specification was depicted in the final deliverable of this Task D3.2.2 which was submitted on the 15<sup>th</sup> of January 2014.

The main task of the final project year was to accompany developments of all technical partners and to continuously monitor whether specifications from D3.2.2 still match the real requirements uncovered during the final implementation phase. JR led this process and stayed in permanent contact with all development teams of MASELTOV to discuss arising challenges during software development and to make proposals for changes to workflow descriptions of software component descriptions and the system architecture in order to fulfil the defined requirements of MASELTOV. The planned end of Task 3.2 was at the end of Y2 but due to ongoing software development by all technical partners during Y3 this Task had to be extended in order monitor the compliance with the final system specification D3.2.2.

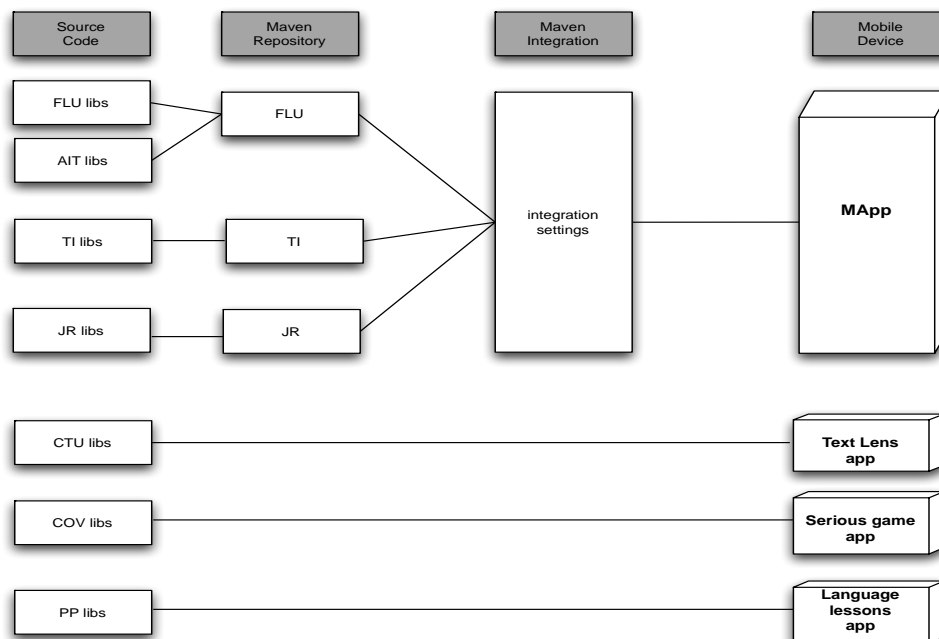
### Task 3.3 Iterative System Integration and Performance Evaluation

The work within Task 3.3 as described in the final report on system integration (D3.3.3, submitted on the 8<sup>th</sup> of October 2014) was controlling of the integration of software components from different partners within one application with a seamless user experience. In the final iteration, a plugin concept intended for interfacing third party applications with MASELTOV was specified and implemented. In addition to this, the start-up procedure covering proper registration and login to the services has been finalized and evaluated in the final field trials.

Especially in the case of the project MASELTOV, where several services are developed by different diversely located project partners, an intensive and efficient management of the overall integration process played a crucial role to ensure the quality of the final application. Therefore, comprehensive integration planning and controlling was continuously needed to ensure a seamlessly integrated MASELTOV application with a single entrance point (dashboard, see Figure 10) at the end of the project.



**Figure 10.** MASELTOV dashboard as a single entrance point for MApp.



**Figure 11.** Schematic diagram visualising the system integration process.



During the final project year a lot of effort was needed to accompany the on-going integration process, which was extended until January 2016 as there was an additional (initially not planned) field trial in Milton Keynes from end of January to begin of February 2016. A final integrated version of MApp was deployed especially for the last trial incorporating lessons learned (final bug fixes and technical enhancements) from previous trials. Monthly integration runs were carried out and many technical as well as organizational challenges had to be solved in order to end up with one integrated MASELTOV application for smartphones (see integration process depicted in Figure 11). Besides taking care of the on-going integration process also technical support was given during the field trials.

In order to support the field trials, an evaluation system was developed (see Figure 12), which visualized the test participant's daily routines. In combination with data gathered from the user profile, this made it possible to deduce how the participants interacted with the MASELTOV system and allowed facilitators to send tailored hints and suggestions.

### 3.3.3 HIGHLIGHTS OF WP3

- Final demonstrator application – technical controlling.
- Final report on system integration D3.3.3.
- Finalisation of technical use-cases specifications, workflows and requirements.
- Final definition of the MASELTOV system architecture.
- Final specification of software-components.
- Definition of the MASELTOV start-up process.
- Definition of Plug-In concept.
- Technical support in field trials.

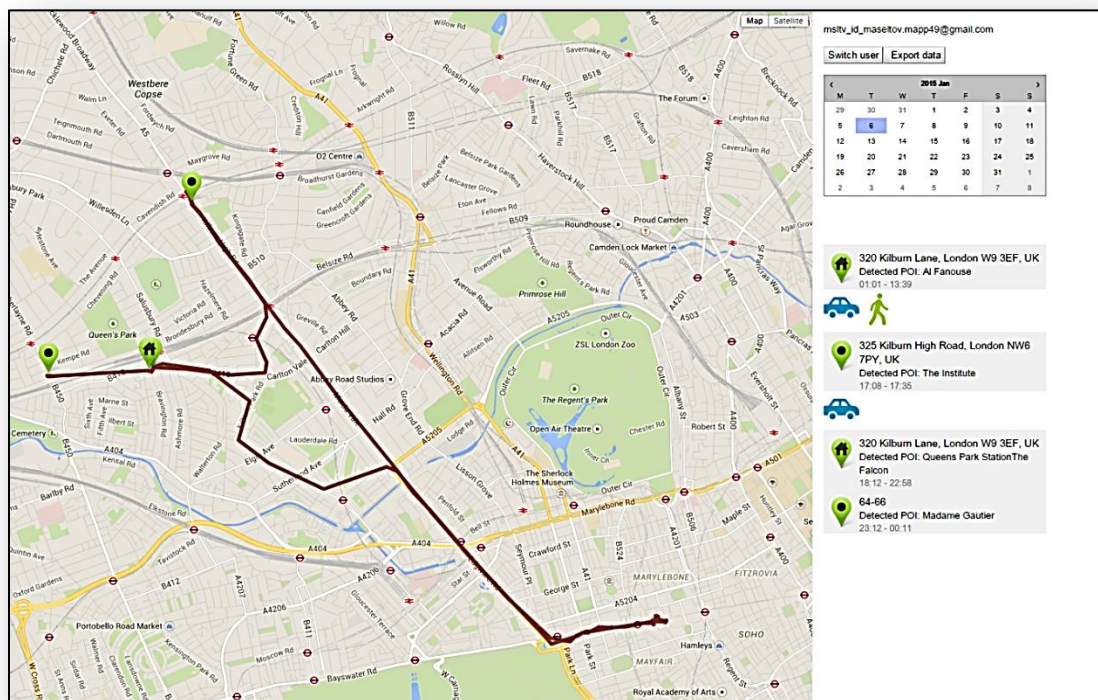


Figure 12. Evaluation support system.

### 3.3.4 USE OF RESOURCES IN WP3

**Table 5:** PMs of partners working in WP3. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 3	11,00	0,00	3,00	0,00	4,00	2,00	3,00	2,00	7,00	4,00		1,46	0,00	0,00	0,00	0,50	0,00
3.1	4,50				1,00			1,00	3,00	1,00		0,48				0,20	
3.2	1,50		1,00		1,00	1,00	1,00	1,00	1,00	1,50		0,50				0,15	
3.3	5,00		2,00		2,00	1,00	2,00		3,00	1,50		0,48				0,15	

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 3	12,79	0,00	4,51	0,00	3,63	1,82	5,83	2,00	6,10	7,87		1,46	0,00	0,00	0,00	0,67	0,00
3.1	4,56	0,00	0,00	0,00	0,37	0,00	0,00	1,00	2,45	1,49		0,50	0,00	0,00	0,00	0,00	0,00
3.2	1,57	0,00	2,51	0,00	0,24	1,00	3,30	1,00	0,75	2,69		0,48	0,00	0,00	0,00	0,67	0,00
3.3	2,46	0,00	2,00	0,00	3,02	0,82	2,53	0,00	2,90	3,69		0,48	0,00	0,00	0,00	0,00	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 3	5,57	0,00	1,70	0,00	3,00	0,09	2,53	0,00	1,80	1,98		0,00	0,00	0,00	0,00	0,67	0,00
3.1	0,70	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
3.2	0,20	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,67	0,00
3.3	0,47	0,00	1,70	0,00	3,00	0,09	2,53	0,00	1,80	1,98		0,00	0,00	0,00	0,00	0,00	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 3	1,79	0,00	1,51	0,00	-0,37	-0,18	2,83	0,00	-0,90	3,87		0,00	0,00	0,00	0,00	0,17	0,00
3.1	0,06	0,00	0,00	0,00	-0,63	0,00	0,00	0,00	-0,55	0,49		0,02	0,00	0,00	0,00	-0,20	0,00
3.2	0,07	0,00	1,51	0,00	-0,76	0,00	2,30	0,00	-0,25	1,19		-0,02	0,00	0,00	0,00	0,52	0,00
3.3	-2,54	0,00	0,00	0,00	1,02	-0,18	0,53	0,00	-0,10	2,19		0,00	0,00	0,00	0,00	-0,15	0,00

### 3.3.5 DEVIATIONS IN WP3

Aberrantly to the initial time plan of MASELTOV at time of proposal writing it turned out that the actual need of technical support for (i) on-going software development and integration activities in Y3 and (ii) especially during field trials was extensive and underestimated. Therefore WP3 activities (T3.2 and T3.3) had to be extended until the end of the last trial in Milton Keynes during the first months of 2015. Actually this trial was a last minute decision and not planned to be carried out. This deviation was a matter of time extension only, as we were able to stay in the planned budget for WP3 and was highly appreciated by all technical partners in MASELTOV who were in need of technical support during Y3.

## 4.4 WORK PACKAGE 4 – MULTISENSORY CONTEXT AWARENESS

### 4.4.1 OBJECTIVES AND STARTING POI

The WP4 tackles the challenges as follows, (i) to adjust existing navigation (including mobile AR) services for immigrants application, (ii) to investigate and develop functional components for the multisensory interpretation of user behaviour, (iii) to develop low level geo-contextual abstractions from user behaviour and associated geo-information, and (iv) to research and develop computer vision methods for highly robust real-time text detection and recognition.

WP4 is structured in three tasks: *Task 4.1* will implement an intelligent navigation assistance focused on the specific user groups and their demands, considering augmented reality based interfaces that enable intuitive access to the services. *Task 4.2* applies methods for quantitative assessment of the performance, using state-of-the-art in mobile eye tracking. These measures will include (i) to investigate the attention processes and from this the evaluation of the usability of interfaces, (ii) enable to deduce facts on cultural diversity from behaviour and attentive perception, and (iii) to monitor the tracks of experts and from this analyse the mobility. *Task 4.3* realises the innovative Text Lens service and integrates real-time text detection, recognition and annotation using the mobile phone camera. For specific targeted text detection, the service includes specific dictionaries that will support the recognition of the text – this information will be transferred to the translation service.

The efforts in WP4 shall lead to the development of multisensory data based background components for the MASELTOV application. In particular, it investigates the contribution of geo-contextual information for situated application of learning and community building technologies. Furthermore, it investigates on cultural diversity, in particular, from the viewpoint of a mobile service user. It also enables via the mobile Text Lens a state-of-the-art ubiquitous access to language translation and understanding.

WP4 started in Year 2 with the aim (i) to proceed on the basis of system specification, agreements and initial implementations towards a full implementation of geo-contextual event analysis, as well as to optimize the augmented reality driven navigation component, (ii) to finalise the implementations in order to prepare for the study of attention processes and human factors in mobile interaction domain, and (iii) to progress on the implementation and the usability of the Text Lens service component in order to make it well available to the immigrant users. The developed prototypes have been integrated with other components of the MASELTOV platform.

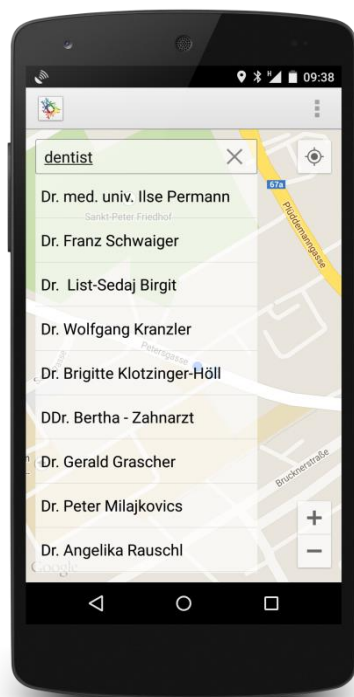
### 3.4.1 PROGRESS OF WP4

#### *Task 4.1 Mobile Navigation and Geocontextual Event Analysis*

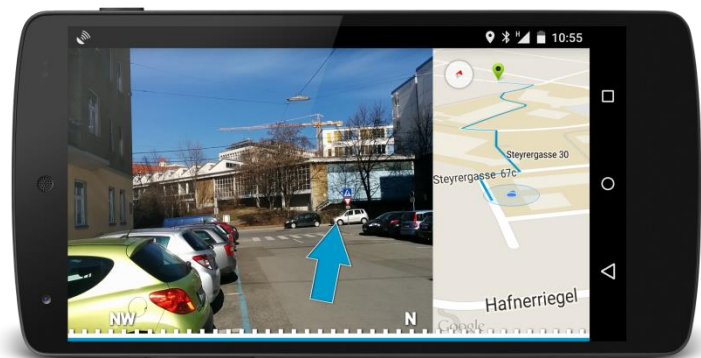
Based on the experience made in the field trials, enhancements of both the Augmented Reality based navigation as well as the Geo Contextual Services have been implemented. In addition to this, the interface for daily reflection and providing feedback concerning the context modules has been improved. The following paragraphs are related to the individual contributions achieved in the third year.

*Augmented Reality based navigation:* Following the concept paper (deliverable D4.1.1) and feedback gained from the user field trails the Augmented Reality navigation component has been enhanced. The module's location handling capabilities were improved in such a way that

a preliminary route can now be calculated without GPS reception by including position estimates from surrounding Wifi networks. Since public transport navigation was not available in all user trial cities, a stand-alone pedestrian navigation component which is independent from public transport data has been developed (see Figure 13). This module includes destination selection via a simple map interface with text auto complete support. The POI service employed fuses multiple sources (Google Places and OpenStreetMap) with world-wide availability. Text inputs can either be addresses, names of places or categories in all target languages (Arabic, Spanish, Turkish). Typos in the input text field are compensated for, so a very flexible and user friendly interface could be realized. The POI service is not only used within T4.1 but also by the recommendation service of AIT and the POI module of FLU. The final AR view which received additional visual enhancements is depicted in Figure 14.



**Figure 13.** Destination selection.

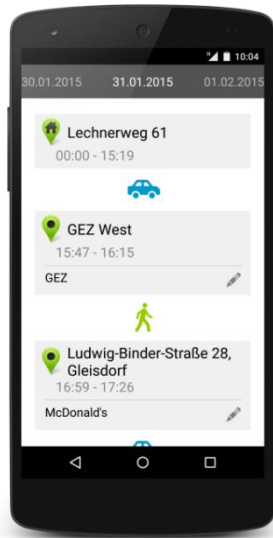


**Figure 14.** Final AR Nav View.

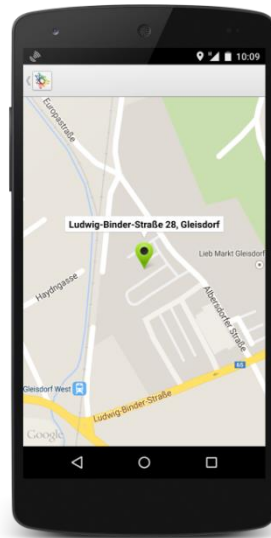
*Geo-Contextual Services:* The following section gives a final overview of the enhancements made in the geo-contextual event analysis, which is described in detail in the final deliverable D4.1.2 of T4.1 which was submitted on January 15<sup>th</sup>, 2014.

The field trials provided valuable user experience data leading to the following changes: (i) background service stability improvements, (ii) simplified internal data structures and (iii) database refactoring in order to support user annotations. In addition to this, the daily reflection component (Figure 15) now also contains besides the map view (Figure 16) an overview of places visited most often by the user (Figure 17).

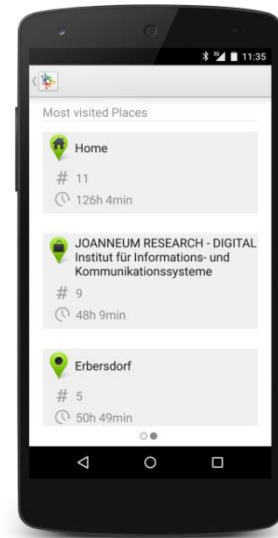




**Figure 15.** Daily reflection.



**Figure 16.** Map View of POI.



**Figure 17.** Top Visited Places.

#### ***Task 4.2 Multisensory Usability Engineering***

This task (led by JR) started in month 1 and formally ended in month 24.

However, in the last project period, the methodology that has been developed in the previous project periods has been optimised, **published at prestigious conferences** (CHI 2014, ETRA 2014), presented at several focused scientific workshops (ISACS 2014, IDGEI 2015) and finally **applied in a large scale study** on the MApp navigation service. The results of the application are published in Deliverable D9.4.

In the **cooperation with work package WP9**, the SMET (smartphone eye tracking) toolbox was applied to enable to deduce facts on cultural diversity from behaviour and attentive perception. Applying the technology to application components using location based services, JR was able together with ATE to monitor the tracks of experts and from this analyse the mobility.

Figure 18 demonstrates relevant aspects of the cooperation with WP9, as follows: (a) Large hospital area where the outdoors study took place (3 routes were investigated by the participants). (b) Participant with eye tracking glasses and smartphone with MApp navigation service installed. (c) Automated detection and localisation of smartphone in eye tracking video for the mapping of current fixations to smartphone ROIs (regions of interest). (d) Resulting statistics, as follows, (left) high percentage of map ROI usage by local citizen users versus (right) high percentage of AR (augmented reality) service usage by immigrants.

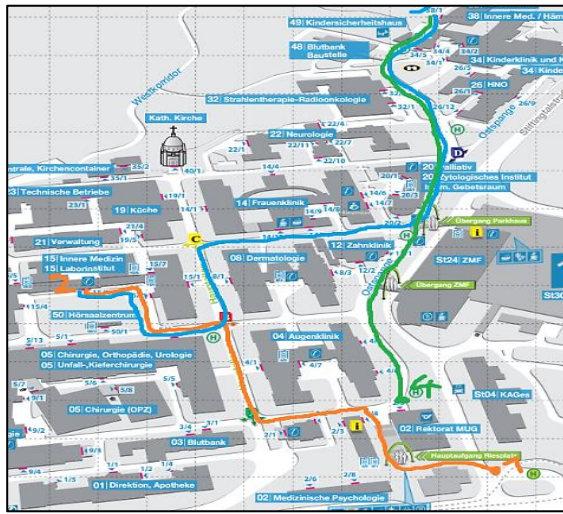
#### ***Task 4.3 Mobile Text Lens***

This task started in month 1 and ended in month 24. It was led by CTU.

The work in this task is based on the previous state-of-the-art level of text detection as defined in the first project year, by the work by CTU. The work in the first reporting period included the continuous improvement of the Text Lens, i.e., the “Text Spotter” performance and making a WWW interface to the service available<sup>2</sup> that enables any user world-wide to upload

<sup>2</sup> <http://textspotter.felk.cvut.cz/>

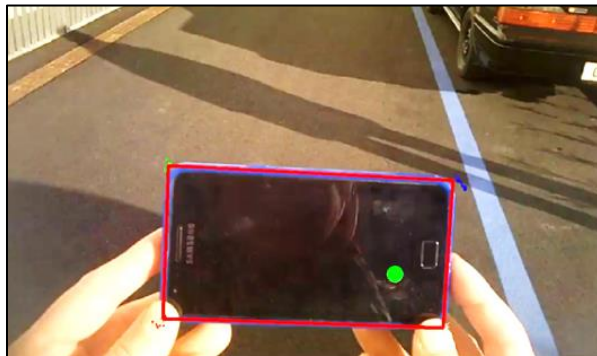
an image with text and the service responds with the text detection within that image. While this web based service will receive continuous improvements, its core components are now in a final version available as being implemented in a mobile service application, as being demonstrated at the review meeting. A second deliverable (D4.3.2) was submitted including successful results of text detection, translation and additional necessary as well as useful service components, at project month 24. Ported to Android mobile phone, a MApp component as well as a stand-alone component is available to be demonstrated at the review meeting (see Figure 19).



(a)

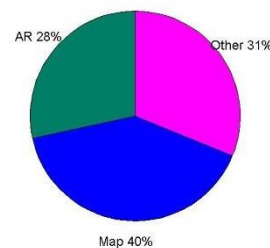


(b)

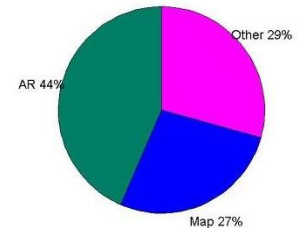


(c)

*local citizen users*



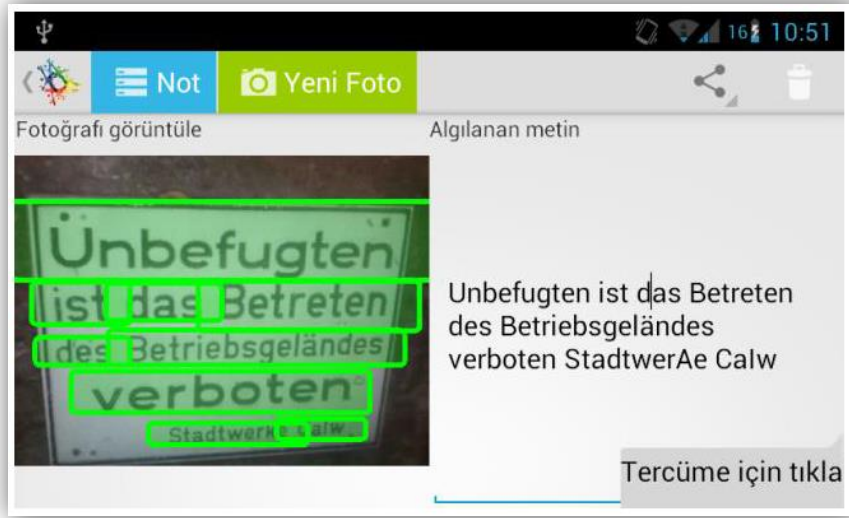
*immigrant users*



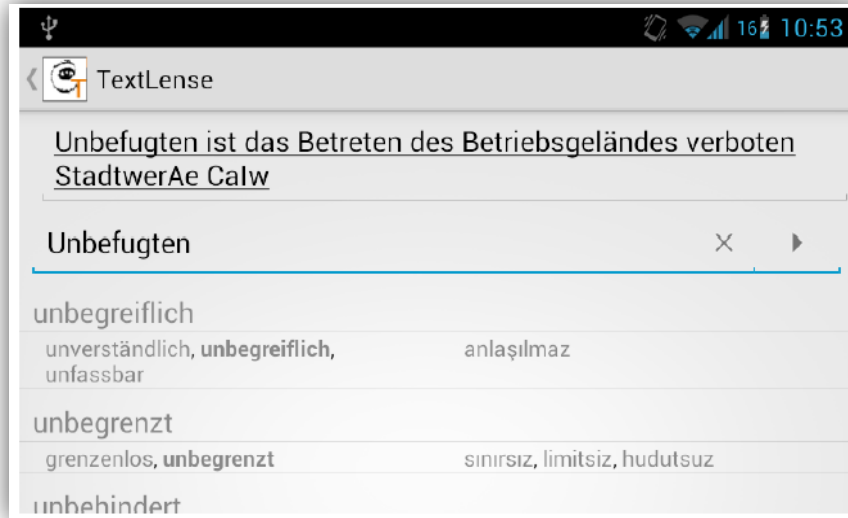
(d)

**Figure 18.** Relevant aspects of the application of innovative methodology for the automated annotation of videos of a large (in terms of video material) user study. (a) Outdoors study area. (b) Participant with eye tracking glasses. (c) Automated detection and localisation of smartphone in eye tracking videos. (d) Resulting statistics, reflecting cultural differences in wayfinding styles, depicting local users preferring map usage (left) and immigrants AR (Augmented Reality) service usage (right), respectively-





(a)



(b)

**Figure 19.** (a) New, updated user interface of the Text Lens. (b) Novel service component, depicting vocabulary that is associated with the detected and translated individual words.

### 3.4.2 HIGHLIGHTS OF WP4

- Improved geo-contextual services to facilitate targeted recommendations.
- User interface for daily self-reflection and feedback.
- Presentation of results at major conferences for human factors in computing systems (CHI, ETRA).
- Application of eye tracking based user interface evaluation in a large user study on cultural diversity in way-finding styles using the MApp navigation services.
- Text lens as a stand-alone application being available in Google Play app store.

### 3.4.3 USE OF RESOURCES IN WP4

**Table 6:** PMs of partners working in WP4. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 4	28,00	3,40	1,00	0,00	0,00	0,00	24,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	2,00
4.1	15,00		1,00														
4.2	13,00	3,40															2,00
4.3							24,00										

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 4	30,39	3,40	1,00	0,00	0,00	0,00	24,96	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,97
4.1	15,00	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
4.2	13,00	3,40	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,97
4.3	2,39	0,00	0,00	0,00	0,00	0,00	24,96	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 4	13,57	0,90	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,97
4.1	8,46	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
4.2	2,72	0,90	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,97
4.3	2,39	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 4	2,39	0,00	0,00	0,00	0,00	0,00	0,96	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	-1,03
4.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00
4.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	-1,03
4.3	2,39	0,00	0,00	0,00	0,00	0,00	0,96	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00

(d)

### 3.4.4 DEVIATIONS IN WP4

The overall spent budget of CTU is smaller than planned. This is due to the fact that the involvement into the project of the key person Jiri Matas had to be reduced because he became head of a Center of Excellence of the Czech Science Foundation. This allowed hiring young postdocs and PhD students. The professor/PhD salary ratio is about 3.5:1 in the Czech Republic (2:1 for professor/postdoc) - hence more PMs, lower spending.

### **3.1 WORK PACKAGE 5 – PERSONALISATION AND RECOMMENDATION**

#### **3.5.1 OBJECTIVES OF WP5**

The objectives of WP5 as listed in the DOW are as follows:

- To generate content abstractions derived from functional components.
- To provide databases for content information in the function of prototypical information services.
- To structure and track user profiling for the shaping of personalized services.
- To develop means to safeguard privacy and data security and prepare to raise trust in the end user.
- To develop recommendation services that map contextual entities to assistance functionality

WP5 run through Year 2 and Year 3 of the project's lifetime, resulting in a stable architecture and prototype implementations of the User Profile and the Recommender system, which was tested during the project's trials.

#### **3.5.2 PROGRESS OF WP5**

WP5 progressed according to the plan and covered the delays that were observed in the first year of the project. The developed components were stabilized, their functionalities were enhanced and they were successfully integrated to the rest of the MASELTOV platform. It should be noted that work in WP5 resulted into additional developments beside what was planned initially in the project. For example the User Profile was enhanced to provide support for virtual coins, and progress indicators. Moreover, work in WP5 supported the project's planned trials and analysis of the results by supplying reports of the collected data for select user groups or time periods, following the needs for user data and context analysis. The following paragraphs summarize the progress made in each of the WP5 tasks.

##### ***Task 5.1 Content Abstraction and Databases***

The work in T5.1 focused on the design of mechanisms for collecting and storing user contextual information. Contextual information results from the user actions, like current location, current use of MApp applications, the identities of other users around this one and is collected through a number of onboard sensors, including MApp applications. Task 5.1 has formalized how the contextual information is represented through events and how it is mapped into the persistent storage of the back end database. During the reporting period, the structure of the database was stabilized and enhanced to support the concept of virtual coins. Moreover, support tools were developed for dumping the database and producing reports that were used for analysis of the user data collected during the project trials.

##### ***Task 5.2 User Profiling and Personalization***

The work in T5.2 focused on the design of the User Profile, which is a central component of the MASELTOV platform. The User Profile is responsible for a number of functionalities: (a) collecting contextual user data that are represented as events from other MApp applications and transmitting them to the back end server for storing them, (b) collecting progress and usage data from other MApp applications for generating statistics and progress reports, (c) allowing the user to define their profile data and preferences for offering more targeted and personalized services. Task T5.2 has defined the architecture of the User Profile, its design and interfaces and has come up with a prototype implementation that has been smoothly integrated with the other MApp applications. The prototype implementation is multilingual, currently supporting six languages but designed so that additional languages are easy to be integrated.

***Task 5.3 Privacy, Trust and Data Security***

The work in T5.3 reviewed the legislation in effect relating to privacy issues of user data and focused on incorporating privacy and trust enhancing functionalities into the User Profile. Registration and user authentication has been designed and the implemented functionalities have been integrated to the User Profile. To be able to use the MApp applications users have to register in advance. Given that privacy issues are a sensitive issue, especially when referring to immigrants, anonymous registration is supported in addition to the normal one. Even for a normal registration, the User Profile maintains no real user identity. Users are identified by an email address they supply during registration. Moreover, privacy functionalities put the user in control of what contextual information is allowed to be collected. Users may disallow for example collection of their current location. The design of the User Profile and the back end database maintain a loose connection between the user identity and the contextual data pertaining to it. Therefore it is not possible to associate any captured contextual information to a particular person (immigrant). The security functionalities that have been implemented include the standard authentication through login and logout for accessing the MApp services. Passwords are never sent in the clear, whereas users are required to change them after a number of logins. Throughout a session user contextual data are sent in the clear but the association with the user to whom they pertain is obfuscated through the use of hashes, therefore neither their integrity can be compromised nor the association with the user to whom they pertain can be discovered.

***Task 5.4 Recommendation Services***

The work in T5.4 focused on the design and prototype implementation of the recommender service, which provides personalized recommendations to users based on their profile data, declared preferences and contextual information, in an attempt to enhance the user experience and social integration. The recommender is based on the widely used DROOLS rule based engine and generates recommendations when triggered by events collected by the User Profile. The rules that are used for generating recommendations are dependent on the User Profile data, and the dynamically captured user context as represented by the various events. Twelve rules have been implemented, recommending the user to look up additional information, take a relevant lesson, visit a place, etc.

**3.5.3 HIGHLIGHTS OF WP5**

The results of WP5 in Year 3 are the following:

- Updates to the designs for the User Profile and the Recommendation services, and finalization of their interfaces, both for the client and the server components.
- Design, implementation and integration of the user registration functionalities.
- Design, implementation, and integration of user login/logout and session functionalities.
- Design, implementation, and integration of functionalities that allow the users to control which parts of their contextual information are allowed to be collected.
- Design and implementation of multilingual support for the User Profile and the Recommender components.
- Prototype implementation of active recommendations, which contain links that can be followed by clicking on them.
- Prototype implementation of a set of rules for generating recommendations to the user.
- API design and prototype implementation of functionalities for the support of virtual coins.
- Editing and submission of Deliverables D5.3, D5.4.2 that were planned for M21.

- Development of scripts for the generation of reports from the contextual data stored in the backend database for subsequent analysis.

The objectives to WP5 have been met for Year 3. The developed software modules were smoothly integrated to the rest of the MApp applications.

### 3.5.4 USE OF RESOURCES IN WP5

WP5 has progressed according to the plan in PP3, fulfilling its objectives and finalizing the developments and producing demonstrable results. The prototypes and components produced by WP5 have been seamlessly integrated to the rest of the MASELTOV platform and used in the field trials. The following Table 7 shows the consumed and allocated effort for WP5. The planned effort concerns the total duration of the project, where-as the last column reports on the cumulative effort spent during the first two years of the project.

**Table 7:** PMs of partners working in WP5. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 5	0,00	0,00	34,00	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.1			10,00														
5.2			9,00														
5.3			5,00		1,00												
5.4			10,00														

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 5	0,00	0,00	33,17	0,00	1,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.1	0,00	0,00	9,99	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.2	0,00	0,00	9,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.3	0,00	0,00	5,00	0,00	1,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.4	0,00	0,00	9,18	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 5	0,00	0,00	15,20	0,00	1,04	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.1	0,00	0,00	3,68	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.2	0,00	0,00	2,62	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.3	0,00	0,00	4,41	0,00	1,04	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.4	0,00	0,00	4,49	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 5	0,00	0,00	-0,83	0,00	0,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.1	0,00	0,00	-0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.3	0,00	0,00	0,00	0,00	0,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
5.4	0,00	0,00	-0,82	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

(d)

By the end of Year 3, the consumed resources were in accord with the planned ones. The remaining resources of T5.4 were used for either the integration tasks or the additional support tasks relating to the report generation from the collected user contextual data.

### 3.5.5 DEVIATIONS IN WP5

None.

## 3.2 WORK PACKAGE 6 – MOBILE ASSISTANCE & INFORMATION SERVICES

### 3.6.1 OBJECTIVES OF WP6

The **Work Package 6** tackles the challenges as follows, (i) to develop mobile assistance as a global portal to information, learning, and social computing services, (ii) to implement most fundamental administrative information services, (iii) to implement an intuitive navigation shell for the appropriation of public transportation navigation services, and (iv) to develop emergency services in the context of fundamental health care specifically for immigrants.

**Work Package 6** is structured in four tasks: *Task 6.1* provides the central **mobile assistance service** and by this the global portal into a choice on various services, including information, learning, and community building services. *Task 6.2* develops a **bureaucratic information service** not only to provide specific helpful information, but it also interfaces to thematically associated learning and gaming. *Task 6.3* investigates and develops towards an intuitive user interface for **navigation assistance** and personalised location based information access. *Task 6.4* realises a **health care assistant** including emergency services and informs “how to’s” when communicating with the medical services, when searching for medical security and associated rights.

The efforts in WP6 shall, firstly, lead to a basic dashboard service that provides entries to the most important innovative service components for the support of the immigrant. Furthermore, services for the information of the immigrant are added, for administration, navigation and health care, being interlinked with other innovative services.

### 3.6.2 PROGRESS OF WP6

The objective of this work package is to develop a global portal to information, learning and social computing service. Additionally, individual services will be developed, including an administrative information and health care service / platform and an intuitive navigation for the public transportation including a journey planner and location based information access.

This work package started in month 07 and was finished in month 33. The objectives of the work package and the requirements were fulfilled.

#### *Task 6.1 Mobile Assistant*

The goal of this task is to provide the central mobile assistance service and by this the global portal into a choice on various services, including information, learning, and community building services.

The dashboard with all identified MASELTOV services was designed and developed. The dashboard with all identified MASELTOV services was constantly updated and supports multiple languages. Additionally, the availability of modules in different cities is displayed (clickable/not clickable). As well as the languages and the setting for the city can be changed within the user profile. Within the status bar (on the right side) there is an additional option for the user. Within this menu item the user can log out, read the disclaimer details and project information.

Furthermore, the integration runs were executed continuously in order to integrate the actual development status of the individual services in an integrated MApp application. Especially before the trials regular updates and integration runs were executed. In order to enable a smoothly integrated run, a sheet was set up in order to track the actual status of the components and to have an overview about implemented features.



MApp Integration					
Datei Bearbeiten Ansicht Einfügen Format Daten Tools Hilfe Alle Änderungen in Drive gespeichert					
Integration Run, 7th of March 2014					
A	B	C	D	E	F
2	MApp Service / Responsible Partner	Version Number	Implemented features/bugs in comparison to the previous version	Maven Repository (y/n)	.apk File (y/n)
3	CTU	0.5	integration with UserService (AIT - reading user language, sending events) minor bug fix on off-line dictionary + Arabic translation (Spanish-Arabic demonstration) (work in progress - added automatic translation, now it is verified by native speakers)	n	y
4	masetlov-poi / JR	0.0.2-SNAPSHOT	text query + OSM integration	y	n
5	masetlov-context / JR	0.0.2-SNAPSHOT	events sent to user profile for recommendations (Instant Place Detection for review)	y	n
6	masetlov-arnav / JR	0.0.2-SNAPSHOT	usage events + internationalization	y	n
7			* change from nickname to username in login process * user profile TAG field management * logout process * user localization management via GPS Tracking field		
	georadar / TI	0.0.2-SNAPSHOT	* events sent to user profile	y	n
8	socialApp / TI	0.0.3-SNAPSHOT	* change from nickname to username in login process	y	n
9	userprofile / AIT	1.0.3	* CTU - TI interlinkage * changed layout for user preferences, grouped into categories * added a drawer list for category selection * lists recommendations (currently only last 15) * a left drawer for filtering recommendations between Unread, Read, Starred, All * actions delete, read/unread/ starred/unstarred (currently does change the status of the recommendation on server but does not refresh the list) * need to change the order to DATE DESCENDING	n	y
10	recommendations / AIT	1.0.0	first available version of PP app	n	y
11	languagelearning / PP	1.1	not integrated	n	y

**Figure 20.** Integration map.

Figure 20 shows the integration sheet (as well available on the following link: <https://docs.google.com/spreadsheets/ccc?key=0AjGQH3WNMpsvdEhpUE9xUkRsTVRaXzFGUjFGbFluQUE#gid=0>). The result of the task is summarized in the deliverable D6.1.2 Mobile Assistant Service.

### Task 6.2 Administration Service

This task started in month 1 and ended in month 18. It was led by FLU.

### Task 6.3 POI Navigation Service

The objective of the third task is the development of the state-of-the journey planner application combined with navigation for Vienna and London. In addition to that, personalised location based information access will be enabled based on a POI search application. Both services will be included within the integrated MApp application. The service is available in Turkish, Spanish, English and German. Additionally, the interlinkage between different services (e.g.: recommendation service) were developed.

The next figures (Figure 21 and Figure 22) represent the screenshots of the navigation service (Vienna/London).

Figure 23 represents the screenshots of the finalised POI search service.

In consultation with the NGO's the most important POI categories for the immigrants were defined. It was important to cover all topics that are relevant for the immigrants and include them in one service. The following categories and POIs were included in the service:

- Health care
  - Hospital
  - Pharmacy
  - Doctor

- Clinic
  - Dentist
  - Health
- Shops
  - Supermarket
  - Post office
- Administrative
  - Local government office
  - Police
- Transport
  - Subway station
  - Train station
  - Bus station
  - Railway station
- Other
  - Mosque
  - Church
  - School
  - University

The service will be available for two trial cities: Vienna, London and Madrid. The service is therefore available in Turkish, Spanish, English and German. Additionally, the interlinkage between different services (e.g.: recommendation service) were developed.

Based on the combination of the POI search service and the location-based function with the innovative navigation service, a state-of-the-art mobility service is established.

#### ***Task 6.4 Health Care Service***

As already mentioned in the previous reports, the work done in task 6.2 represented the basis for this task. Together with FHJ and the NGOs the most important requirements were defined. The result was a list of categories and corresponding information that should be within this health care service/information platform.

As already mentioned in T6.2 a prototype was developed that covers the bureaucratic as well as the health care topics. Within T6.4 FLU developed a more intuitive information platform – enabling a better user experience for the admin as well for the user. Therefore FLU implemented an innovative information platform. The content can be administrated within a backend, which is presented in Figure 24.

The content, which is entered by the admin, will be shown to the user in a native application, representing a huge benefit in comparison to the first prototype. In the first prototype a web link was called and the user left the native info module from the MApp application. The content that is available covered the most relevant categories for the immigrants as well as the topics from the MARIA scenario (Education, Employment, Health Care). Additionally, several inter-linkages with other MApp modules were implemented (e.g.: navigation, recommendation component). Figure 25 shows the native representation of the content.

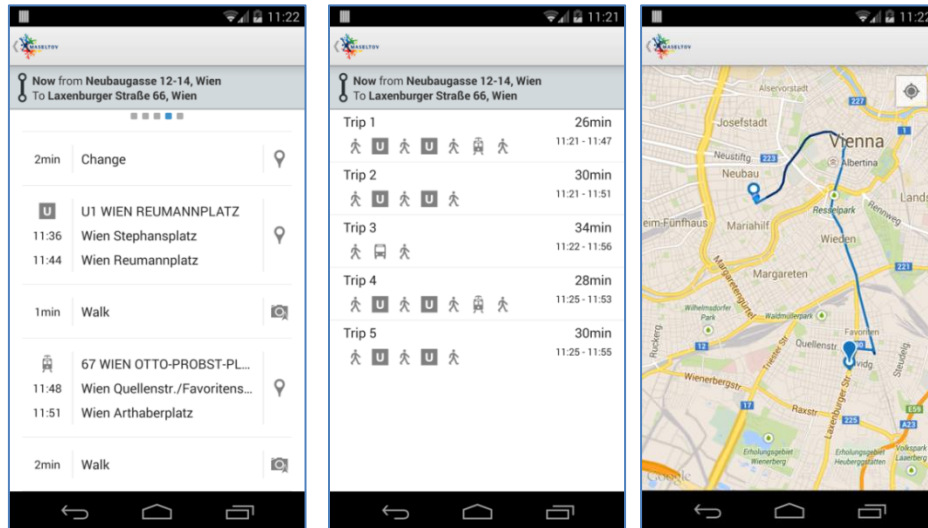


Figure 21. MApp Journey planner screenshots (Vienna).

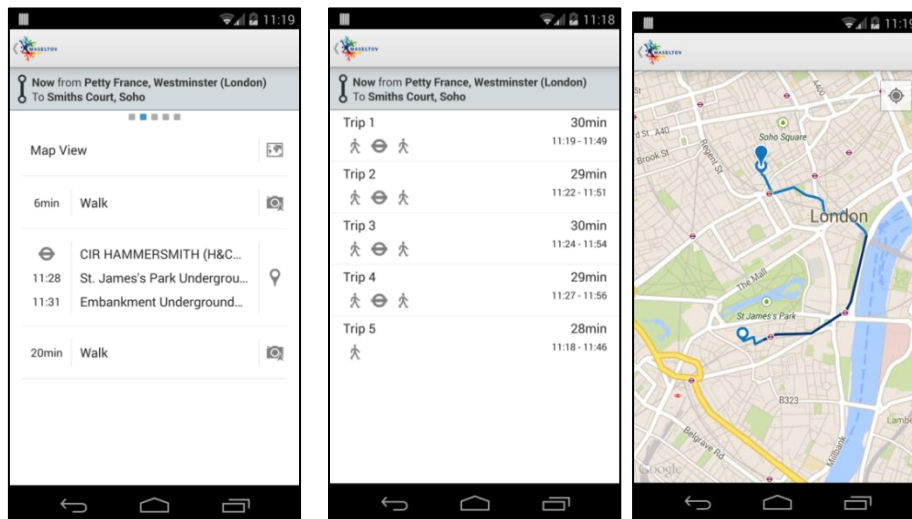


Figure 22. MApp Journey planner screenshots (London).

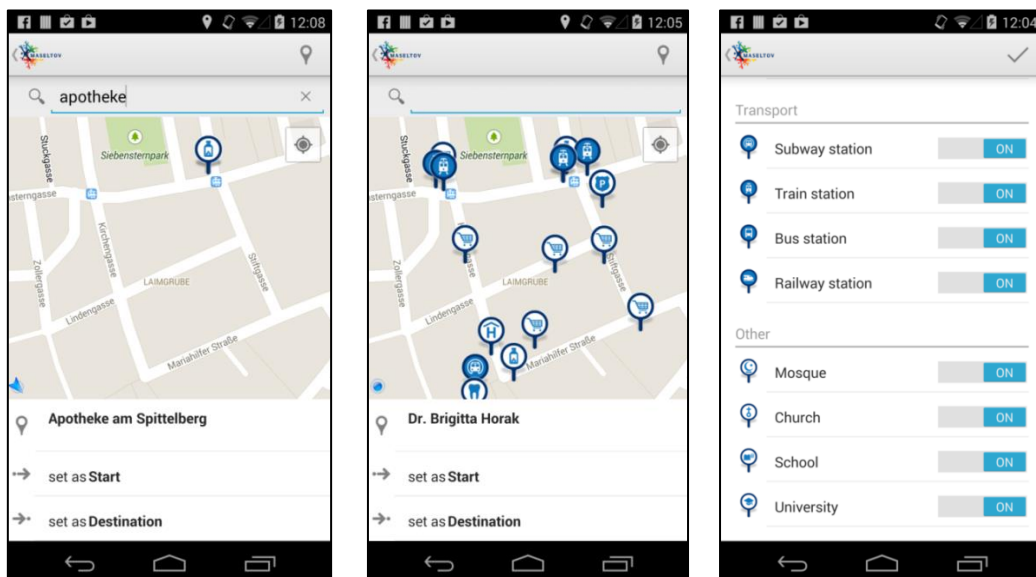


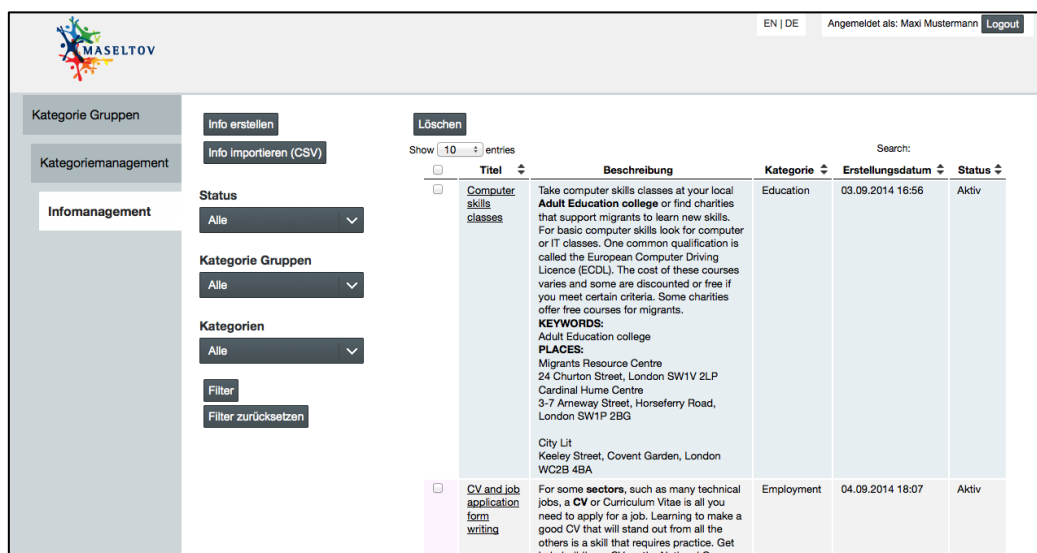
Figure 23. MApp POI search screenshots.

**Table 8:** List of categories to be within the health care service/information platform.

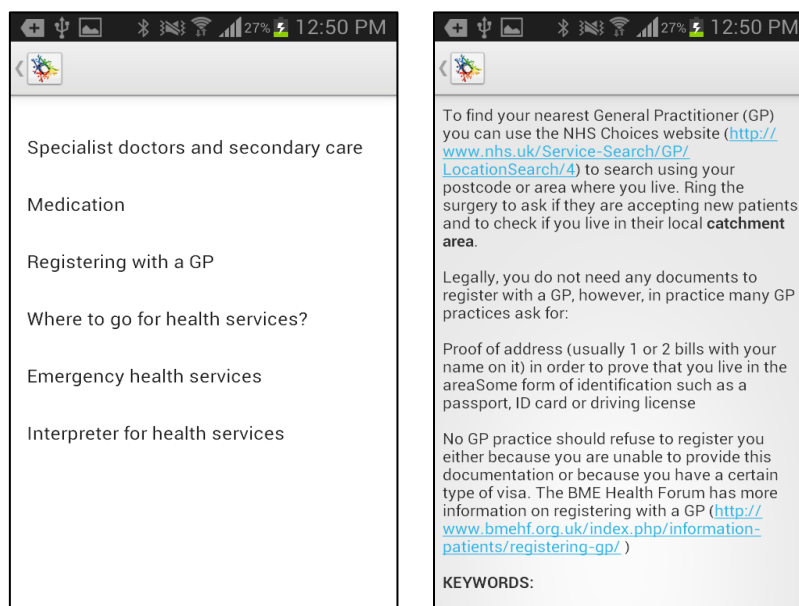
Category	Description	Items
<b>Health Care</b>	The user is able to choose from different categories of health services. Addresses and link to navigation are available.	Emergency Services, Primary Care, Secondary Care, Dental Care, Medications, Pharmacy, Entitled to NHS, Interpreter Service, FAQ, Transportation
<b>Emergency Calls &amp; Hotlines</b>	The user can instantly access this info to see emergency calls and hotlines (administration etc.)	International Emergency Calls Hotlines

### 3.6.3 HIGHLIGHTS OF WP6

- Constantly integration runs and integrated MApp application.
- Development of the navigation and POI service and development of both services for cities Vienna and London based on several iterations. Interlinkage with other modules was implemented as well as the multi-language support.
- Development of the information platform for London based on several iterations. Interlinkage with other modules was implemented as well as the multi-language support.



**Figure 24.** Information platform based on health care information (Web interface - Admin user).



**Figure 25.** Information platform based on Health care information (Mapp client - user).

**Table 9:** PMs of partners working in WP6. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 6	8,00	0,00	0,00	0,00	0,00	0,00	0,00	8,00	0,00	19,00		0,00	0,00	0,00	1,00	0,00	0,00
6.1	4,00																
6.2										6,00							
6.3	4,00									8,00							
6.4								8,00		5,00					1,00		

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 6	10,71	0,00	0,00	0,00	0,00	0,00	0,00	8,27	0,00	36,59		0,00	0,00	0,00	0,00	0,00	0,00
6.1	4,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
6.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,40		0,00	0,00	0,00	0,00	0,00	0,00
6.3	6,71	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	20,27		0,00	0,00	0,00	0,00	0,00	0,00
6.4	0,00	0,00	0,00	0,00	0,00	0,00	0,00	8,27	0,00	12,65		0,00	0,00	0,00	0,00	0,00	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 6	7,72	0,00	0,00	0,00	0,00	0,00	0,00	3,67	0,00	14,16		0,00	0,00	0,00	0,00	0,00	0,00
6.1	1,84	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
6.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
6.3	5,88	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	6,42		0,00	0,00	0,00	0,00	0,00	0,00
6.4	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,67	0,00	7,47		0,00	0,00	0,00	0,00	0,00	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 6	2,71	0,00	0,00	0,00	0,00	0,00	0,00	0,27	0,00	17,59		0,00	0,00	0,00	-1,00	0,00	0,00
6.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
6.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-2,60		0,00	0,00	0,00	0,00	0,00	0,00
6.3	2,71	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	12,27		0,00	0,00	0,00	0,00	0,00	0,00
6.4	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,27	0,00	7,65		0,00	0,00	0,00	-1,00	0,00	0,00

(d)



### 3.6.4 USE OF RESOURCES IN WP6

Table 9 provides an overview of the planned and actual resources that have been invested in this work package. The FLU MASELTOV team members who actually worked in the project do have a lower hourly rate compared to the average rate used by FLU in the Proposal / Description of Work. This fact has been described also in the context of the Y1 and Y2 reporting and was accepted by the EC.

#### 3.7.1 DEVIATIONS IN WP6

None.



Figure 26: Some screenshots of the game.



### **3.3 WORK PACKAGE 7 – PERSUASIVE LEARNING SERVICES**

#### **3.7.2 OBJECTIVES OF WP7**

The objectives of WP7 are:

- To increase immigrants' ability to function in an unfamiliar society by facilitating communication and learning, and by structuring technological supports according to user needs.
- To change in a positive way immigrants' behaviour and attitudes through technology-mediated persuasion and social networking influence.
- To take advantage of situation and context to capture user motivation and extend immediate assistance into more structured learning, game-playing and interaction with other immigrants and the wider community.

In the first nine months of Year 3 work effort was initially focused on the recruitment and induction of the replacement language learning partner, Pearson Publishing Ltd., which was vital to the delivery of Task 7.5.2 Mobile Situated Language Learning.

#### **3.7.3 PROGRESS OF WP7**

##### ***Task 7.1: Incidental Learning Framework (ILF)***

D7.1.2, focusing on further development of the Incidental Learning Framework (ILF) was delivered in M18 but there was a continued focus on the development and application of the ILF in D7.5.2 (Mobile Situated Language Learning). This was presented at the international IADIS Mobile Learning conference in Madrid, Spain, in March, 2014.

During this period there have also been discussions to progress the ILF through drawing on to analyse the data from the Milton Keynes field trial (formally part of WP9), which took place between the end of January and March 2015.

The ILF has served as a shared representation between partners from different discipline areas in MASELTOV to enable educational design of the services. It has also made a theoretical contribution in the field of mobile learning. There has been a high level of interest in the framework when it has been presented, and in using it in other contexts. Given this interest, the Open University team is continuing to work on the ILF and this will extend beyond the end of the MASELTOV project. One important focus of this work is to consider its applicability beyond MASELTOV.

##### ***Task 7.2: Feedback and Progress Indicators***

D7.2 (reporting on Feedback and Progress Indicators) was delivered in M18 (as scheduled) but there was a continued focus on the implementation of the Feedback and Progress Indicators in D7.5.2, and also in the Milton Keynes (UK) Field Trial (WP9). Building on the five key types of feedback and progress indicators, derived from the literature, the SCAMP framework was developed focusing on the following aspects: Social, Cognitive, Affective Motivation and Progress. This is described in a journal publication (see Jones et al., 2014). The framework has also been presented in a presentation by Professor Kukulska-Hulme at the University of California at Berkeley and has had positive feedback.

##### ***Task 7.3/7.4: Persuasive Assistance and Playful Cultural Learning***

In the final phases of 7.3&7.4 (that is, the further development of D7.3/D7.4 (delivered in M24) towards D7.4.2 (delivered M33)), the game has been made available for download on Google Play. Furthermore, final features and functionalities to support integration have been

added to the game and tested; the currency system allows players to earn currency by using MApp services, then spend it at the in-game store. Final actions for deployment have included testing on different platforms than those used for field trials, identifying and bug-fixing issues. Academic contribution has also been delivered through a paper documenting the final game design in IDGEI2015, Atlanta, and participation presenting the game at the final MASELTOV conference, London. The game currently has 100+ downloads on Google Play, and a 4.5\* ranking, though some feedback from end-users on Google Play, including an issue with certain tablets causing a bug at the midpoint of the game, have been identified by the user community and addressed. Work has also included optimisation of file size and performance, with the game reduced to 135Mb to increase its accessibility to users with slow/poor internet connections. Preliminary analysis of field trial findings shows that, as expected, immigrants who were non-gamers had little interest in the game, with ~60% of users failing to access it a single time; taken in perspective, however, that 10 users actively engaged with it is an encouraging starting point when considering exploitation to a wider user base, particularly immigrants who are gamers but might be less aware of NGO services than the groups used in the trials.

#### ***Task 7.5: Mobile Situated Language Learning***

A new language learning partner and Task Lead, Pearson Publishing Ltd (PP) was recruited informally in January 2014 and work began on Task 7.5.2. PP replaced BUS on this task. D7.5.2 was delivered on time in M33 although PP was not formally admitted to the project until M34 (see below).

PP brought significant educational and publishing experience to the project as well as a new platform for delivering learning materials on smartphones. Language learning resources were developed from scratch for the MASELTOV project.

Initial work in this task was based around exploring the Incidental Learning Framework developed by OU. Learning materials were devised that complemented its aims and approach. Planning of structure and content was informed by the work done in D7.5.1, which set out detailed criteria for mobile language learning. Scope, subject matter and a suitable pedagogical approach were agreed through meetings and workshops with OU.

In total, six rich, multimedia and interactive language learning modules were devised, written and produced for the project field trials. They were translated and produced in three versions: learning English for Spanish speakers, learning English for Arabic speakers and learning German for Turkish speakers. The content and the platform were well received by the project participants in Graz, London and Milton Keynes.

D7.5.2 described the structure, features and pedagogical approach of the language modules in detail. It also illustrated how the materials met each of the criteria for language learning activities outlined in D7.5.1, including their incorporation of social networks as an added dimension to learning (see D8.3.3). Further work since the trials has improved the appearance and content of language lessons and added new features ready for exploitation.

#### **3.7.4 HIGHLIGHTS OF WP7**

- Developed SCAMP model from the Feedback and Progress Indicators (FPI) work.
- Language lessons completed and evaluated at London, Graz and MK trials with positive findings.
- An OU project SALSA ([Sensors and Apps for Languages in Smart Areas](#)) started in September within the larger MKSMART project. The SALSA project, on location-

based language learning with beacon technologies in smart cities, has applied some of the research findings from WP7 and has received much interest from various UK organisations. This has included, for example, an external talk to language tutors at Adult Continuing Education, Bletchley, Milton Keynes (Dr. Mark Gaved).

- Presentation and follow up paper at The University of California, Berkeley (Prof. Agnes Kukulska-Hulme).

### 3.7.5 USE OF RESOURCES IN WP7

**Table 10:** PMs of partners working in WP7. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 7	0,00	0,00	0,00	0,00	24,00	23,00	6,00	0,00	0,00	0,00		6,28	0,00	0,00	0,00	16,50	0,00
7.1					10,00	2,00											
7.2					5,00												
7.3/4						21,00											
7.5					9,00		6,00					6,28				16,50	

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 7	0,00	0,00	0,00	0,00	23,68	21,10	11,76	0,00	0,00	0,00		6,79	0,00	0,00	0,00	17,65	0,00
7.1	0,00	0,00	0,00	0,00	7,85	2,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.2	0,00	0,00	0,00	0,00	4,33	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	1,16	0,00
7.3/4	0,00	0,00	0,00	0,00	0,00	18,79	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.5	0,00	0,00	0,00	0,00	11,50	0,00	11,76	0,00	0,00	0,00		6,79	0,00	0,00	0,00	16,49	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 7	0,00	0,00	0,00	0,00	4,22	2,58	11,76	0,00	0,00	0,00		0,00	0,00	0,00	0,00	17,65	0,00
7.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	1,16	0,00
7.3/4	0,00	0,00	0,00	0,00	0,00	2,58	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.5	0,00	0,00	0,00	0,00	4,22	0,00	11,76	0,00	0,00	0,00		0,00	0,00	0,00	0,00	16,49	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 7	0,00	0,00	0,00	0,00	-0,32	-1,90	5,76	0,00	0,00	0,00		0,51	0,00	0,00	0,00	1,15	0,00
7.1	0,00	0,00	0,00	0,00	-2,15	0,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.2	0,00	0,00	0,00	0,00	-0,67	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	1,16	0,00
7.3/4	0,00	0,00	0,00	0,00	0,00	-2,21	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
7.5	0,00	0,00	0,00	0,00	2,50	0,00	5,76	0,00	0,00	0,00		0,51	0,00	0,00	0,00	-0,01	0,00

(d)

### 3.7.6 DEVIATIONS IN WP7

#### *Delivery of language lessons*

Pearson Publishing (PP) was informally recruited as a replacement partner for BUS in January 2014. It carried out work on the language learning lessons in good faith, with a view to receiving some initial funding. Due to a significant delay in being accepted formally onto the project, this initial funding was not forthcoming. Delay to receipt of funding resulted in a delay in the completion of the language learning materials. This contributed to the decision to slightly postpone the start dates of the final field trials, which allowed the language lessons to be delivered in time to be used extensively. They were positively reviewed. PP was formally

accepted as a project partner on 7 October 2014 (M34) and duly received its initial funding. D7.5.2 was delivered on schedule in M33.

### ***Loss of BUS social network***

The change of language learning partner from BUS to PP meant the loss of the extensive busuu.com social network. This necessitated rethinking the way that a social learning aspect could be incorporated into the project. A good social element was instead introduced to language learning by use of the Forum and by linking to Facebook.

### ***Additional work effort for 7.5.2***

Given that PP's expertise, interests and technological capability were different to those of BUS, some realignment of work effort took place. A slight shift in focus away from social networking (WP8) meant more work effort available for the development of language learning materials. PP was able to increase its resources to 16.5 PM from the 7.38 PM inherited from BUS. The result was richer, more adaptable language lessons.

### ***Milton Keynes field trials***

The addition of a further field trial in Milton Keynes was a deviation from the original WP7 plan. It was run in order to gather more detailed data on language learning and cultural learning.

## **3.4 WORK PACKAGE 8 – COMMUNITY BUILDING SERVICES**

### **3.8.1 OBJECTIVES OF WP8**

**Work Package 8** has these main objectives: (i) to elevate the individual as part of a community, taking advantage of this interaction for providing adapted services enriched by the group, (ii) to improve the user experience making the participation in social networks and the access to information more satisfactory and (iii) to develop geosocial services and language learning methodologies based on Social Network interaction.

In order to reach these objectives this work package is structured in three tasks:

- **Task 8.1** in which a mobile Forum service is developed. In the MASELTOV Forum users can read community news and specific topics, can share personal experiences, interacting by means of public posts and private messages. The effectiveness of the community interactions are measured by a Social Network Analysis web application developed within the task. Community people mood and sentiment (provided that is expressed in Italian language) about specified arguments can be analysed using a Sentiment Analysis engine developed in the task as well.
- **Task 8.2** which empowers the actual local communication by means of the Help Radar<sup>3</sup> service that allows user-to-user communication when registered users need assistance. When a user needs assistance can use Help Radar service to search for volunteers with fitting competences and language skills. Help Radar displays potential volunteers nearby to the requesting participant and enables immediate getting in contact (chat).
- **Task 8.3** whose original objectives have been devised with busuu's well-established social network of language learners in mind. Some emphasis has therefore been shifted from this particular task to the delivery of mobile-situated language learning materials. Despite the withdrawal of busuu, the project's objective to stimulate language learning in social networks is confirmed with the partner PP.

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<sup>3</sup> In order to better understood by the final users the GeoRadar app has been renamed "Help Radar"

### 3.8.2 PROGRESS OF WP8

In the reporting period conceptual and implementation activities have been carried out in order to contribute to MS5. In Tasks 8.1 and 8.2 the functionalities and the UIs of the services Forum and Help Radar have been extended and improved. In Task 8.1 the Social Network Analysis module has been used to analyse the use of the Forum during the first field trials and during the final field trials. In WP8.3 the language learning in social networks has been contextualized with respect to the MASELTOV services (Forum especially).

#### *Task 8.1 Local Community Building Services*

In the reporting period the social network service has been extended and improved:

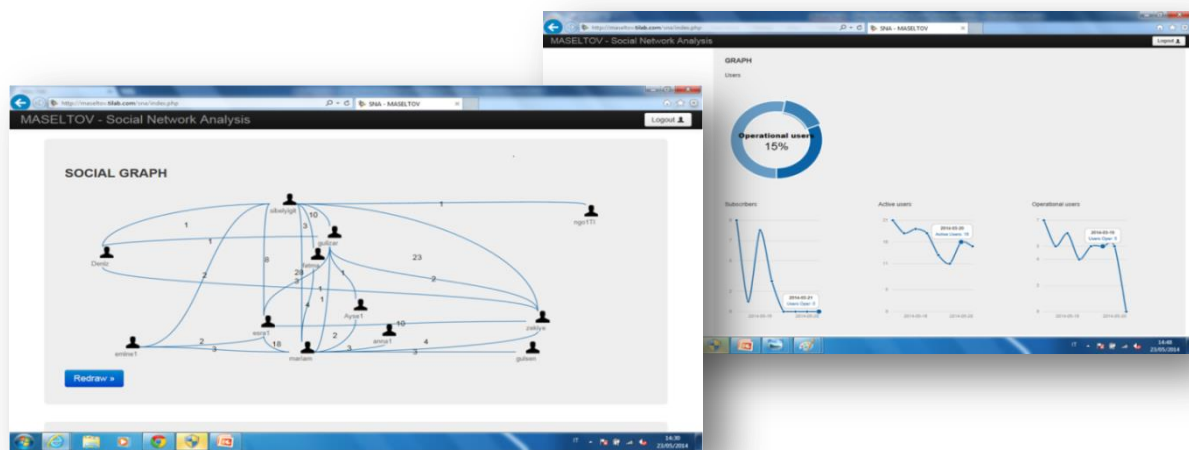
- UI and functionalities have been adapted to the requirements of WP9 (feedback from internal testing and field trials with real users):
- UI has been translated in Turkish and Spanish by professional translators
- integration with the User authentication, with the User Profile and with the Recommendation module has been completed
- implementation of interlinks from Language Learning and Text Lens modules have been completed

Forum topics have been configured as designed in collaboration with WP9 and Task 8.3. Topics contain threads of general interest for the MASELTOV community, threads about language learning and threads with comments about the MASELTOV app services.

The Social Network Analysis web application (connected to the data of the MASELTOV forum) has been used to analyse the usage of MASELTOV forum during the different phases of field trials (measurements and graphs are available).



**Figure 27:** Forum screenshots: (a) dashboard, (b) list of threads and (c) reading a post.



(a)

(b)

**Figure 28:** Social Network Analysis screenshots: (a) Social Graph and (b) Donut graph + linear graphs.

### Task 8.2 Geosocial Network Services

In the reporting period, the Help Radar service has been extended and improved:

- UI and functionalities have been adapted to the requirements of WP9 (feedback from internal testing and field trials with real users):
- UI has been translated in Turkish, Spanish and Arabic by professional translators
- integration with the User authentication, with the User Profile and with the Recommendation module has been completed
- implementation of interlinks from Language Learning and Text Lens modules have been completed

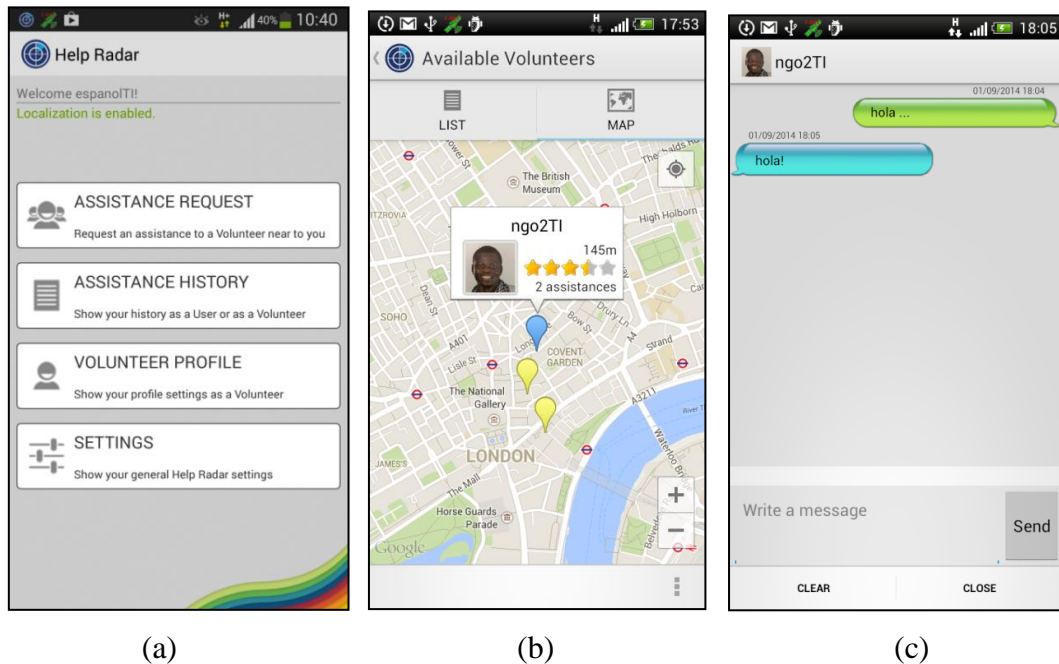
In order to make sure that volunteers are properly accredited, the volunteer's subscription phase has been enhanced: a secure registration process has been introduced by adding a "Volunteer's Validation code" in the User Profile that is verified by the Help Radar.

### Task 8.3 Language Learning in Social networks

In the reporting period Pearson Publishing (PP) took over from busuu.com (start of Project Year 3). With limited time and without the asset of busuu's social network, the expectations of this task were necessarily revised. The objectives set out in the description of work are to be achieved through the integration of three main tools:

- The MASELTOV discussion forum
- The use of Facebook
- The design and implementation of language lessons (Task 7.5) which will include prompts and activities for social learning



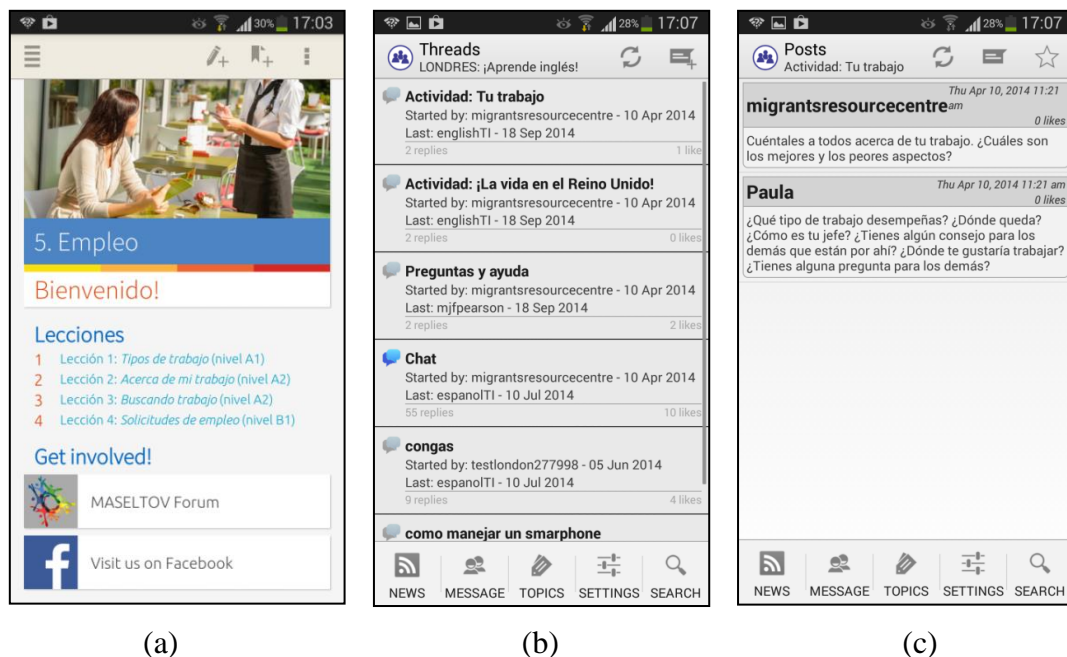


**Figure 29:** Help Radar screenshots: (a) dashboard, (b) browsing volunteers and (c) chat.

These tools aim to create and encourage an environment where users are able to exercise language skills in a ‘community of practice’. The implementation for this task includes a direct link from the language lessons to the MASELTOV Forum, ‘social activities’ built into the language lessons and a direct link from the language lessons to a dedicated MASELTOV Facebook group.

Forum topics and threads on Language Learning have been designed in collaboration with WP9 and inserted in the MASELTOV Forum (Task 8.1).

These principles are briefly introduced in D8.3.2 and described in full detail in D8.3.3.



**Figure 30:** (a) Link from Language Learning to Forum, (b) list of threads and (c) list of posts.

### 3.8.3 HIGHLIGHTS OF WP8

- Forum and Help Radar: UIs improvements
- Forum and Help Radar: UIs translations done by professional translators
- Forum and Help Radar: functionalities enhancements
- Use of Social Network Analysis tool applied to MASELOV Forum
- Concept of language learning in social networks
- Final version (in MS5) of D8.1.2, D8.2.2, D8.3.2 and D8.3.3
- All services have been used during the field trials with good results

### 3.8.4 USE OF RESOURCES IN WP8

**Table 11:** PMs of partners working in WP8. (a) Planned for the full period of the MASELOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 8	2,00	0,00	0,00	0,00	1,50	4,00	0,00	0,00	41,00	0,00		4,93	0,00	0,00	0,00	4,40	0,00
8.1									21,00								
8.2	2,00								20,00			0,49				1,20	
8.3					1,50	4,00						4,44				3,20	

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 8	3,07	0,00	0,00	0,00	1,54	2,60	0,00	0,00	44,28	0,00		6,93	0,00	0,00	0,00	2,52	0,00
8.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	22,52	0,00		0,00	0,00	0,00	0,00	0,00	0,00
8.2	3,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	21,76	0,00		0,35	0,00	0,00	0,00	0,00	0,00
8.3	0,00	0,00	0,00	0,00	1,54	2,60	0,00	0,00	0,00	0,00		6,58	0,00	0,00	0,00	2,52	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 8	3,07	0,00	0,00	0,00	1,00	0,30	0,00	0,00	13,48	0,00		0,00	0,00	0,00	0,00	2,52	0,00
8.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	5,90	0,00		0,00	0,00	0,00	0,00	0,00	0,00
8.2	3,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,58	0,00		0,00	0,00	0,00	0,00	0,00	0,00
8.3	0,00	0,00	0,00	0,00	1,00	0,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	2,52	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 8	1,07	0,00	0,00	0,00	0,04	-1,40	0,00	0,00	3,28	0,00		2,00	0,00	0,00	0,00	-1,88	0,00
8.1	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,52	0,00		0,00	0,00	0,00	0,00	0,00	0,00
8.2	1,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,76	0,00		-0,14	0,00	0,00	0,00	-1,20	0,00
8.3	0,00	0,00	0,00	0,00	0,04	-1,40	0,00	0,00	0,00	0,00		2,14	0,00	0,00	0,00	-0,68	0,00

(d)

### 3.8.5 DEVIATIONS IN WP8

Task 8.1: One of the recommendations resulting from the review meeting of Luxembourg (March 2014) is to reconsider Social Network Analysis and Sentiment Analysis following the exit of the partner busuu.com, which could have played the role of big social data provider with its widespread social network. The resultant reflections in WP8 have considered this recommendation and the availability of SNA and SA tools as already implemented (prototypical stage) and already designed with the purpose of being applied to the data of the MASELOV Forum. The amount of data which will be collected during field trials will presumably not be big enough to support a highly detailed analysis, nevertheless measurements produced by the SNA can be used during and after the fields trials. During the

trials SNA tool gives opportunity to monitor the Forum trend in order to encourage users to be more active in the Forum and to discover who are the leaders of the community (possibly involving them more deeply in MASELTOV trials activities). After the trials the measurements about the Forum usage enrich the analysis of results carried on by WP9. The sentiment analysis (SA) tool manages opinions only in Italian but field trials are not carried out in Italy. Therefore SA activities are not applied in the third year of the project. Nevertheless no shift of budget is requested since during YR3 more emphasis is being put by Task 8.1 in the support of field trials (configuration and administration of the Forum, SNA).

The departure of busuu from the project and the loss of social assets and expertise has led to some removal of emphasis from the Task 8.3 and a revised work plan (see above). It is believed that the new work plan nevertheless fulfils the projects objectives adequately.

### **3.5 WORK PACKAGE 9 – FIELD TRIALS AND EVALUATION**

#### **3.9.1 OBJECTIVES OF WP9**

Work Package 9 had three main objectives: (i) to evaluate the MASELTOV services with end users in three European areas (England, Spain and Austria) and to learn and conclude from these evaluations; (ii) To comprise assessment with respect to development of the designed user interfaces and services, To support for the design and implementation activities and To assure the compliance of the development to user-centred-design processes; and (iii) To provide input to other WPs so that the development process achieves a systematic improvement of the usability and usefulness of the services. Therefore several investigations based on the service prototypes were conducted in relation to the systems usability under the coordination of ATE (formerly CURE). The major goals were (i) to detect the conformance of services with the end-user-specific expectations and needs; (ii) to identify potential ergonomic design strengths and weaknesses; and systematically improve MASELTOV user interfaces.

The work package was structured in four tasks: T9.1 developed a comprehensive testing and evaluation plan. T9.2 implemented an iterative evaluation assuring a user-centred design approach during the development of the services and their user interfaces. T9.3 performed the implementation of the first field trials that investigate the MASELTOV services separately. Information and community services were to be evaluated in Madrid, navigation services and context awareness in Vienna, language services and the serious game are assessed in London. T9.4 particularly considers the evaluation of the final integrated prototype which was conducted with participants in all demonstrator countries.

#### **3.9.2 PROGRESS OF WP9**

##### ***Task 9.1 Preparation of Field Trials and Evaluations***

This task led to three versions of the report D9.1 that presents the evaluation plan. One part is the description of the overall methodology for the user involvement within MASELTOV. It explains the user-centred design process we follow during the project and gives status information about the progress in this respect. The second part of D9.1.1 presented the detailed planning of T9.2 – the iterative user interface evaluations. In this task an expert review on the first user interfaces concepts was conducted, followed later on by the first and second user tests. The second version (D9.1.2) replaced the description of the iterative user interface evaluations with the setup of the first field trials. After the user interfaces have been evaluated and the technological functions have been verified before, field trial setups aimed at evaluating the MASELTOV services outside the controlled lab conditions. Hence the purpose of the task T9.1.2 was to evaluate the functionality of the services and the infrastructure they

are based upon. D9.1.2 contained the exact procedure and methodologies of a one week duration field study involving thirty participants in Graz, Madrid and London. A first version integrated version of the MASELTOV system was provided to 10 immigrants from Turkey, 10 from Latin-American countries (such as Ecuador, Colombia, Peru) and 10 immigrants from Arabic speaking countries (such as e.g. Eritrea, Sudan, Bahrain).

After final improvements of the prototypes based on the feedback from first field trials a third version (D9.1.3) was elaborated describing the planning of the assessment of the final integrated prototype of the MASELTOV project. Instead of the first part this final update of D9.1 contained a first treatment of challenges commonly known in cross-cultural evaluation and research. In order to accurately evaluate the MASELTOV services in three countries involving three different cultural groups in the field, specific challenges were tackled in advance. In D9.1.3 the exact planning of selected procedures and methods

This task started in month 7 and ended in month 28. It was led by ATE.

### ***Task 9.2 Iterative evaluations of user interfaces and services***

In the reporting period the first version of D9.2 has been created within in this task. Usability experts of ATE reviewed the first concepts of the services and validated them against usability principles and heuristics. In a heuristic evaluation usability experts take the users point of view when they inspect the user interface to help uncover problems a user would probably encounter. For all detected usability issues recommendations for improvements were given (see D9.2.1).

In the reporting period the following versions of this deliverable (D9.2.2, D9.2.3) were presented containing the results of first and second user testing where immigrants were directly within lab based usability studies in London.

This task started in month 10 and ended in month 22. It was led by ATE.

### ***Task 9.3 First Field Trials***

In this task the first field trials were conducted in Graz, Madrid and London involving users of the exact MASELTOV target groups according to the predefined assessment and evaluation plan (D9.1.3). The deliverable report D9.3 covered the procedure and results of the first field trials of the MASELTOV applications (MApp). In particular it described the conditions of the trials in Austria, Spain and United Kingdom, how users were recruited and the three different evaluations carried out. In the first field trials, the participants installed a first integrated version of the MApp services on a test smartphone (Motorola Moto G), with acceptance and user experience as the main focus of the evaluation.

Due to limitations in the recruitment only Arabic users with higher educational level could be acquired for the study participation (see Table 12).

As shown in Table 13, selected services were available to be evaluated within a first integrated MApp version.

In contrast to the previous evaluations in the lab (T9.2), participants in this study used the MApp services under natural, uncontrolled conditions for the duration of one full week. Hence no explicit task based observation was conducted but user-generated feedback was gathered. Regarding the overall handling and expected experience with the services, an introduction workshop was held. During and after the field trial phase of 7 days, additional workshops were held (see Figure 31). Most relevant, persistent bugs that were reported from user feedback were documented in D9.3.

**Table 12.** Demographic sample description.

	Arabic	Latin American	Turkish
<b>Amount of participants</b>	10 (4 female, 6 male)	10 (4 female, 6 male)	10 (9 female, 1 male)
<b>Age</b>	35.2 ± 5.29 yrs	29.1 ± 11.9 yrs	29.2 ± 5.85 yrs
<b>Length of stay</b>	4.11 ± .78 yrs	2 ± 1.58 yrs	3.89 ± 2.36 yrs
<b>Education level</b>	university	secondary school	elementary school
<b>Host country language skills</b>	rather good	rather poor	poor

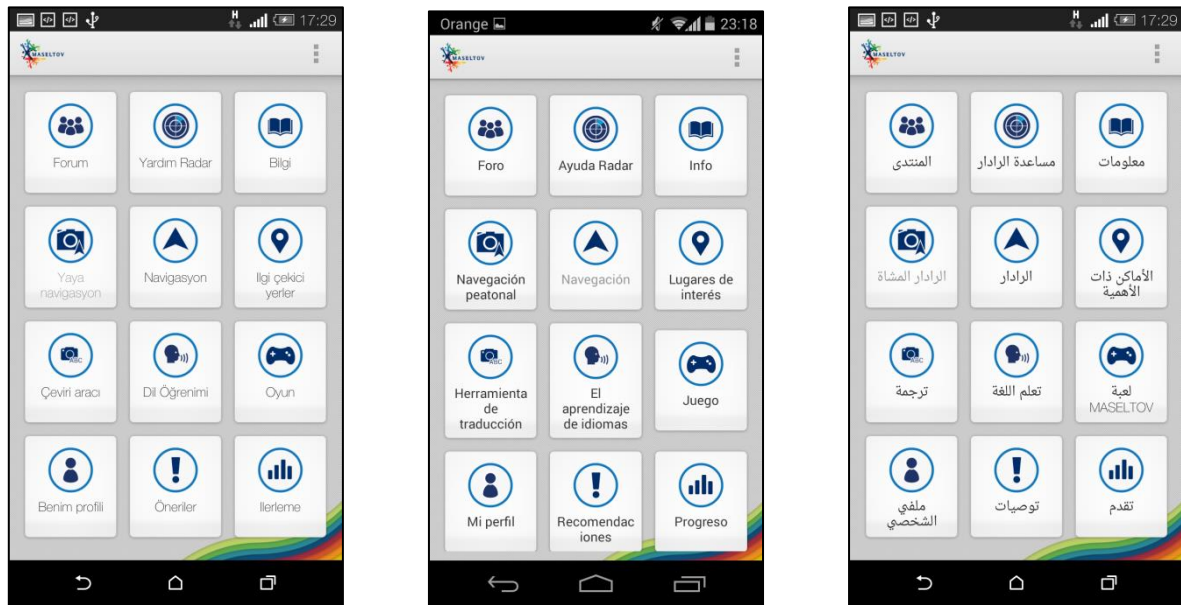
**Table 13.** MASELTOV services evaluated in the first field trials, with services being available in different languages in three countries.

Services and Modules	evaluated in (by participants)		
	United Kingdom (Latin American)	Spain (Arabic)	Austria (Turkish)
<b>Profile</b>	x	x	x
<b>Translation tool</b>	x	x	x
<b>Help Radar</b>	x	x	x
<b>Forum</b>	x		x
<b>Navigation service</b>	x		
<b>Pedestrian navigation</b>		x	
<b>Places of interest</b>	x		x
<b>Language lessons</b>	x		
<b>Game</b>	x		



**Figure 31.** Study participants in London (left) and Graz (right).





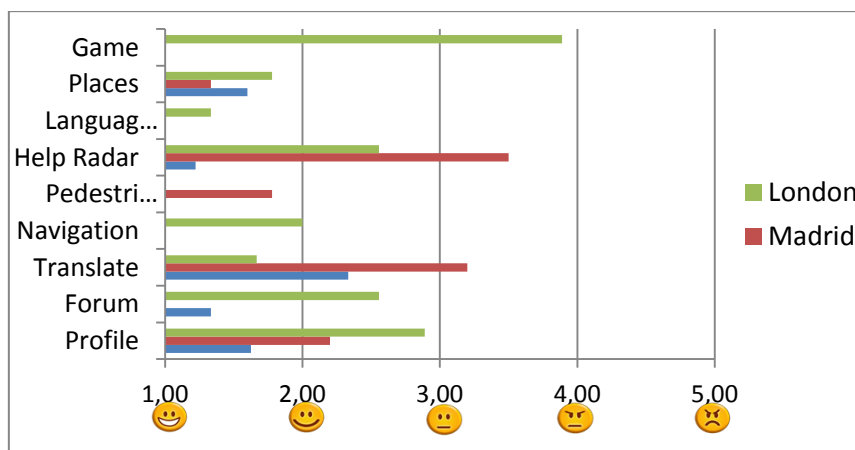
**Figure 32.** Dashboard views in the target language (from left to right: Turkish, Spanish, Arabic).

## Results

Beside concrete recommendations for the improvement of each evaluated service, results about user satisfaction (see Figure 33) and subjectively perceived usability were provided in D9.3.

From Closing workshops with participants it turned out Spanish speaking users liked the *Translation tool* and the *Language lessons* most, followed by the *Navigation service* and the “*Places of interest*” service.

Overall Turkish participants preferred the *Help Radar* and the *Forum* most to interact with each other, followed by the *Profile* and *Places of interest*. Arabic speaking users likes most the *Places of interest* and *Pedestrian navigation service*, while Latin American users in London liked most *Language lessons*, the *Translation tool* and the *Places of interest*.

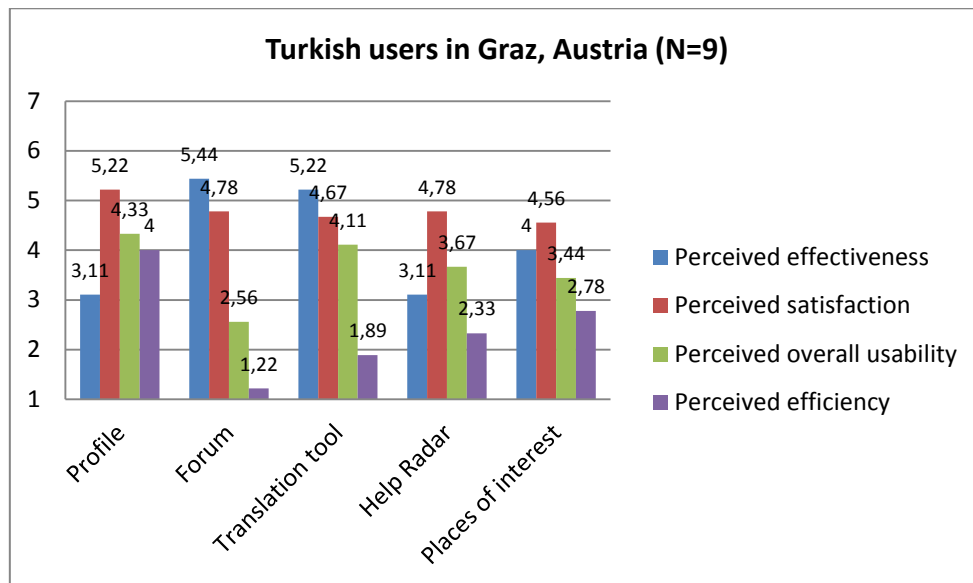


**Figure 33.** Average overall satisfaction with MApp services per user group, collected in diaries.

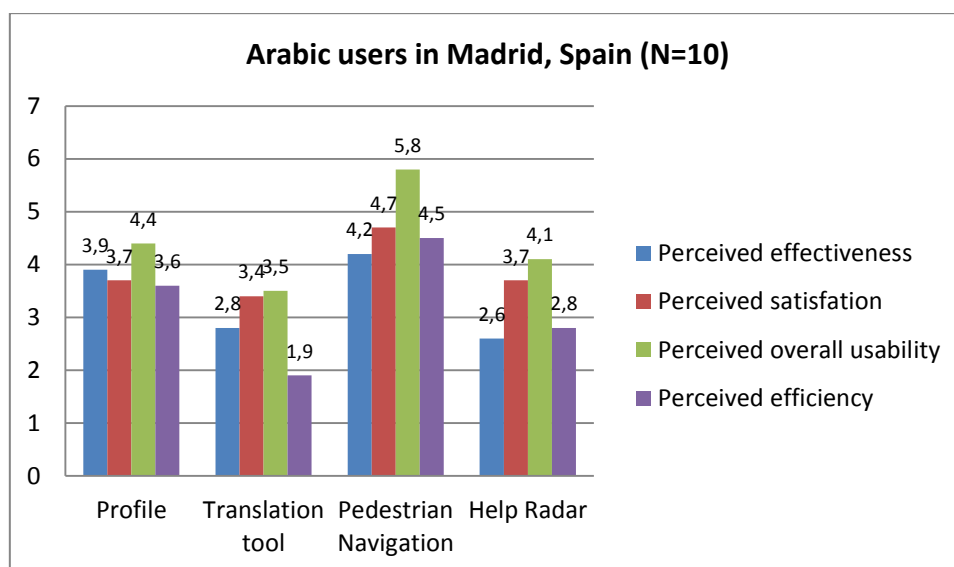
Overall **Turkish** participants had a quite **positive attitude towards all MApp services** that is why they were rather satisfied with all of them. Most effective tools were the *Forum* for social exchange and the *Translation tool* for capturing and translating texts whereas the *Translation*



*tool* was perceived as the most usable service together with the *Forum*, which was clear to participants in terms of the handling and understanding the concept of sending and receiving messages. However due to the occurred connectivity problems the *Forum* was perceived as inefficient, meaning that participants did spent too much time correcting things with the service. There were low efficiency ratings also for the *Translation tool* due to the low text recognition and translation quality.

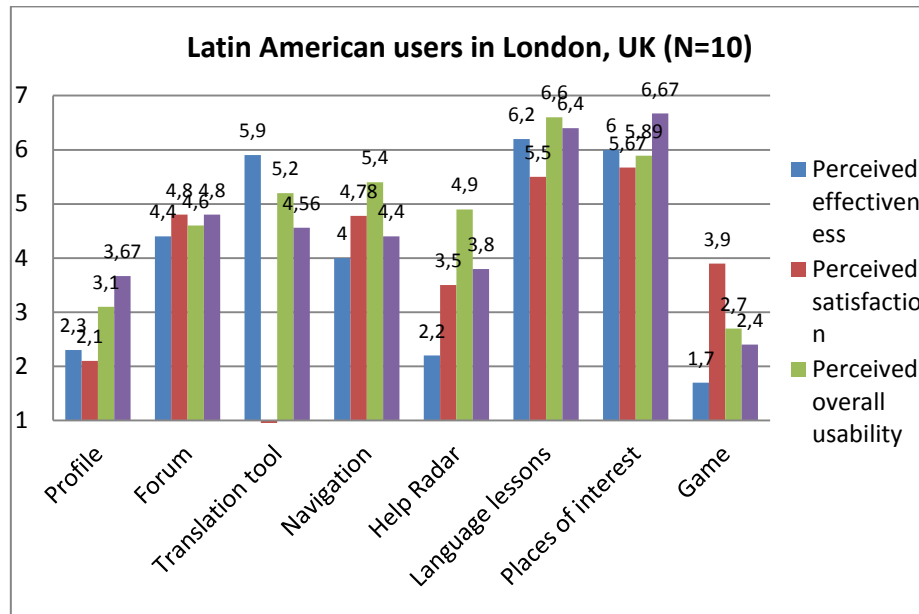


**Figure 34.** Results on Usability Metric for User Experience scale (UMUX), Turkish participants in Graz.



**Figure 35.** Results on Usability Metric for User Experience scale (UMUX), Arabic participants in Madrid.

Overall users from Latin America in London had the most positive experience with the *Pedestrian navigation*, which also was perceived as most usable, efficient, and effective, followed by the *Help Radar* and the *Profile*. Due to text recognition and translation limitations the *Translation tool* was associated with lowest efficiency.



**Figure 36.** Results on Usability Metric for User Experience scale (UMUX), Latin-Am. participants in London.

Figure 36 depicts the UMUX results provided by the Latin American immigrants group in London. It shows that overall *Language lessons* and *Places of interest* were the most usable services with highest perceived efficiency and effectiveness. That means that these two services' capacities accurately met the users' requirements.

## Conclusions

The first field trials revealed valuable insights on user experience of the involved end users interacting with the first integrated prototype for the duration of one week in London, Madrid and Graz.

- In terms of user experience among the tested services the *Language lessons* and the *Places of interest* were perceived as meeting best the participants' requirements (perceived effectiveness), followed by the *Translation tool* and the *Forum*.
- Participants encountered frustration with some services. Overall they were most satisfied with the *Language lessons* and the *Places of interest*, followed by the *Forum*, *Navigation service* (evaluated in London only), the *Pedestrian Navigation service* (evaluated in Madrid only) and the *Translation tool*.
- Nevertheless and regarding the MASELTOV target groups, as it is, the *Translation tool* is hard to use for its intended target population, e.g. Arabs with no Spanish knowledge. They would not know that the translations were wrong or how to interact with the volunteers since Arab texting in the *Help Radar* did not work.
- Overall the *Language lessons service* (evaluated in London only) was perceived as the most usable service, followed by the *Places of interest* and the *Pedestrian navigation service* (evaluated in Madrid only).

Feedback from these first field trials was transferred to developing partners to improve the services toward a fully functional integrated MASELTOV system.

### Task 9.4 Final Field Trials

In task 9.4 the fully integrated MASELTOV system was evaluated with target users in the field. For the trials the services were available in the immigrants' native language. In their final version the prototypes for the access to all services developed in WP 5 to 8 were tested one last time in a real world context with the goal to investigate usability and user experience aspects during long term usage of the main service components (see Table 14). A special focus was set on the evolution of different learning and user experience aspects over time. Hence, the purpose of this task was to evaluate not only the functionality of the services but also the infrastructure they are based upon which serve to fostering the empowerment and social inclusion of the immigrant target groups.

The final field trials lasted from End of October until end of December 2014. Immigrants used the services for the duration of eight weeks in Graz (AT), London and Milton Keynes (UK). Based on the final iteration and integration of the functional prototypes the MApp system could be evaluated with end users under real world conditions. Results from quantitative and qualitative analysis are documented in D9.4.

**Table 14.** Overview of location and language settings for the conducted service evaluations.

Services and Modules	evaluated in (by participants)		
	United Kingdom (Latin American)	United Kingdom (Arabic)	Austria (Turkish)
Profile	x	x	x
Translation tool	x	x	x
Help Radar	x	x	x
Forum	x		x
Navigation service	x	x	
Pedestrian navigation	x	x	x
Places of interest	x	x	x
Information service	x		
Language lessons	x	x	x
Game	x		x
Recommendations	x	x	x

### Research questions

These final trials focused on the investigation of differences in the usage activity of immigrants with different origins in different European countries when using MASELTOV services over time, aimed to answering the questions which services of the system did immigrants use and which services did the different immigrant groups prefer.

Further focus was set on the user experience feedback to uncover what user experience did immigrants have when using MASELTOV services over time, how satisfied they were when using the provided services over time, as well as whether they experienced privacy concerns towards the use of the MApp services.

Finally user feedback should be analyzed to learn more about what extent the MApp use served to enhance quality of life in terms of learning, understanding of cultural differences, and facilitate social integration of participating immigrants.

**Table 15.** Demographics of the final study sample.

	Turkish (N=21)	Latin-American (N=13)	Arabic (N=22)	<i>p</i> value
Age	39.19 ± 9.59	34.92 ± 10.72 <sub>N(12)</sub>	34.7 ± 9.20 <sub>N(20)</sub>	0.963
Female	18	8	11	
Male	3	5	11	
Length of stay in the hosting country	4.55 ± 2.06 <sub>N(22)</sub>	1.93 ± 0.96 <sub>N(15)</sub>	5.19 ± 5.78 <sub>N(21)</sub>	<b>0.001</b>
Language skills	2.4 ± 0.94 <sub>N(20)</sub>	2.31 ± 1.11	3.89 ± 1.29 <sub>N(19)</sub>	<b>0.001</b>
Education level*	1.64 ± 1.14 <sub>N(22)</sub>	3.38 ± 0.87	5 ± 0.53	<b>0.000</b>
Years in school	5.85 ± 2.80 <sub>N(20)</sub>	-	17.33 ± 3.12 <sub>N(9)</sub>	<b>0.000</b>

\* education level: 0... no school attainment; 1... primary school; 2... lower secondary; 3... upper secondary; 4... high school; 5... bachelor or equivalent; 6... master or equivalent; 7... doctoral or equivalent

## Methodology

In the long term field trial several different quantitative and qualitative methods and techniques were adopted to answer the above described research questions:

- **Questionnaires:** short paper-pencil pre-questionnaires were used to gather basic demographics and information about previous usage habits with different mobile technologies.
- **Usage activity logs.** App logs were collected via event logging in the User Profile (provided by the partner AIT) and consisted of the usage events of all MApp services been accessed via the MApp dashboard.
- **Experience Sampling Method.** In the study a modified approach was used to gather subjective user-feedback in the course of the field phase on a regular base. Users received weekly notifications in their mother tongue on the test device (Motorola Moto G) via text messaging and the MASELTOV Forum, sent from the facilitators.
- **Content analysis.** The qualitative feedback which was provided by users during the workshops was content analysed in order to deepen and accomplish findings from quantitative data.

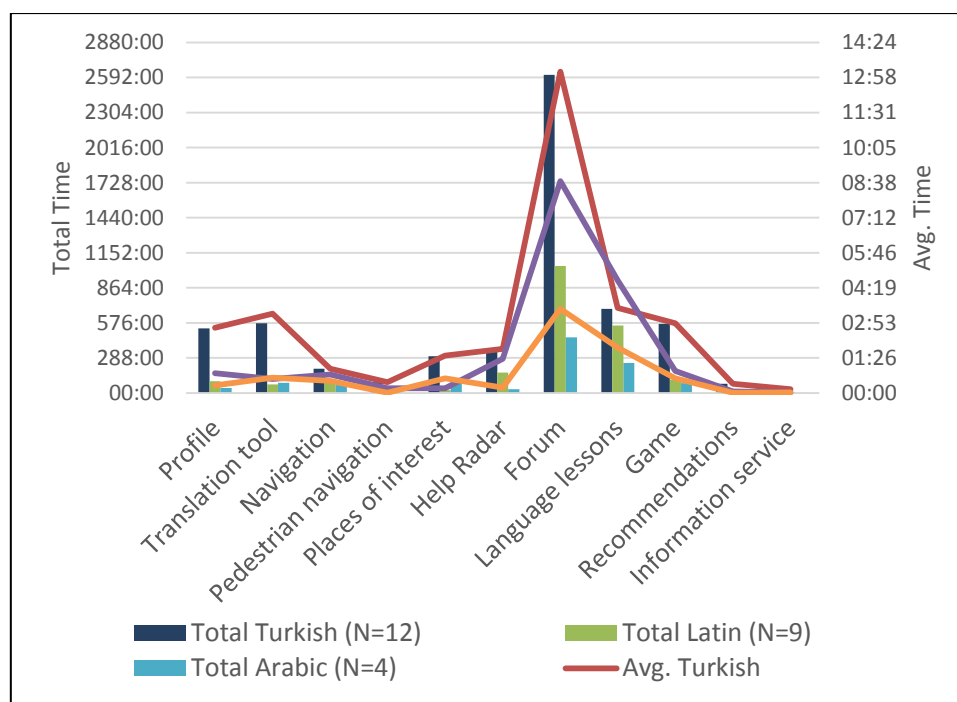
The overall study procedure followed a four phases approach: a face-to-face introduction with participants, a field phase for the duration of eight weeks, a preliminary analysis of MApp usage data, and finally a series of closing workshops with a reduced and selected amount of participants.

Demographic information in **Fehler! Verweisquelle konnte nicht gefunden werden.** shows the significant differences in the user characteristics in detail.

## Results

A variety of personal and experience-related information and data were collected from the participants during the eight weeks of trial duration. Among the main results we concluded that overall:

- **Experience with mobile apps:** Latin-American users had more experience with the use of selected mobile apps than Turkish users
- **Subjective self-esteem:** The average self-esteem of the Latin-American group was significantly higher than the one of the Turkish or the Arabic group.
- **Long term MApp usage:** Turkish participants used the MApp services significantly longer than the Latin-American and the Arabic group.



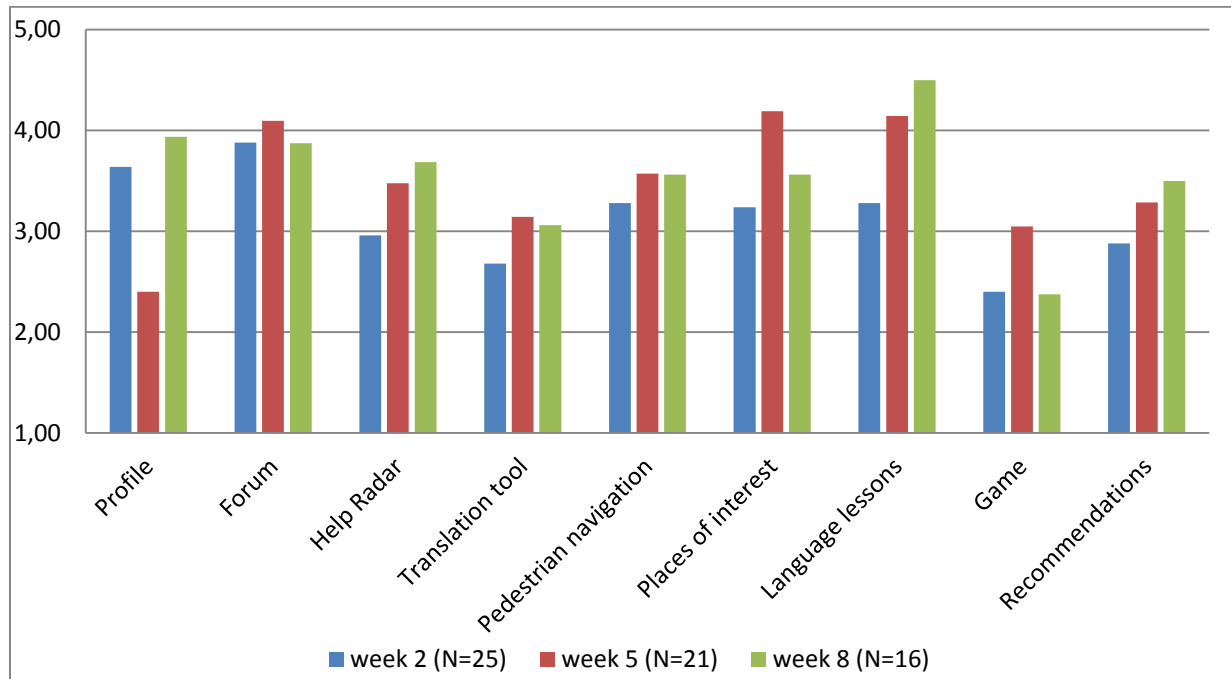
**Figure 37.** Usage duration of each MApp service per immigrant group.

Among all provided services the *Forum* was frequented most, where participants were engaged in online discussions with members of their group. Especially the Turkish community profited from the social network tool to keep connected with each other. The second most used service was the *Language lessons* service, used most by Turkish and Latin-American users. As Arabic users in London had better English skills, they probably lacked the motives to using the language learning tool.

While Turkish and Latin American users made use of the *Help Radar* Arabic users barely asked for assistance from a volunteer. As Arabic users had higher education level (and English language skills) and had been in the host country for a longer period than the other two groups, they apparently did not have the need for external help as much as one year arrival Latin American immigrants and Turkish immigrants in Graz did.

The third most used service was the *Translation tool* which was most explored by Turkish users. However due to missing data from Latin American and Arabic users in week 3 exploration and usage of the tools in the first week of trial are not reflected in this illustration.

- **Satisfaction:** Among the tested MApp services immigrants users were most satisfied with the language lessons service, followed by the Places of interest and the Forum



**Figure 38.** Overall satisfaction per service, full study sample.

Most assessments from immigrants ranged from “neither satisfied nor not satisfied” to “rather satisfied”. Overall satisfaction rose for the majority of the services over time, except the *Forum*, *Places of interest* and the *Game*.

As the *Forum* was extensively used, the increasing amount of posts and messages led to a reduction of the overall usability of the service regarding clarity and arrangement of the content on the small display. Subjective satisfaction regarding the *Places of interest* service might have been influenced by the occurrence of connectivity problems participants had using the tool on the move.

Satisfaction ratings for the *Game* remained at and below average for the duration of the field trials, due to the problems the participants reported to proceed in the game (See section c for more details).

All participant groups fully appreciated the value of the *Language lessons*, satisfaction with this service increased over time and reached the highest score among the MApp services.

While at the beginning the rating for *Recommendations* was below average, satisfaction with this component rose with time as with processing of more and more logging data (e.g. MApp usage, location tracking) the MASELTOV system produced entries in the *Recommendations* which could be read by participants.

Summarizing results most participants reported they felt the MApp was a fantastic idea to help immigrants at first arrivals. Trials went well, while major limitations were related to the connection problems, participants were put off from using the MApp more frequently because



of the connectivity. Participants were asked if they would pay for this MApp and they replied they would if the connectivity problems were resolved.

### 3.9.3 HIGHLIGHTS OF WP9

In this work package the main end user involving activities (beside the affordability study done in Task 2.2) were realized until the end of the project. Valuable insights could be gathered on usability aspects and targeted user experience factors (satisfaction, privacy concerns) and acceptance (usefulness, ease of use) as well as the impact of the services on the immigrants' quality of life.

From a methodological point of view many learnings were achieved regarding the approaching of immigrants within user centred evaluation activities including questionnaires, interview situations, recruitment aspects, the involvement of additional staff such as facilitators and volunteers as well as the coordination of various translation tasks that had to be done during the preparation, conduction and the analysis phases of the user trials.

### 3.9.4 USE OF RESOURCES IN WP9

**Fehler! Verweisquelle konnte nicht gefunden werden.** provides an overview of the planned and actual resources that have been invested in WP9 Field Trials and Evaluation. The actual resources are in accordance with the efforts reached until the end of project.

**Table 16:** PMs of partners working in WP9. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 9	2,00	17,00	0,00	0,00	4,50	0,00	2,00	0,00	0,00	1,00		0,00	5,00	4,00	5,00	0,00	8,00
9.1		3,00					1,00										2,00
9.2	2,00	5,00					1,00			1,00			3,00	2,00	3,00		
9.3		6,00			2,50								1,00	1,00	1,00		2,00
9.4		3,00			2,00								1,00	1,00	1,00		4,00

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 9	0,30	17,00	5,70	0,00	10,94	0,00	23,51	0,00	0,00	1,80		0,00	4,00	5,01	6,45	0,00	15,82
9.1	0,00	4,90	0,00	0,00	0,00	0,00	23,51	0,00	0,00	0,00		0,00	2,60	0,00	0,00	0,00	0,21
9.2	0,00	8,20	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,80		0,00	1,40	2,50	3,35	0,00	0,00
9.3	0,00	3,90	3,00	0,00	3,97	0,00	0,00	0,00	0,00	0,00		0,00	0,00	2,51	1,00	0,00	5,00
9.4	0,30	0,00	2,70	0,00	6,97	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	2,10	0,00	10,61

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 9	0,30	3,90	5,70	0,00	10,82	0,00	23,51	0,00	0,00	1,76		0,00	0,78	2,51	3,25	0,00	15,82
9.1	0,00	0,00	0,00	0,00	0,00	0,00	23,51	0,00	0,00	0,00		0,00	0,48	0,00	0,00	0,00	0,21
9.2	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,76		0,00	0,30	0,00	0,25	0,00	0,00
9.3	0,00	3,90	3,00	0,00	3,85	0,00	0,00	0,00	0,00	0,00		0,00	0,00	2,51	0,90	0,00	5,00
9.4	0,30	0,00	2,70	0,00	6,97	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	2,10	0,00	10,61

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 9	-1,70	0,00	5,70	0,00	6,44	0,00	21,51	0,00	0,00	0,80		0,91	-1,00	1,01	1,45	0,00	7,82
9.1	0,00	1,90	0,00	0,00	0,00	0,00	22,51	0,00	0,00	0,00		0,35	2,60	0,00	0,00	0,00	-1,79
9.2	-2,00	3,20	0,00	0,00	0,00	0,00	-1,00	0,00	0,00	0,80		0,00	-1,60	0,50	0,35	0,00	0,00
9.3	0,00	-2,10	3,00	0,00	1,47	0,00	0,00	0,00	0,00	0,00		0,00	-1,00	1,51	0,00	0,00	3,00
9.4	0,30	-3,00	2,70	0,00	4,97	0,00	0,00	0,00	0,00	0,00		0,55	-1,00	-1,00	1,10	0,00	6,61

(d)

### **3.9.5 DEVIATIONS IN WP9**

Main deviations from the work plan occurred in relation of leaving partners and redistribution of budget in order to proceed with the realization of the tasks in questions. Due to the exit of the partner FUNDESO from the project in Summer 2014, the consortium lost the contact to the exact target group of the Arabic immigrants in Spain, who were planned to be involved within the final trials. As a consequence the consortium decided to nonetheless make possible to include Arabic immigrants, which was realized by MRC in London who received additional budget. Additional budget was shifted to ATE as well as to involved NGOs MRC and DAN, as for the setup of the field trials additional staff had to be acquired (i.e., Spanish, Turkish and Arabic speaking facilitators, volunteers for the Help Radar service).

By investing intense search and recruiting efforts MRC managed to acquire Arabic immigrant users. However due to lacking access to the low educated immigrant community, Arabic immigrants in the final field trials were better educated than the initial recruitment criteria would have foreseen. The average language skills, the education level and the years spent in school, were significantly higher for the Arabic group than proclaimed in the MASELTOV user groups definition. Regarding these significant differences between the participants from Arabic speaking countries compared to those from Turkey and Latin American countries, direct comparison between the three groups would have been illegitimate according to requirements in cross-cultural research.

On average Arabic participants had a significant higher education level, better host language skills and more years in school than the two other groups. It can be assumed that these facts might have direct impact on mobile technology and app experience, but more importantly on the MApp services usage and user experience feedback. As a consequence in the report, the results for the Arabic groups were reported but comparative analysis between the groups aimed to always consider these inconsistencies in the user group characteristics.

## **3.6 WORK PACKAGE 10 – DISSEMINATION AND EXPLOITATION**

### **3.10.1 OBJECTIVES OF WP10**

The Work package is mainly dedicated to all the activities necessary to make MASELTOV services known and exploited. Within this WP partners are supposed to collaborate in order to realize tools, papers and all appropriate communication means in order to better explain MASELTOV objective to every stakeholder who could be interested.

Among the WP10 activities the organization of the MASELTOV web site and publication of MASELTOV work progress through text, pictures and videos; the organization of thematic, scientific and industry dedicated workshops.

The objectives of this work package are:

- to setup standard dissemination measures to maintain distribution of information to the European society.
- to prepare and organize scientific workshops that focus on MASELTOV specific themes and spread the details of innovation and knowledge to the research communities
- to identify EU ICT standardization topics and communicate with stakeholders for convergence.

- to exploit the project results for maximizing the social impact as well as for marketing of the mobile service solutions for independent living. is to develop a global portal to information, learning and social computing service.

This work package started in month one and is well on track. It is organized in 4 tasks; their relevant issues are described in the following.

### 3.10.2 PROGRESS OF WP10

#### *Task 10.1 Dissemination and Training Activities*

This task is devoted to communication and dissemination. In the first months of the project a web site and a discussion forum have been installed, as well as Facebook and Twitter accounts. On the web site the discussion forum is an efficient instrument for the communication within the Technical and Advisory Board and is also open to the interested community. The mentioned communication technologies were applied as well in the PP3 and through the homepage as well as through the Facebook page, additional attention was gathered.

The deliverable D10.1.4 on Dissemination and Training firstly addresses the dissemination activities envisaged for the MASELTOV project which are complementary to the project's and to the use of social media already illustrated in D10.1.1. All the dissemination activities are listed in a continuously updated Google<sup>4</sup> doc.

In February 2014, the **Second International Workshop on Intelligent Digital Games for Empowerment and Inclusion** (IDGEI 2014, <http://idgei2014.joanneum.at>) has been organised in collaboration with the two projects ASC-Inclusion and TARDIS, and was successfully held in Haifa, Israel, as a satellite workshop of IUI 2014 (International ACM Conference on Intelligent User Interfaces). MASELTOV contributed with a paper on the serious games aspect and feedback indicators; the presentation was received with high interest of people from the prestigious IUI conference and the workshop chairs were motivated to repeat the workshop in the future.

In March 2015, the **Third International Workshop on Intelligent Digital Games for Empowerment and Inclusion** (IDGEI 2015, <http://idgei2015.joanneum.at>) has been organised in collaboration with the two projects ASC-Inclusion and TARDIS, and was successfully held in Atlanta, GA, as a satellite workshop of IUI 2015 (International ACM Conference on Intelligent User Interfaces). MASELTOV invited three renowned keynote speakers, (1) James C. Lester (University of North Carolina, NC, USA), James M. Rehg (Georgia Institute of Technology, GA, USA) and Alex Games (Microsoft Redmond, WA, USA). The keynote speakers attracted additional visitors and gave very impressive probes of their expertise on game narratives (Prof. Lester), novel technologies for assistance in social inclusion (Prof. Rehg) and playful learning perspectives in the future (Dr. Games) which made the complete workshop a future research roadmap. MASELTOV contributed with one paper on the overall integrated project results as well as with one on the serious games aspect and feedback indicators; the presentation was received with high interest of the present keynote speakers as well as by people from the prestigious IUI conference. Again, the workshop chairs were motivated to repeat the workshop in the future, even outside the DGEI clustering initiative (see Task 10.2).

Finally, the project organised an **International Conference on Mobile Applications for Empowerment and Social Inclusion of Immigrants** at the Open University Campus in

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<sup>4</sup>available at the link

[https://docs.google.com/spreadsheet/ccc?key=0Ar0nP\\_wdouWhdEVWTVdGTEJPbm1RUVRqOEVWN2pkdmc#gid=0](https://docs.google.com/spreadsheet/ccc?key=0Ar0nP_wdouWhdEVWTVdGTEJPbm1RUVRqOEVWN2pkdmc#gid=0)

London, United Kingdom (March 16-17, 2015; <http://maseltov2015.joanneum.at/>). Stefano Kluzer (ERVET, Bologna, Italy) as a top expert in Europe expertise on ICT for migration organised and chaired a conference (with Agnes Kukulska-Hulme from Open University and Lucas Paletta from Joanneum Research as co-chairing committee) that focused on applied research and innovation aspects. The first day was dedicated to the voices of independent SMEs that are highly active in the immigration community and provide an outlook to future pathways. The second day was dedicated to the presentation of the MASELTOV project, including a real-time demonstration of the MApp service which finally was confirmed to attract the respect of the community. Stefano Kluzer and Dana Diminescu, professor at Telecom Paris Tech, and Fondation Maison des Sciences de l'Hommes, Paris, provided very positive testimonials from their side on the results that were achieved by the MASELTOV project within three years.

Several dissemination activities were conducted by representative press media.

Training activities were prepared to take place at the NGOs as part of the final field trials, in cooperation with WP9, and as described in D10.1.4

### ***Task 10.2 Clustering Activities***

The MASELTOV project (by Lucas Paletta, JR) has **chaired the organisation of the Second IDGEI in 2014** in Haifa, Israel and contributed with one paper (OU, COV) to the workshop.

Furthermore, the MASELTOV project (by Lucas Paletta, JR) has as well **chaired the Third workshop, IDGEI 2015, in Atlanta, GA, USA, in March 2015** and contributed with two papers (JR, ATE, OU, COV – and COV, OU).

The consortium cooperated in the preparation of a white paper in terms of a research roadmap together with the consortia of the other two DGEI cluster projects, i.e., ASC-INLCUSION and TARDIS, as described in **Deliverable D10.2.3**.

### ***Task 10.3 Standards in ICT Accessibility***

Standards are a useful tool for ensuring that products and components are mutually compatible and that they will function properly when connected together – even if they were made by different companies in different countries. This benefit of standardisation is known as interoperability, and it is vital for numerous industries. Also the common functionality of the MASELTOV services strongly rest upon interoperability as the various services were developed by different partners. Existing standards and “pseudo” standards have been considered and appropriate pre-standardization developments within MASELTOV took place to ensure the applicability in different European countries considering different socio-economic structures. One of the goals in MASELTOV was to identify EU ICT standardisation topics and to become aware about the potential for appropriate standards for ICT accessibility in the case of applications for immigrants, while taking existing standards into account with the aim to consider their further development. As the MASELTOV project connects different research areas, each of the areas depends on its own standardisation adaptation. Relevant existing standards from CEN or ISO have been taken into consideration to optimise efforts. The European standard (EN) accessibility requirements in the frame of the ICT domain were investigated in terms of technical specifications under consideration of recent immigrants.

Specifically, the deliverable on the standardisation (D10.3) prepares considerations arising from teaching and learning aspects. For example, learning content such as prepared for in the Language Lessons provided within the MApp have explicit or implicit learning outcomes which the user is intended to achieve if they make use of the content, i.e. these learning outcomes are the goals that a MApp user will be aiming for. To maximise accessibility a mobile application should provide a way for all users to achieve their particular learning

goals. The work in this task considered similar aspects with respect to the MASELTOV project developments.

A relevant issue in accessibility is the satisfaction of pragmatic goals, such as the recommendation being reported in association with the cost of using services requiring a continuous internet connection. A requirement to make services accessible without an internet connection when possible could be included in one or more of accessibility guidelines, standards and/or processes. Some of the MApp services, such as, the Serious Game, Translation Tool and Language Learning services, work without an internet connection.

The work on standardisation finally considers possible next steps towards standardisation that could be taken up by successor projects with similar or different technological objectives but with the focus on similar target groups with the goal of social inclusion.

#### ***Task 10.4 Exploitation***

The work done in the reporting period started in January with the finalization of D10.4.3 “Exploitation Strategy II” document, officially released in the middle of February. Relevant business models have been identified. This work is part of the final release of the document (D10.4.4) due in March 2015 (delivery date according to Amendment 2).

In designing the MASELTOV exploitation strategy plan many factors have been taken into account: the new technologies available on the market, the affordability issues, the different actors needed for playing a role in providing MASELTOV services. In Figure 39b, the main roles that have been worked out and identified in the provision of MASELTOV service are depicted:

- Service Providers are in charge of the maintenance of the services and of content specifically needed for the service.
- The Infrastructure Provider offers the infrastructure and the connectivity necessary to the MApp Provider to deploy the MApp.
- The Ethical authority is to check and make sure that every service deployed or content made available is provided in total respect of all different people/ethnics/religions.

In May 2014 in Madrid a specific session amongst all the partners has been organized on Exploitation issues and it has been planned to insert in the final document the agreements regarding the ownership / IPR of MASELTOV services and the Technology Readiness Level (TRL) that is targeted at the end of the project time. In the last months, relevant stakeholders have been contacted (such as Italian municipalities), non-profit organizations (such as Telecom Italia Foundation and Gruppo Abele).

The MASELTOV Conference was held under the scope of Task 10.1, however, the event was extremely important for exploitation objectives as well: specifically, the present company CEOs and applied research stakeholders assured in reflection to the presentation and demonstration of the MASELTOV app that it has already reached a high level of technical readiness and provided a highly appropriate service for recent immigrants. This, together with the enthusiasm of the Milton Keynes trials (WP9) is finally bringing the consortium into a situation where exploitation efforts start to become highly efficient. First contacts with the Austrian Integration Funds have been initiated in this respect directly after the conference.

#### **3.10.3 HIGHLIGHTS OF WP10**

The highlight of the reporting period was the

- organisation of the MASELTOV Conference in London (March 2015), with the appreciation of the demonstrated MApp service, and the positive feedback in the community of SME and applied research related international experts, and the
- organization of the IDGEI 2015 in Atlanta (March 2015), with a program of resulting DGEI clustering expertise together with three international renowned experts in narratives in serious games, innovative technologies and playful learning.

### 3.10.4 USE OF RESOURCES IN WP10

**Table 17:** PMs of partners working in WP9. (a) Planned for the full period of the MASELTOV project, (b) reported for the full period from M1-M39 (PP, PP2 and PP3), (c) reported for the last (this) period, PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015), (d) over- / underspending (planned vs. reported) for the full period M1-M39 (PP, PP2 and PP3).

FULLY PLANNED PMs (report by partners) over 39 months																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 10	7,00	4,40	2,00	5,00	8,00	1,00	1,00	1,00	15,49	2,00		1,15	7,00	7,00	5,50	2,50	1,11
10.1	2,50	2,20	1,00	4,00	7,00	0,50	1,00	1,00	7,49			0,39	7,00	7,00	5,50	0,75	1,00
10.2	2,00				0,50	0,50											
10.3	1,50	2,20		1,00	0,50				2,00	1,00							0,11
10.4	1,00		1,00						6,00	1,00		0,76				1,75	

(a)

SPENT PMs (report by partners) M1-M39																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 10	8,54	4,40	1,62	4,15	5,79	3,37	6,77	1,04	14,80	1,95		2,06	5,62	5,12	5,75	2,69	1,33
10.1	3,61	4,40	0,77	3,41	4,98	2,57	6,77	1,04	4,55	0,00		0,74	5,62	5,12	5,75	0,00	0,60
10.2	2,00	0,00	0,00	0,00	0,61	0,80	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
10.3	1,50	0,00	0,00	0,74	0,20	0,00	0,00	0,00	0,00	0,49		0,00	0,00	0,00	0,00	0,00	0,73
10.4	1,43	0,00	0,85	0,00	0,00	0,00	0,00	0,00	10,25	1,46		1,31	0,00	0,00	0,00	2,69	0,00

(b)

SPENT PMs (report by partners) PP3																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 10	5,30	0,00	0,60	2,11	3,46	2,69	6,77	0,29	4,87	0,80		0,00	0,60	2,95	3,30	2,69	1,33
10.1	2,00	0,00	0,10	1,61	3,42	1,97	6,77	0,29	1,12	0,00		0,00	0,60	2,95	3,30	0,00	0,60
10.2	0,88	0,00	0,00	0,00	0,00	0,72	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
10.3	1,40	0,00	0,00	0,50	0,04	0,00	0,00	0,00	0,00	0,47		0,00	0,00	0,00	0,00	0,00	0,73
10.4	1,02	0,00	0,50	0,00	0,00	0,00	0,00	0,00	3,75	0,33		0,00	0,00	0,00	0,00	2,69	0,00

(c)

Over- / Underspending																	
	JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE
WP 10	1,54	0,00	-0,38	-0,85	-2,21	2,37	5,77	0,04	-0,69	-0,05		0,91	-1,38	-1,88	0,25	0,19	0,22
10.1	1,11	2,20	-0,23	-0,59	-2,02	2,07	5,77	0,04	-2,94	0,00		0,35	-1,38	-1,88	0,25	-0,75	-0,40
10.2	0,00	0,00	0,00	0,00	0,11	0,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00
10.3	0,00	-2,20	0,00	-0,26	-0,30	0,00	0,00	0,00	-2,00	-0,51		0,00	0,00	0,00	0,00	0,00	0,62
10.4	0,43	0,00	-0,15	0,00	0,00	0,00	0,00	0,00	4,25	0,46		0,55	0,00	0,00	0,00	0,94	0,00

(d)

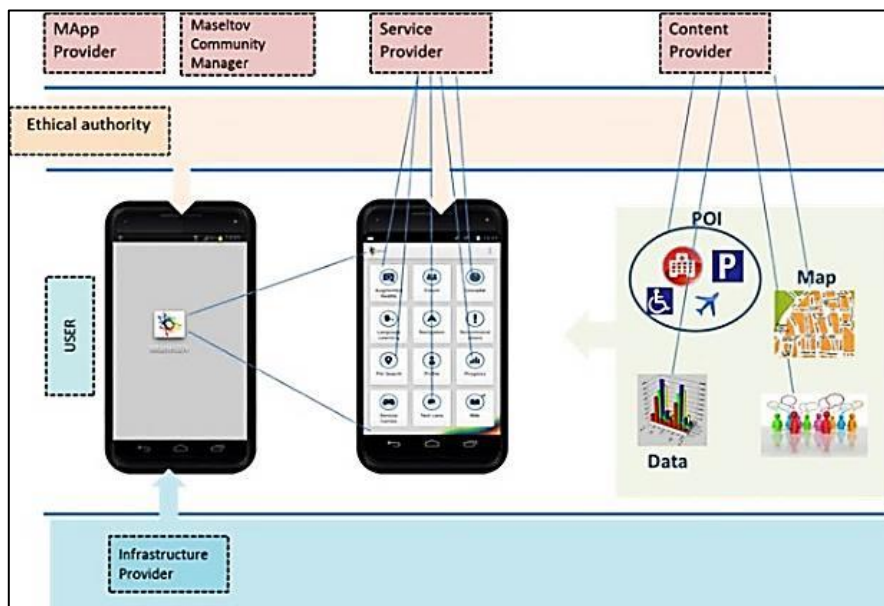
### 3.10.5 DEVIATIONS IN WP10

None.





(a)



(b)

**Figure 39:** Aspects of progress in WP10: (a) Chairing the Third IDGEI in 2015 at Atlanta, GA, USA, with keynote speakers from Georgia Tech, NCU and Microsoft Redmond. (b) Main roles identified in the provision of MASELTOV service are depicted. Service providers are in charge of the maintenance of the services and of content specifically needed for the service.

#### 4.5 DELIVERABLES

Table 18 - DELIVERABLES (SORTED BY DUE DELIVERY DATE, PROJECT PERIOD 3)								
Del. no.	Deliverable name	WP no.	Lead	Nature	Dissem. level	Due delivery	Delivered	Actual delivery date
D1.1.5	Interim Progress Report & Mgt. Summary	1	JR	R	CO	M33	Yes	October 24, 2014
D1.1.6	Final Progress Report and Mgt. Summary	1	JR	R	PU	M39	Yes	May 6, 2014 / Oct. 7 2015*
D1.6	Final Strategy on Ethics Issues	1	UOC	R	PU	M39	Yes	May 8, 2014 / Oct. 7 2015*
D2.2.2	Social and Cultural Needs	2	UOC	R	PU	M33	Yes	September 30, 2014
D3.3.3	Iterative System Integration	3	JR	P	PU	M33	Yes	October 8, 2014
D5.3	Privacy Policy Framework	5	AIT	R	PU	M33	Yes	October 19, 2014
D5.4.2	Recommendation Services	5	AIT	P	PU	M33	Yes	October 19, 2014
D6.1.2	Mobile Assistant Service	6	JR	R	PU	M33	Yes	October 8, 2014
D6.3.2	POI Navigation Service	6	FLU	R	PU	M30	Yes	October 8, 2014
D6.4.2	Health Care Service	6	FHJ	R	PU	M30	Yes	October 8, 2014
D7.4.2	Playful Cultural Learning	7	COV	R	PU	M33	Yes	October 8, 2014
D7.5.2	Mobile Situated Language Learning	7	PP	R	PU	M33	Yes	October 8, 2014
D8.1.2	Social Network Analysis	8	TI	R	PU	M33	Yes	October 8, 2014
D8.2.2	Geosocial Mobility and Comm. Model	8	TI	P	PU	M33	Yes	October 8, 2014
D8.3.2/8.3.3	Social Learning of Language for Imm.	8	PP	P	PU	M33	Yes	October 8, 2014
D9.1.3	Field Trial and Evaluation Plan	9	ATE	R	PU	M28	Yes	October 8, 2014
D9.3	Field Trials	9	ATE	R	CO	M30	Yes	October 8, 2014/ October 7 2015*
D9.4	Evaluation of Final Integrated Prototype	9	ATE	R	PU	M39	Yes	May 6, 2015 / October 7 2015*
D10.1.4	Final Dissemination and Training Strategy	10	UOC	R	PU	M39	Yes	May 9, 2015
D10.2.3	Cooperation on White paper	10	JR	R	PU	M34	Yes	May 4, 2014 / October 7, 2015*
D10.3	Standardization	10	JR	R	PU	M39	Yes	May 9, 2015/ October 7 2015*
D10.4.4	Final Exploitation Strategy	10	TI	R	CO	M39	Yes	May 6, 2015

\*delivery dates of the revised deliverable version.

#### 4.6 MILESTONES

Table 19 - Milestones (sorted by due delivery date, Period 3)							
Milestone no.	Milestone name	WP no.	Lead beneficiary	Due achievement date from Annex	Achieved Yes/No	Actual / Forecast achievement date	Comments
MS1	Interaction Design	WP2	2	6	Yes	Month 8	In the first part of the project, we had some substantial delays with respect to the delivery plan in the DOW and a challenge to coordinate the close interaction of impacts from one deliverable to another. However, the important goal of the Consortium was to converge in the Consortium until the end of the first project year, and that objective has been overall achieved.
MS2	Context Awareness	WP3, WP4	1	12	Yes	Month 13	The objectives have been met in general and the milestone has been achieved. However, some impact due to the lack of WP5 work will be towards the achievement of the next milestone, MS3. The delay is under control of the management and a contingency plan has been agreed with the WP5 coordinator,
MS3	Mobile Assistance	WP5, WP6, WP7	10	18	Yes	Month 18	In the third reporting period, there were no delays to be mentioned regarding the submission of the deliverables. The project is well in tune with the overall time plan.
MS4	Learning Services	WP4, WP5, WP7	5	24	Yes	Month 24	In the fourth reporting period, the only delays registered were the delays due to the leave of partner BUS. The project is in tune with the overall time plan.
MS5	Community Building Services	WP6, WP8	9	33	Yes	Month 24	In the fifth reporting period, partner PP went into operation and field trials were scheduled as planned.
MS6	Field Trials and Evaluation	WP9, WP10	9	39	Yes	Month 39	The project finalises with all substantial objectives met in time.

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## 5. PROJECT MANAGEMENT

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### 5.1 CONSORTIUM MANAGEMENT TASKS AND ACHIEVEMENTS

#### 5.1.1 OVERVIEW

The final project period (PP3) is primarily characterised by its **extension by 3 months** (15 months instead of 12 months) due to the agreement made in the second year review meeting, being dedicated to grant more time for the preparation of the field trials which are a very important part of the project, due to its user-centred design approach and the relevance of the application for the immigrant population.

The key task in this reporting period was therefore to overview the system preparation for the **first field trial** which took place in May 2014, and then to receive in time the evaluation of this first field trial in order to enable the system developers to really **react on** the first field trial period. This could be made in time and a wealth of component as well as complete system updates were considered despite summer time and complex integration issues due to the number of services involved.

A next step was to push the service to full and near-to errorless operation, as pre-condition for the evaluation of end users who intend to check the benefit of the MApp for their social inclusion. Despite a seemingly well-functioning integrated service there were still various problems occurring at the first part of the **final field trials** in London and in Graz, starting in October, November 2014. However, until the end of these trials, the problems could be fixed and in this way, perfect conditions were available for the final evaluation in the **Milton Keynes** located field trials. These field trials received an enthusiastic response by the immigrants.

The intention of the consortium was to organise at the end of the project an international conference on the topic of ‘ICT and immigration’ in order to position the results of the project within the international applied research landscape. Although the partner who was initially attributed to organise the conference, i.e., UOC, had to leave the consortium, we still could manage to include an international expert to cooperate for the preparation of the program.

The **MASELTOV Conference** finally took place at the **Open University campus at London** and involved a representative group of company CEOs and applied research experts. The success story of this conference was that the presentation of the MApp was highly appreciated by top international experts who gave their positive testimonials at the conference site. In total, this event – closing a process of achieving an integrated app with a suite of meaningful services, and receiving the positive response by the end users, in particular as feedback to the well-working service – makes any future endeavours for the exploitation of the project results much more intuitive and probably convincing.

#### 5.8.1 SPECIFIC ACTIVITIES OF INTEREST

Specific consideration should be given to the fact that MASELTOV had to operate on two contract amendments during the third project period. The second amendment took a very long time despite the fact that we had already the commitment of a very motivated replacement for the previous partner busuu, i.e., by the new partner Pearson publishing (PP). In principle, PP was ready to cooperate since the beginning of 2014 and continuously contributed to develop components for the project despite the fact that they were not yet officially accepted as consortium members. Only the official approval of the second amendment by the EC would have made it possible to enter as official partner. In general, the amendment was prepared in

February 2014, but then the second review meeting and consequences on the fulfilment of recommendations as well as formal issues, together with summer problems in availability made the contract not approved by the EC before October 2014. There was an on-going coordination of approving PP that the approval will be soon, at the same time caring for their requirements to get their continuously increasing costs covered. The complete consortium was very glad to receive the final approval in October, and was very thankful that PP proved so much commitment to the project by delivering the results that were expected in the project without being official partner before that official approval.

### 5.8.2 STANDARD ACTIVITIES

The consortium management is implemented by means of WP1, Task 1.1, and includes the administrative/technical management. The activities in the reporting period are summarized by the corresponding deliverables and activities.

- Administrative and Technical Management.
  - *Organization of plenary meetings and the first year review meeting:*
  - D1.1.5 (Month 33) *Interim project progress report.*
  - D1.1.6 (Month 39) *Final Progress Report and Management Summary*

Beside these deliverables and activities, many other activities by the coordinator and the consortium have been launched in order to maintain interaction and progress in the project. Most of these fall under coordination activities or are part of the management report. Major decisions on the project are, as described in Annex I, made by the Management Board.

Besides many informal meetings (mostly during skype and phone conferences or project meetings), we had *formal meetings of the Management Board* at each of the plenary project meeting, i.e., at

- Vienna, Austria (19-21 February, 2014)
- Madrid, Spain (26-28 May, 2014)
- Prague, Czech Republic (8-10 September, 2014)
- London, United Kingdom (18-19 March, 2015)

In addition, WP1 has been chairing or co-chairing the meetings with more than one MASELTOV partner as listed in Table 21.

The time table (Sec. 5.2, next page) demonstrates the overall work plan of the project, together with milestone and deliverable submission dates. Note that at the final end of the project, in month M39, all activities have terminated within project time. The diagram contains the current reporting time point (blue horizontal axis, Month 39).

**Table 20: Project work plan, updated from second contract amendment to 39 months duration.**

DOW Version 2014-02-20



## **5.2 PROBLEMS WHICH HAVE OCCURRED AND HOW THEY WERE SOLVED OR ENVISAGED SOLUTIONS**

### **5.2.1 CHANGES IN THE CONSORTIUM**

In this period there happened several changes in the consortium due to various reasons:

- (1) The new partner PP added the consortium with the beginning of period 3. They took over the responsibilities from the previous partner BUS. Note that the allocated tasks were adapted such that they fit to the competencies of PP (for details see Amendment No.2).
- (2) In April 2015 people working for CUR were overtaken by another company. Thus, ATE was integrated as new partner with exact the same responsibilities as CUR since the same person are still responsible for the MASELTOV project.
- (3) Since June 2014 the partner FUN is under insolvency proceedings. Despite this fact the responsible person Samuel Richardo Ruiz accompanied the field trials done by ATE over the summer. Thus, the official date of withdrawal was changed from 30.06.2014 to 30.09.2014.
- (4) The partner UOC withdrew from the project with 31.10.2015. The reason for termination is caused by the leave of the key personnel from UOC (Adela Ros as of June 30<sup>th</sup> and Maria Cecilia Gordano as of October 31<sup>st</sup>) hence from the project, and due to the incapability of UOC to provide expertise for its requested role in the project after October 31<sup>st</sup>.
- (5) Left over responsibilities from UOC and FUN were taken over by other partners (JR, DAN, MRC and ATE) in the consortium and the remaining budget accordingly redistributed.

For details about the entry of PP see Amendment No.2 while changes regarding CUR, UOC and FUN are explained in Amendment No.3.

For details about the entry of PP see Amendment No.2 while changes regarding CUR, UOC and FUN are explained in Amendment No.3.

### **5.2.2 DEVIATIONS IN COSTS OR PMS**

There are several small deviations occurring in the budget for some partners. In order to avoid questions about this we collected the reasoning for the finally occurring numbers:

**FLU:** The FLU MASELTOV team members who actually worked in the project do have a lower hourly rate compared to the average rate used by FLU in the Proposal / Description of Work.

This fact has been described also in the context of the Y1 and Y2 reporting and was accepted by the EC.

**COV:** For the final claim we will have an overall underspend on personnel costs of around 8.500,- euros and overspend on direct costs of around 6.400,- euros. The overspend occurred within the final claim period and it was due to travel costs being much higher than anticipated when attending trips relating to the project.

**CTU:** There are considerably more PMs than originally planned. These efforts occurred mainly in the final period. The reasons for this are that CTU has discovered a significantly faster (about 5x) completely new method for text detection that will

enable to run the Text Lens on much weaker hardware (on older mobile phones) which significantly increases the applicability of the tool for the target group. The new method had to be implemented, ported to the mobile phone, optimized and extensively tested. They also submitted two papers in the last period (to top conferences in the field) on the method and will probably file a patent (the patent centre of the university is looking into the matter).

Despite these additional PMs the overall spent budget of CTU is smaller than planned. This is due to the fact that the involvement into the project of the key person Jiri Matas had to be reduced because he became head of a Center of Excellence of the Czech Science Foundation. This allowed hiring young postdocs and PhD students. The professor/PhD salary ratio is about 3.5:1 in the Czech Republic (2:1 for professor/postdoc) - hence more PMs, lower spending.

**DAN:** We'll be 5% below the planned budget. The reason for this is that the personnel costs for the main involved employee (Maria Morozova) were much smaller than planned. This is due to the fact that she does not have that much periods of previous service. Furthermore, a lot of PMs were planned for Dissemination activities. But since the App was not available before the end of the project the intended interaction with the target group was performed only on a reduced level.

**PP:** The way I have recorded our work effort has meant that PP is about 1PM over budget in WP7 but 2PM under budget on WP8. Some unused work effort from WP8 was used in WP7 where it could have more impact. It was applied to the improvement of language learning resources for future exploitation of MASELTOV.

Any left over budget from partners (CTU, DAN) will be split between those partners that had more efforts in the project than planned. Especially the OU did an additional user study and JR had a lot of unforeseen management activities (3 major amendments, leave and replacement of partners, managing considerable time one partner not contributing – AIT, and managing a long time one potential partner not being assured to be included into the consortium - PP).

### 5.2.3 ADAPPTIONS IN DOW AND OTHER ISSUES

The DoW had to be adapted due to the changes in the consortium and the resulting budget shifts. The latest version dates from 13.01.2015 and includes all adaption as requested in Amendment No.3. That is, all changes related to partner withdrawals, budget shifts and PM shifts (between WPs and Tasks).

Furthermore, AIT and UOC have different legal representatives than at the beginning of the period.

### 5.2.4 PLANNED VERSUS FINAL PM (OVERVIEW)

The following tables give an overview of the use of resources in all WPs for all partners:

- Table 22 shows the planned PM (following the DoW dated from 13.01.2015).
- Table 23 depicts the number of PMs as reported over the full duration of the project, i.e., M1-M39.
- Table 24 gives the numbers as reported for the third year including 01.01.2014-31-03-2015).

- Finally the difference between overall planned and overall claimed PMs are given in **Fehler! Verweisquelle konnte nicht gefunden werden.**, in order to show overspending and underspending covering the complete project.

### *Known deviations*

**Underspending** as occurring for some partners in **Fehler! Verweisquelle konnte nicht gefunden werden.** will be covered with the final 3 months of the period (for partners where no special explanation was provided). In addition, it also can be seen that a lot of partners do have an **overspending**. This is due to the fact that some details of the development were underestimated regarding their effort. In addition there was an additional (not planned in DoW) field trial at the OU campus. And as already mentioned a lot of administrative issues occurred due to changes in the consortium over the projects period (3 major amendments).

There are several other remarkable deviations occurring in the budget for some partners. In order to avoid questions about this we collected the reasoning for the finally occurring numbers:

The FLU MASELTOV team members who actually worked in the project do have a lower hourly rate compared to the average rate used by FLU in the Proposal / Description of Work.

This fact has been described also in the context of the Y1 and Y2 reporting and was accepted by the EC.

**COV:** For the final claim we will have an overall underspend on personnel costs of around 8.500,- € and overspend on direct costs of around 6.400,- €. The overspend occurred within the final claim period and it was due to travel costs being much higher than anticipated when attending trips relating to the project

**CTU:** There are considerably more PMs than originally planned. These efforts occurred mainly in the final period. The reasons for this are that CTU has discovered a significantly faster (about 5x) completely new method for text detection that will enable to run the Text Lens on much weaker hardware (on older mobile phones) which significantly increases the applicability of the tool for the target group. The new method had to be implemented, ported to the mobile phone, optimized and extensively tested. They also submitted two papers in the last period (to top conferences in the field) on the method and will probably file a patent (the patent center of the university is looking into the matter).

Despite these additional PMs the overall spent budget of CTU is smaller than planned. This is due to the fact that the involvement into the project of the key person Jiri Matas had to be reduced because he became head of a Center of Excellence of the Czech Science Foundation. This allowed hiring young postdocs and Phd students. The Professor/Phd salary ratio is about 3.5:1 in the Czech Republic (2:1 for professor/postdoc) - hence more PMs, lower spending.

**DAN:** We'll be 5% below the planned budget. The reason for this is that the personnel costs for the main involved employee (Maria Morozova) were much smaller than planned. This is due to the fact that she does not have that much periods of previous service. Furthermore, a lot of PMs were planned for Dissemination activities. But since the App was not available before the end of the project the intended interaction with the target group was performed only on a reduced level.

**PP:** The way I have recorded our work effort has meant that PP is about 1PM over budget in WP7 but 2 PM under budget on WP8. Some unused work effort from WP8 was used in WP7 where it could have more impact. It was applied to the improvement of language learning resources for future exploitation of MASELTOV.

**ATE:** The originally planned amount of 38.897 € for direct costs (travel and consumables) was not needed. 19.000 € of these direct costs were shifted to other categories. That is, 2.400 € were used to cover the overspending in subcontracting (that is the costs for the field trials, mainly financial compensations for participants). The remaining budget of 16.600 € was used for personnel costs. The main reason for this overspending of effort is that the preparation and conduct of the field trials was exaggerating the expected complexity.

Any left over budget from partners (CTU, DAN) will be split proportional between those partners that had more efforts in the project than planned.

### 5.3 LIST OF PROJECT MEETINGS, DATES AND VENUES

**Table 21 - List of project meetings, dates and venues in the reporting period M25-M39.**

Type of meeting	Date	Location	Objective
<b>7<sup>th</sup> Plenary consortium meeting</b>	19-21 Feb, 2014	Vienna, Austria (CUR)	Status check and planning of next activities and deliverable submissions
<b>Second IDGEI workshop</b>	24 Feb 2014	Haifa, Israel	Second Intl. Workshop on Intelligent Digital Games for Empowerment and Inclusion
<b>DGEI clustering meeting</b>	25 Feb 2014	Haifa, Israel	DGEI clustering of the projects MASELTOV, ASC-INCLUSION and TARDIS
<b>Consortial skype meeting</b>	6 Mar, 2014	Skype	Status check and planning of next activities and deliverable submission
<b>Rehearsal meeting</b>	20 Mar, 2014	Luxembourg, Luxembourg	Review meeting with all consortium partners
<b>Review Meeting RP2</b>	21 Mar, 2014	Luxembourg, Luxembourg	Review meeting with all consortium partners and the reviewers, PO
<b>8<sup>th</sup> Plenary consortium meeting</b>	26-28 May, 2014	Madrid, Spain (FUN)	Status check and planning of next activities and deliverable submissions
<b>WP9 Workshop</b>	27 Aug, 2014	Graz, Austria	Workshop on evaluation at JR (JR, CUR)
<b>9<sup>th</sup> Plenary consortium meeting</b>	8-10 Sep, 2014	Prague, Czech Republic (CTU)	Status check and planning of next activities and deliverable submissions
<b>Consortial skype meeting</b>	16 Sep, 2014	Skype	Status check and planning of next activities and deliverable submission
<b>Consortial skype meeting</b>	23 Sep, 2014	Skype	Status check and planning of next activities and deliverable submission
<b>Consortial skype meeting</b>	26 Sep, 2014	Skype	Status check and planning of next activities and deliverable submission
<b>Consortial skype meeting</b>	30 Sep, 2014	Skype	Status check and planning of next activities and deliverable submission
<b>MASELTOV Conference 2015</b>	16-17 Mar, 2015	London, United Kingdom	Presentation and discussion of project results in applied research community
<b>10<sup>th</sup> Plenary consortium meeting</b>	18-19 Mar, 2015	London, United Kingdom	Status check and planning of next activities and deliverable submission
<b>Third IDGEI workshop</b>	29 Mar 2015	Atlanta, GA	Third Intl. Workshop on Intelligent Digital Games for Empowerment and Inclusion

### 5.4 PROJECT PLANNING AND STATUS

According to the opinion of the MASELTOV consortium, the project has achieved all objectives in time. The extension of project duration by 3 month in the last project period has very much helped to realise the iterative development stages of the user-centered design process.

**Table 22: Planned PMs for the complete project.**

		Planned for 39 months																	
		JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE	
WP 1	PROJECT MANAGEMENT	25,00	3,45	0,00	3,00	4,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,00	0,00	0,00	0,71	
1.1	Administrative Management	20,00	2,45			4,00												0,60	
1.2	Ethical Management	5,00	1,00		3,00	0,50									1,00			0,11	
WP 2	USER REQUIREMENTS & INTERACTION DESIGN	0,00	20,10	0,00	13,00	1,00	2,00	0,00	1,00	5,00	5,00	0,00		2,00	2,00	2,00	0,00	0,50	
2.1	Immigration and ICT in Europe				3,00														
2.2	Stating the Frame of Social and Cultural Needs		2,00		8,00				1,00									0,50	
2.3	Use Cases and Service Scenarios		5,00		2,00		1,00			3,00	2,00					0,00			
2.4	Participatory Design and Interaction Concepts		4,00			1,00				1,00	2,00			1,00	1,00	1,00			
2.5	Iterative User Interface Design and Interaction Prototyping		9,10				1,00			1,00	1,00			1,00	1,00	1,00			
WP 3	SYSTEM SPECIFICATION & INTEGRATION	11,00	0,00	3,00	0,00	4,00	2,00	3,00	2,00	7,00	4,00	1,46		0,00	0,00	0,00	0,50	0,00	
3.1	Technical Scenarios and System Architecture	4,50				1,00			1,00	3,00	1,00	0,48					0,20		
3.2	System Specifications	1,50		1,00		1,00	1,00	1,00	1,00	1,00	1,50	0,50					0,15		
3.3	Iterative System Integration and Performance Evaluation	5,00		2,00		2,00	1,00	2,00		3,00	1,50	0,48					0,15		
WP 4	MULTISENSORY CONTEXT AWARENESS	28,00	3,40	1,00	0,00	0,00	0,00	24,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	2,00	
4.1	Mobile Navigation and Geocontextual Event Analysis	15,00		1,00															
4.2	Multisensory Usability Engineering	13,00	3,40															2,00	
4.3	Mobile Text Lens							24,00											
WP 5	PERSONALISATION & RECOMMENDATION	0,00	0,00	34,00	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	
5.1	Content Abstraction and Databases			10,00															
5.2	User Profiling and Personalisation			9,00															
5.3	Privacy, Trust and Data Security			5,00		1,00													
5.4	Recommendation Services			10,00															
WP 6	MOBILE ASSISTANCE & INFORMATION SERVICES	8,00	0,00	0,00	0,00	0,00	0,00	0,00	8,00	0,00	19,00	0,00		0,00	0,00	1,00	0,00	0,00	
6.1	Mobile Assistant	4,00																	
6.2	Administration Service										6,00								
6.3	POI Navigation Service	4,00									8,00								
6.4	Health Care Service								8,00		5,00					1,00			
WP 7	PERSUASIVE LEARNING SERVICES	0,00	0,00	0,00	0,00	24,00	23,00	6,00	0,00	0,00	0,00	6,28		0,00	0,00	0,00	16,50	0,00	
7.1	Incidental Learning Framework					10,00	2,00												
7.2	Feedback and Progress Indicators					5,00													
7.3/4	Persuasive Assistance and Playful Cultural Learning						21,00												
7.5	Mobile Situated Language Learning					9,00		6,00				6,28					16,50		
WP 8	COMMUNITY BUILDING SERVICES	2,00	0,00	0,00	0,00	1,50	4,00	0,00	0,00	41,00	0,00	4,93		0,00	0,00	0,00	4,40	0,00	
8.1	Local Community Building Services									21,00									
8.2	Geosocial Network Services	2,00								20,00		0,49					1,20		
8.3	Language Learning in Social Networks					1,50	4,00					4,44					3,20		
WP 9	FIELD TRIALS & EVALUATION	2,00	17,00	0,00	0,00	4,50	0,00	2,00	0,00	0,00	1,00	0,00		5,00	4,00	5,00	0,00	8,00	
9.1	Preparation of Field Trials and Evaluations		3,00					1,00										2,00	
9.2	Iterative Evaluation of User Interfaces and Services	2,00	5,00					1,00			1,00			3,00	2,00	3,00			
9.3	Field Trials of Prototypes		6,00			2,50								1,00	1,00	1,00		2,00	
9.4	Evaluation of Final Integrated Prototype		3,00			2,00								1,00	1,00	1,00		4,00	
WP10	DISSEMINATION & EXPLOITATION	7,00	4,40	2,00	5,00	8,00	1,00	1,00	1,00	15,49	2,00	1,15		7,00	7,00	5,50	2,50	1,11	
10.1	Dissemination and Training Activities	2,50	2,20	1,00	4,00	7,00	0,50	1,00	1,00	7,49		0,39		7,00	7,00	5,50	0,75	1,00	
10.2	Clustering Activities	2,00				0,50	0,50												
10.3	Standards in ICT Accessibility	1,50	2,20		1,00	0,50				2,00	1,00							0,11	
10.4	Exploitation	1,00		1,00						6,00	1,00	0,76					1,75		
	OVERALL	83,00	48,35	40,00	21,00	48,50	32,00	36,00	12,00	68,49	31,00	13,82		14,00	14,00	13,50	23,90	12,32	
Total		Total sum of PMs PLANNED for the project:																	511,88

**Table 23:** Reported PMs for the full project period, i.e., M1-M39 (January 1<sup>st</sup>, 2012 – March 31<sup>st</sup>, 2015).

		Spent for 39 months																	
		JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE	
WP 1	PROJECT MANAGEMENT	29,89	3,45	0,00	3,25	6,22	0,00	0,00	0,00	0,00	0,00	0,00		0,00	1,09	0,00	0,00	0,37	
1.1	Administrative Management	24,89	2,80			5,93												0,13	
1.2	Ethical Management	5,00	0,65		3,25	0,29									1,09			0,24	
WP 2	USER REQUIREMENTS & INTERACTION DESIGN	0,00	20,10	0,00	12,92	0,36	1,87	0,00	0,91	3,93	8,07	0,00		2,00	2,09	2,25	0,00	0,13	
2.1	Immigration and ICT in Europe				2,92													0,00	
2.2	Stating the Frame of Social and Cultural Needs		2,85		8,00	0,02			0,91									0,13	
2.3	Use Cases and Service Scenarios		9,65		2,00		0,99			1,93	2,00							0,00	
2.4	Participatory Design and Interaction Concepts		4,25			0,34				0,90	2,18			0,84	1,69	1,00		0,00	
2.5	Iterative User Interface Design and Interaction Prototyping		3,35				0,88			1,10	3,89			1,16	0,40	1,25		0,00	
WP 3	SYSTEM SPECIFICATION & INTEGRATION	12,79	0,00	4,51	0,00	3,63	1,82	5,83	2,00	6,10	7,87	1,46		0,00	0,00	0,00	0,67	0,00	
3.1	Technical Scenarios and System Architecture	4,56				0,37			1,00	2,45	1,49	0,50						0,00	
3.2	System Specifications	1,57		2,51		0,24	1,00	3,30	1,00	0,75	2,69	0,48					0,67	0,00	
3.3	Iterative System Integration and Performance Evaluation	2,46		2,00		3,02	0,82	2,53		2,90	3,69	0,48						0,00	
WP 4	MULTISENSORY CONTEXT AWARENESS	30,39	3,40	1,00	0,00	0,00	0,00	24,96	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,97	
4.1	Mobile Navigation and Geocontextual Event Analysis	15,00		1,00														0,00	
4.2	Multisensory Usability Engineering	13,00	3,40															0,97	
4.3	Mobile Text Lens	2,39						24,96										0,00	
WP 5	PERSONALISATION & RECOMMENDATION	0,00	0,00	33,17	0,00	1,13	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	
5.1	Content Abstraction and Databases			9,99														0,00	
5.2	User Profiling and Personalisation			9,00														0,00	
5.3	Privacy, Trust and Data Security			5,00		1,13												0,00	
5.4	Recommendation Services			9,18		0,00												0,00	
WP 6	MOBILE ASSISTANCE & INFORMATION SERVICES	10,71	0,00	0,00	0,00	0,00	0,00	0,00	8,27	0,00	36,59	0,00		0,00	0,00	0,00	0,00	0,00	
6.1	Mobile Assistant	4,00																0,00	
6.2	Administration Service	0,00									3,40							0,00	
6.3	POI Navigation Service	6,71									20,27							0,00	
6.4	Health Care Service	0,00							8,27		12,65							0,00	
WP 7	PERSUASIVE LEARNING SERVICES	0,00	0,00	0,00	0,00	23,68	21,10	11,76	0,00	0,00	0,00	6,79		0,00	0,00	0,00	17,65	0,00	
7.1	Incidental Learning Framework					7,85	2,30											0,00	
7.2	Feedback and Progress Indicators					4,33											1,16	0,00	
7.3/4	Persuasive Assistance and Playful Cultural Learning						18,79											0,00	
7.5	Mobile Situated Language Learning					11,50		11,76				6,79					16,49	0,00	
WP 8	COMMUNITY BUILDING SERVICES	3,07	0,00	0,00	0,00	1,54	2,60	0,00	0,00	44,28	0,00	6,93		0,00	0,00	0,00	2,52	0,00	
8.1	Local Community Building Services	0,00								22,52								0,00	
8.2	Geosocial Network Services	3,07								21,76		0,35						0,00	
8.3	Language Learning in Social Networks	0,00				1,54	2,60					6,58					2,52	0,00	
WP 9	FIELD TRIALS & EVALUATION	0,30	17,00	5,70	0,00	10,94	0,00	23,51	0,00	0,00	1,80	0,00		4,00	5,01	6,45	0,00	15,82	
9.1	Preparation of Field Trials and Evaluations	0,00	4,90					23,51						2,60				0,21	
9.2	Iterative Evaluation of User Interfaces and Services	0,00	8,20								1,80			1,40	2,50	3,35		0,00	
9.3	Field Trials of Prototypes	0,00	3,90	3,00		3,97									2,51	1,00		5,00	
9.4	Evaluation of Final Integrated Prototype	0,30		2,70		6,97										2,10		10,61	
WP10	DISSEMINATION & EXPLOITATION	8,54	4,40	1,62	4,15	5,79	3,37	6,77	1,04	14,80	1,95	2,06		5,62	5,12	5,75	2,69	1,33	
10.1	Dissemination and Training Activities	3,61	4,40	0,77	3,41	4,98	2,57	6,77	1,04	4,55		0,74		5,62	5,12	5,75		0,60	
10.2	Clustering Activities	2,00				0,61	0,80											0,00	
10.3	Standards in ICT Accessibility	1,50			0,74	0,20					0,49							0,73	
10.4	Exploitation	1,43		0,85						10,25	1,46	1,31					2,69	0,00	
	OVERALL	96,25	48,35	46,00	20,32	53,29	30,76	72,88	12,22	69,11	56,28	17,24		11,62	13,31	14,45	23,53	18,62	
Total		Total sum of PMs REPORTED FOR FULL PROJECT duration (M1-M39, PP1, PP2, PP3):																	604,23



**Table 24:** Reported PMs for the final project period, i.e., PP3 (January 1<sup>st</sup>, 2014 – March 31<sup>st</sup>, 2015).

		PP3 (01.01.2014-31.03.2015)																	
		JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE	
WP 1	PROJECT MANAGEMENT	12,73	0,65			2,99												0,37	
1.1	Administrative Management	10,48	0,65			2,99												0,13	
1.2	Ethical Management	2,25																0,24	
WP 2	USER REQUIREMENTS & INTERACTION DESIGN		0,60		1,00	0,19	0,10		0,16	0,20	1,43				0,40			0,13	
2.1	Immigration and ICT in Europe																		
2.2	Stating the Frame of Social and Cultural Needs		0,60		1,00				0,16									0,13	
2.3	Use Cases and Service Scenarios																		
2.4	Participatory Design and Interaction Concepts					0,19													
2.5	Iterative User Interface Design and Interaction Prototyping						0,10			0,20	1,43				0,40				
WP 3	SYSTEM SPECIFICATION & INTEGRATION	5,57		1,70		3,00	0,09	2,53		1,80	1,98						0,67		
3.1	Technical Scenarios and System Architecture	0,70																	
3.2	System Specifications	0,20															0,67		
3.3	Iterative System Integration and Performance Evaluation	0,47		1,70		3,00	0,09	2,53		1,80	1,98								
WP 4	MULTISENSORY CONTEXT AWARENESS	13,57	0,90															0,97	
4.1	Mobile Navigation and Geocontextual Event Analysis	8,46																	
4.2	Multisensory Usability Engineering	2,72	0,90															0,97	
4.3	Mobile Text Lens	2,39																	
WP 5	PERSONALISATION & RECOMMENDATION			15,20		1,04													
5.1	Content Abstraction and Databases			3,68															
5.2	User Profiling and Personalisation			2,62															
5.3	Privacy, Trust and Data Security			4,41		1,04													
5.4	Recommendation Services			4,49															
WP 6	MOBILE ASSISTANCE & INFORMATION SERVICES	7,72							3,67		14,16								
6.1	Mobile Assistant	1,84																	
6.2	Administration Service																		
6.3	POI Navigation Service	5,88									6,42								
6.4	Health Care Service								3,67		7,47								
WP 7	PERSUASIVE LEARNING SERVICES					4,22	2,58	11,76										17,65	
7.1	Incidental Learning Framework																		
7.2	Feedback and Progress Indicators																	1,16	
7.3/4	Persuasive Assistance and Playful Cultural Learning						2,58												
7.5	Mobile SituatedLanguage Learning					4,22		11,76										16,49	
WP 8	COMMUNITY BUILDING SERVICES	3,07				1,00	0,30			13,48								2,52	
8.1	Local Community Building Services									5,90									
8.2	Geosocial Network Services	3,07								7,58									
8.3	Language Learning in Social Networks					1,00	0,30											2,52	
WP 9	FIELD TRIALS & EVALUATION	0,30	3,90	5,70		10,82		23,51			1,76			0,78	2,51	3,25		15,82	
9.1	Preparation of Field Trials and Evaluations							23,51						0,48				0,21	
9.2	Iterative Evaluation of User Interfaces and Services										1,76			0,30		0,25			
9.3	Field Trials of Prototypes		3,90	3,00		3,85									2,51	0,90		5,00	
9.4	Evaluation of Final Integrated Prototype	0,30		2,70		6,97										2,10		10,61	
WP10	DISSEMINATION & EXPLOITATION	5,30		0,60	2,11	3,46	2,69	6,77	0,29	4,87	0,80			0,60	2,95	3,30	2,69	1,33	
10.1	Dissemination and Training Activities	2,00		0,10	1,61	3,42	1,97	6,77	0,29	1,12				0,60	2,95	3,30		0,60	
10.2	Clustering Activities	0,88					0,72												
10.3	Standards in ICT Accessibility	1,40			0,50	0,04					0,47							0,73	
10.4	Exploitation	1,02		0,50						3,75	0,33						2,69		
	OVERALL	48,26	6,05	23,20	3,11	26,72	5,76	44,57	4,12	20,35	20,13	0,00		1,38	5,86	6,55	23,53	18,62	
Total		Total sum of PMs REPORTED IN PP3:																	258,21

**Table 25: PMs reported for over- (positive) / underspending (negative) for full project duration.**

		Overspending/Underspending																	
		JR	CUR	AIT	UOC	OU	COV	CTU	FHJ	TI	FLU	BUS	BUS_UK	FUN	DAN	MRC	PP	ATE	
WP 1	PROJECT MANAGEMENT	4,89	0,00	0,00	0,25	1,72	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,09	0,00	0,00	-0,34	
1.1	Administrative Management	4,89	0,35	0,00	0,00	1,93	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	-0,47	
1.2	Ethical Management	0,00	-0,35	0,00	0,25	-0,21	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,09	0,00	0,00	0,13	
WP 2	USER REQUIREMENTS & INTERACTION DESIGN	0,00	0,00	0,00	-0,08	-0,64	-0,13	0,00	-0,09	-1,07	3,07		0,00	0,00	0,09	0,25	0,00	-0,37	
2.1	Immigration and ICT in Europe	0,00	0,00	0,00	-0,08	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
2.2	Stating the Frame of Social and Cultural Needs	0,00	0,85	0,00	0,00	0,02	0,00	0,00	-0,09		0,00		0,00	0,00	0,00	0,00	0,00	-0,37	
2.3	Use Cases and Service Scenarios	0,00	4,65	0,00	0,00	0,00	-0,01	0,00	0,00	-1,07	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
2.4	Participatory Design and Interaction Concepts	0,00	0,25	0,00	0,00	-0,66	0,00	0,00	0,00	-0,10	0,18		0,00	-0,16	0,69	0,00	0,00	0,00	
2.5	Iterative User Interface Design and Interaction Prototyping	0,00	-5,75	0,00	0,00	0,00	-0,12	0,00	0,00	0,10	2,89		0,00	0,16	-0,60	0,25	0,00	0,00	
WP 3	SYSTEM SPECIFICATION & INTEGRATION	1,79	0,00	1,51	0,00	-0,37	-0,18	2,83	0,00	-0,90	3,87		0,00	0,00	0,00	0,00	0,17	0,00	
3.1	Technical Scenarios and System Architecture	0,06	0,00	0,00	0,00	-0,63	0,00	0,00	0,00	-0,55	0,49		0,02	0,00	0,00	0,00	-0,20	0,00	
3.2	System Specifications	0,07	0,00	1,51	0,00	-0,76	0,00	2,30	0,00	-0,25	1,19		-0,02	0,00	0,00	0,00	0,52	0,00	
3.3	Iterative System Integration and Performance Evaluation	-2,54	0,00	0,00	0,00	1,02	-0,18	0,53	0,00	-0,10	2,19		0,00	0,00	0,00	0,00	-0,15	0,00	
WP 4	MULTISENSORY CONTEXT AWARENESS	2,39	0,00	0,00	0,00	0,00	0,00	0,96	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	-1,03	
4.1	Mobile Navigation and Geocontextual Event Analysis	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
4.2	Multisensory Usability Engineering	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	-1,03	
4.3	Mobile Text Lens	2,39	0,00	0,00	0,00	0,00	0,00	0,96	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
WP 5	PERSONALISATION & RECOMMENDATION	0,00	0,00	-0,83	0,00	0,13	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
5.1	Content Abstraction and Databases	0,00	0,00	-0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
5.2	User Profiling and Personalisation	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
5.3	Privacy, Trust and Data Security	0,00	0,00	0,00	0,00	0,13	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
5.4	Recommendation Services	0,00	0,00	-0,82	0,00		0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
WP 6	MOBILE ASSISTANCE & INFORMATION SERVICES	2,71	0,00	0,00	0,00	0,00	0,00	0,00	0,27	0,00	17,59		0,00	0,00	0,00	-1,00	0,00	0,00	
6.1	Mobile Assistant	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	0,00	0,00	
6.2	Administration Service	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-2,60		0,00	0,00	0,00	0,00	0,00	0,00	
6.3	POI Navigation Service	2,71	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	12,27		0,00	0,00	0,00	0,00	0,00	0,00	
6.4	Health Care Service	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,27	0,00	7,65		0,00	0,00	0,00	-1,00	0,00	0,00	
WP 7	PERSUASIVE LEARNING SERVICES	0,00	0,00	0,00	0,00	-0,32	-1,90	5,76	0,00	0,00	0,00		0,51	0,00	0,00	0,00	1,15	0,00	
7.1	Incidental Learning Framework	0,00	0,00	0,00	0,00	-2,15	0,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
7.2	Feedback and Progress Indicators	0,00	0,00	0,00	0,00	-0,67	0,00	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	1,16	0,00	
7.3/4	Persuasive Assistance and Playful Cultural Learning	0,00	0,00	0,00	0,00	0,00	-2,21	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
7.5	Mobile Situated Language Learning	0,00	0,00	0,00	0,00	2,50	0,00	5,76	0,00	0,00	0,00		0,51	0,00	0,00	0,00	-0,01	0,00	
WP 8	COMMUNITY BUILDING SERVICES	1,07	0,00	0,00	0,00	0,04	-1,40	0,00	0,00	3,28	0,00		2,00	0,00	0,00	0,00	-1,88	0,00	
8.1	Local Community Building Services	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,52	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
8.2	Geosocial Network Services	1,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,76	0,00		-0,14	0,00	0,00	0,00	-1,20	0,00	
8.3	Language Learning in Social Networks	0,00	0,00	0,00	0,00	0,04	-1,40	0,00	0,00	0,00	0,00		2,14	0,00	0,00	0,00	-0,68	0,00	
WP 9	FIELD TRIALS & EVALUATION	-1,70	0,00	5,70	0,00	6,44	0,00	21,51	0,00	0,00	0,80		0,00	-1,00	1,01	1,45	0,00	7,82	
9.1	Preparation of Field Trials and Evaluations	0,00	1,90	0,00	0,00	0,00	0,00	22,51	0,00	0,00	0,00		0,00	2,60	0,00	0,00	0,00	-1,79	
9.2	Iterative Evaluation of User Interfaces and Services	-2,00	3,20	0,00	0,00	0,00	0,00	-1,00	0,00	0,00	0,80		0,00	-1,60	0,50	0,35	0,00	0,00	
9.3	Field Trials of Prototypes	0,00	-2,10	3,00	0,00	1,47	0,00	0,00	0,00	0,00	0,00		0,00	-1,00	1,51	0,00	0,00	3,00	
9.4	Evaluation of Final Integrated Prototype	0,30	-3,00	2,70	0,00	4,97	0,00	0,00	0,00	0,00	0,00		0,00	-1,00	-1,00	1,10	0,00	6,61	
WP10	DISSEMINATION & EXPLOITATION	1,54	0,00	-0,38	-0,85	-2,21	2,37	5,77	0,04	-0,69	-0,05		0,91	-1,38	-1,88	0,25	0,19	0,22	
10.1	Dissemination and Training Activities	1,11	2,20	-0,23	-0,59	-2,02	2,07	5,77	0,04	-2,94	0,00		0,35	-1,38	-1,88	0,25	-0,75	-0,40	
10.2	Clustering Activities	0,00	0,00	0,00	0,00	0,11	0,30	0,00	0,00	0,00	0,00		0,00	0,00	0,00	0,00	0,00	0,00	
10.3	Standards in ICT Accessibility	0,00	-2,20	0,00	-0,26	-0,30	0,00	0,00	0,00	-2,00	-0,51		0,00	0,00	0,00	0,00	0,00	0,62	
10.4	Exploitation	0,43	0,00	-0,15	0,00	0,00	0,00	0,00	0,00	4,25	0,46		0,55	0,00	0,00	0,00	0,00	0,94	0,00
	OVERALL	13,25	0,00	6,00	-0,68	4,79	-1,24	36,88	0,22	0,62	25,28		3,42	-2,38	-0,69	0,95	-0,37	6,30	
Total	Total sum of PMs REPORTED for OVER- (positive) / UNDERSpending (negative) for full project duration:																	92,35	

## 5.5 IMPACT OF POSSIBLE DEVIATIONS FROM THE PLANNED MILESTONES AND DELIVERABLES

There were no deviations from the planned milestones experienced, therefore there is no impact identified.

## 5.6 DEVELOPMENT OF THE PROJECT WEBSITE

### 5.6.1 WORDPRESS HOMEPAGE

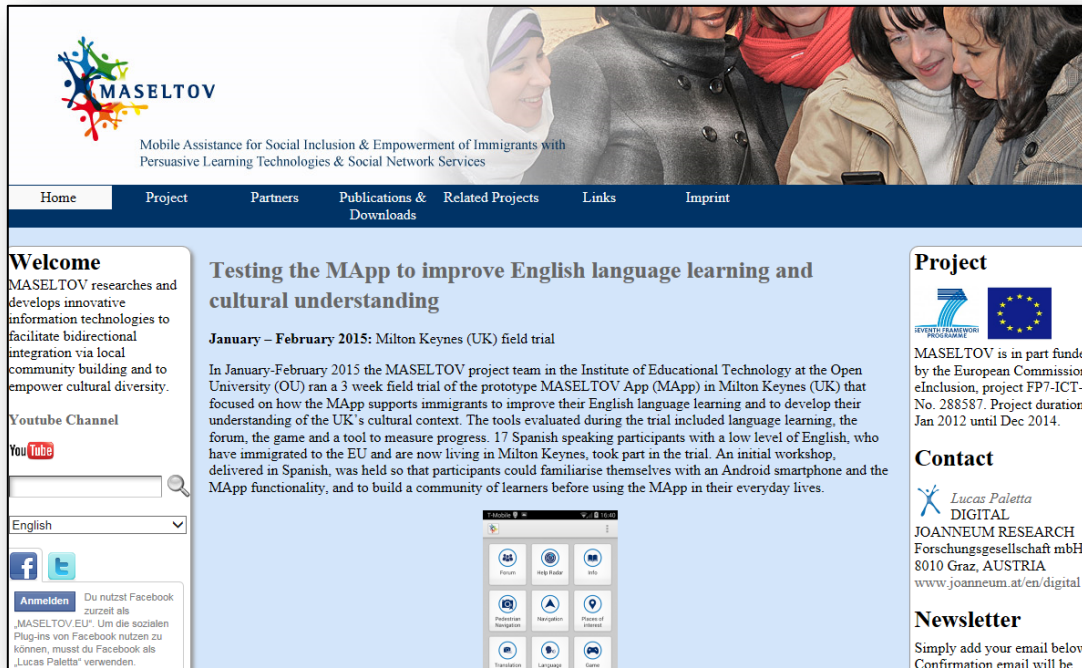


Figure 40 - Print screen of MASELTOV WordPress homepage.

### 5.6.2 PARTNERS WEB SITES AS REFERRING TO THE MASELTOV PROJECT

JR	<a href="http://www.joanneum.at/jr/news/news-single-display/article/maseltov.html">http://www.joanneum.at/jr/news/news-single-display/article/maseltov.html</a>
CUR	<a href="http://www.cure.at/ecfundedprojects">http://www.cure.at/ecfundedprojects</a>
AIT	<a href="http://www.ait.edu.gr/ait_web_site/news/201209/002.html">http://www.ait.edu.gr/ait_web_site/news/201209/002.html</a>
UOC	<a href="http://in3.uoc.edu/opencms_portalin3/opencms/en/recerca/projectes/mobile_assistance_for_social">http://in3.uoc.edu/opencms_portalin3/opencms/en/recerca/projectes/mobile_assistance_for_social</a>
OU	<a href="http://www8.open.ac.uk/iet/main/research-scholarship/research-projects/maseltov">http://www8.open.ac.uk/iet/main/research-scholarship/research-projects/maseltov</a> <a href="http://www3.open.ac.uk/media/fullstory.aspx?id=23700&amp;filter=research">http://www3.open.ac.uk/media/fullstory.aspx?id=23700&amp;filter=research</a>
COV	<a href="http://www.seriousgames.org.uk/research.aspx?section=14&amp;item=461&amp;category=52">http://www.seriousgames.org.uk/research.aspx?section=14&amp;item=461&amp;category=52</a>
FHJ	<a href="https://www.fh-joanneum.at/aw/home/Studienangebot_Uebersicht/fachbereich_gesundheitswissenschaften/bio/Menschen/Team/~baqg/bio_teamdetails/?perid=4295314735&amp;lan=de">https://www.fh-joanneum.at/aw/home/Studienangebot_Uebersicht/fachbereich_gesundheitswissenschaften/bio/Menschen/Team/~baqg/bio_teamdetails/?perid=4295314735&amp;lan=de</a>

### 5.6.3 FACEBOOK PAGE

The Facebook page (<http://www.facebook.com/MASELTOV.EU>) is quite similar to the HOME item of the official MASELTOV homepage. As can be seen in **Figure 41**, it encompasses the general project description and all important news. But in this case just overviews are presented and the user will be referred to the official MASELTOV homepage for further details.



**Figure 41 - Print screen of MASELTOV Facebook page.**

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## 6. CONTRIBUTION OF MASELTOV TO STATE OF THE ART AND INNOVATION

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### 2.1 INTRODUCTION

In most EU countries one can find a certain number of **ICT projects** that either directly or indirectly aim at promoting and enabling the social and economic participation and integration of **immigrants and /or migrants living in Europe**. A mapping exercise that attempted in 2007 to survey the most significant ICT initiatives for and by immigrants and ethnic minorities in the EU27. (Kluzer, Haché, & Codagnone, 2008) identified about 120 of them from almost all EU27. A later update added a further 40 cases with similar characteristics (Haché, Le Corvec, & Willem, 2010). We refer here to these studies as they provide the most comprehensive overview of ICT projects for/by immigrants and/or migrants in Europe today. It was known in general that the majority of immigrants in Europe make some use of ICT, the (few) existing quantitative figures show that, especially mobile phones, but also PC and internet, mostly for communication purposes see (Ros, 2010) and (Codagnone & Kluzer, 2010). Nevertheless, lack of digital literacy and PC/Internet access are still critical for many immigrants and about 30% of the surveyed initiatives addressed these shortcomings.

- **MASELTOV has extended the knowledge about the use of mobile phone use**, in particular, the usage of smartphones as they increasingly populate within immigrant and migrant communities. Actually, a sociological study driven by the MASELTOV project and performed among N-234 immigrants in London, Graz and Madrid revealed that ca. 80% do have continuous practice in smartphone usage (Ros et al., 2014).
- MASELTOV did not address digital literacy per se, but rather aimed at **enhancing daily ICT appropriation by immigrants at risk of exclusion**, i.e., their purposeful use of technology to meet their own needs and also digital skills, within the environments where language skills are actually challenged.

In many countries the increase in the number of EU Member States setting compulsory national language (second language or L2) requirements often associated with ‘knowledge of society’ requirements, for granting entry, residency and other permits to migrants are prompting a wider use of computers in this context (Kluzer, Ferrari, & Centeno, 2010). This drives additional digital literacy efforts towards adult migrants, as a pre-condition to deliver ICT-based language courses and tests. Two cases were well known before, of mobile phone use for L2 learning: by the Municipality of Stockholm in the job placement of refugees and in the City of London within an innovative L2 training scheme of migrant women from Bangladesh.

MASELTOV aimed at exploring, enriching and extending significantly **mobile L2 learning** opportunities for adult migrants, by **embedding them into social networking processes** enabled by social computing services (e.g. the Facebook and an immigrant specific social forum community) and **multisensory context awareness**, including geo-localised services (e.g. navigation towards users’ POIs). The specific objective of MASELTOV in contrast to previous attempts was to motivate immigrants to practice the target language, to learn it on the spot, to engage them in social networks and from this into concrete communication in the host language.

**Health care services** are mandatory for survival, social inclusion and finally smooth integration into the European information society. Epidemiological evidence from several countries (Stanciole & Huber, 2009) confirmed that the health status of large immigrant



populations is poorer than that of natives. In general, health problems often overlap with deprivation and poor living conditions, highlighting the relationship between poverty, poor health and lack of access to health care. Immigrants are often disadvantaged due to lack of knowledge about available services; language differences; and varying cultural attitudes to health and health care. Studies found higher utilization rates among some immigrant groups explained by disparities in health status or lack of knowledge about the health care system (Solé-Auró et al., 2009). When immigrants are from low-income countries, their use of emergency services is even higher, which might be attributable to greater needs, barriers to access or reflect the way that immigrants access health care in their countries of origin (Rué et al., 2008). There are severe difficulties in mobilising the resources necessary to access care which include the lack of easily accessible information about what is available and difficulties in organising the social and practical support necessary to facilitate attendance for treatment, especially out of opening hours or where services cannot be accessed directly (Huber et al., 2008; Stanciole & Huber, 2009). Studies requested support to reduce barriers of access to health care for immigrants in increasing the level of supply-side responsiveness“(Stanciole & Huber, 2009). Projects like MiMi (Mimi, 2008; Germany) intended to improve the situation via presentations, flyers or billboards. However, there has been a lack in appropriate responsive support services for immigrants, helping them in emergency situations as well as in spontaneous and immediate need for appropriate health care.

- The key idea of MASELTOV, implemented in its mobile service application (“MApp”) is to equip immigrants for the first time with **everywhere/everytime access** to most important services in terms of mobile assistance, such as, vocabulary in health care relevant situations, navigation services, context sensitive language learning, and so on.
- Particularly innovative is the application on connecting together volunteers/practitioners with appropriate personal profile (e.g., language), with the help radar service. MASELTOV provides essential services for learning, emergency information for survival and preparatory information for elementary improvements in the immigrant’s health care behavior (Scheitz, 2014).

## 2.2 MOBILE INCIDENTAL AND INFORMAL LEARNING

- MASELTOV has developed the state-of-the-art through exploring ways in which bridges can be built from informal and incidental learning to more structured learning. For example, MASELTOV WP7 developed the Incidental Learning Framework (Kukulska-Hulme et al., 2015) which has been used within MASELTOV as a design tool to help software/content developers and service providers establish links and triggers from spontaneous and unplanned learning to more structured and reflective learning. ‘Incidental learning’ was redefined as arising from specific notable incidents (e.g. security incident, health incident) as well as from everyday and routine activity around the city.
- Furthermore, MASELTOV identified 5 types of feedback and progress indicators from the literature: Social, Cognitive, Affective, Motivational, Progress (SCAMP: Jones et al., 2014). Although the role of feedback and progress indicators is understood in formal learning, their role in supporting incidental mobile learning was less well understood. The development of the SCAMP framework enabled examples of all of these indicators to be built into the MASELTOV MApp.
- MASELTOV research around the city as an environment for contextual learning (Gaved et al. 2012) has led to the SALSA (“Sensors and Apps for Languages in Smart Areas”) research project (Gaved et al. 2015), funded by the Open University to contribute to research carried out through the UK HEFCE funded MK:Smart (<http://www.mksmart.org>)



smart cities project. SALSA is exploring location-triggered language learning for immigrant English language learners around Milton Keynes, UK, using smartphones and Bluetooth. The project is supported by a number of commercial and civic partners including Arriva Buses, Nimbus Journey Information, and Milton Keynes Council, and has been invited to bid for further funding to support immigrant integration in another UK town (Ross-on-Wye) that has an ongoing town regeneration project involving tourists and immigrant agricultural workers.

This indicates that MASELTOV research and development is applicable in various contexts including smaller towns as well as larger cities.

### 2.3 SERIOUS GAMES

The potential for using game engines for **serious games** has been recognised for years (National Research Council, 1997; Seunf Aeok Noh & Jin Wan Park, 2006). The vision of using games for simulation has been realised in a number of military training- oriented games, including America's Army and Full Spectrum Command (Wray et al., 2004). As a result there has been a trend towards the development of more complex, serious games, which are informed by both pedagogic and game elements. Whilst it is true that the technical state-of-the-art in serious games mirrors that of leisure games (Anderson et al., 2009), the technical requirements of serious games are frequently more diverse and wide ranging than their entertainment counterparts. Serious game developers frequently resort to bespoke and proprietary development due to their unique requirements, such as (Playgen, 2010) and (PIXELearning, 2010), and difficulties exist for game engine developers in accurately understanding and supporting the needs of instructional design.

Although many serious games have limited visual interactivity, immersion and fidelity, there is an increasing motivation to create serious games that intend to support situative (social and peer-driven) and experiential pedagogies; partially because behaviourist approaches have been shown to be limited (e.g. people learn to play the game, not address learning requirements), whilst cognitive approaches struggle to impart deeper learning in the areas of affect and motivation (Egenfeldt-Nielsen, 2005). Given this motivation to create immersive, high fidelity serious games, an obvious development choice is to utilise game engines with 'out of the box' support for state-of-the-art GPU rendering and physics.

- MASELTOV applied already existing gaming methodologies but for the novel application of social inclusion of immigrants which obviously involved very specific consideration of ethical, cultural and privacy issues. The game contains a mixed setup of game components using simulated environment but also **applying situatedness from real situations**, by integrating the mixed-reality concept in the fully connected version.

The ubiquity of mobiles phones is leading to more **mobile gaming applications**. In particular recent research projects (e.g. EC-funded Mobilelearn and MLearn projects) are using this mode of delivery for supporting skills needs (e.g. literacy and numeracy). However, while these studies have shown that mobile gaming can be used to engage students, desired learning outcomes are not always effectively demonstrated (Attewell and Savill-Smith, 2004). The use of mobile - and pervasive gaming - is relatively recent (Bjork et al., 2002). Some academic pilots have tried to evaluate these games, one leisure game using a soap-opera style game: Supafly in Sweden (Jegers and Wiberg, 2006) explored three aspects of pervasive gaming: mobile place-independent game play; integration between the physical and the virtual worlds; and, social interaction between players. Several other game-based learning applications using mobile and portable devices are being piloted. As well as Savannah, which used mobile

devices to map virtual spaces onto real spaces, other mobile games, such as Urban Tapestries and MobileGame aim to map real spaces onto the virtual (Schwabe and Goth, 2005: 192). The MobileGame developed as part of the European Union-funded Mobilearn project allows participants to 'experience immersion in a mixed reality environment'. The rally of small teams is structured as a competitive and cooperative game, where each team tries to catch another team. Following from the mixed reality approach, the emergence of 'street gaming' or 'social gaming' where individuals play games in often urban spaces are games 'experiences' which are proliferating (DeKoven, 2002; Fullerton, 2005). For example 'Big Game' crosses over into alternate Reality games; these games are usually large-scale multiplayer games that blend electronic and virtual elements with real-world presence (Ruberg, 2006). These convergent forms of gaming rely upon using multiple media channels and sources, and parallel developments in social software (e.g. blogging, wikis and social shared spaces such as MySpace) support wider opportunities for collaborative activities (e.g. Stead et al., 2006). Other approaches are blending augmented reality interfaces with games (e.g. ARQuake, EyeToy). These convergent forms of games and immersive interactions may have quite profound implications for how we learn in the future, but in overview seem to imply a more general move towards more holistic and reality-based learning experiences rather than a sequencing of learning 'chunks' or pieces.

- MASELTOV opened an innovative avenue for mobile games by focussing on **social needs for immigrants, situatedness and community building**. The project developed a multi-level game that motivates the immigrant to progress from a 'rooky' level to an 'expert' level upon performing specific tasks, delivering targeted results and collecting points through differential progress towards community building (contact efforts), informal learning progress in cultural understanding (positive feedback) and language comprehension (responsiveness in critical situations).
- To address the challenge of providing cultural learning both within the context of the project, and in a form suitable for deployment on Google Play, several themes have been considered. The **game seeks to empower the user through a fictional narrative** which places them as a hero seeking to reconcile a "**dimensional split**", in which reality has been divided into two discrete dimensions, each with a distinct culture. Hence, they are required to traverse the two dimensions as they move through the game world, experiencing cultural differences first-hand. Dialogic interactions are used extensively, with users having the freedom to choose a variety of responses to situations and experience the consequences. Success requires they develop their understanding of each of the two cultures, and apply this understanding to solve problems they will encounter. The narrative of the game takes the player through themed activities including travel, job seeking, healthcare, and shopping, with the problems faced developed through games design discussions with non-governmental organizations (NGOs) in three countries working with immigrants on a daily basis. Through solving these challenges, the player is awarded points and given feedback to indicate their progress, progressing through narrative which places them as a scientist trying to reconcile two different "dimensions", each with a unique culture.

Empowerment is a common and demonstrably effective approach used in games seeking to influence behaviour (Caldwell et al., 2013). It appears particularly suited to the case of a game for immigrants, as cultural exclusion can be seen to be linked to disempowerment: excluded immigrants feel they have no role in influencing their host country's attitudes, policies, and systems. Following the theme of empowerment, MASELTOV adopted an approach taken by other serious games, which combines a partially-abstracted narrative together with an

overarching story seeking to both reflect common challenges faced by immigrants, whilst presenting this from a position of empowerment.

In the case of integrative approaches combining multiple tools, such as that of MASELTOV presented, a blended approach to learning which seeks to support learners in traversing a wide range of tools and resources requires that the impact of the game be consider and evaluable in wider terms. Games may provide a valuable starting point for learners, particularly where desired learning outcomes require they first engage and acquire intrinsic motivation to learn, rather than requiring extrinsic motivators. Whilst evaluating and understanding individual components of a blended learning experience can guide development, assessing the joint impact of these components and their interplay is also frequently required.

A clear need exists for two distinctions in the evaluation process for game based learning approaches to cultural competence development. The first is the distinction between evaluations which seek to gain insight into the behavior of the players of the deployed game (or prototype), compared to evaluations which take place in a laboratory context. Both have merits; the former consists of a representative sample, and can provide valuable information into the impact of the game on its target audience, the latter allows researchers greater access to participants and hence more qualitative insight which was finally implemented and realized by the MASELTOV serious game. The second distinction is between evaluation seeking to feed-in to design, and evaluation seeking to assess the impact of a game-based learning approach as a whole. Whilst accurate assessment of impact has value in both cases, frameworks emphasize the importance of this distinction, and its implications for research methodology.

## 2.4 SOCIAL NETWORKING

With the advent of Web 2.0, the second wave of websites and applications offers a much richer experiences via **social networking**. Social networking, a highly flexible platform, allows users to interact, communicate and collaborate synchronously and/or asynchronously with or without revealing their identities as an individual or a member of a group on the go (Dwyer et al., 2008). Some social network services, such as Facebook, are also friendly to application developers. For instance, the “plug-in style” platform (Musser, 2007) allows third parties to develop their own social-networking applications that enhance the platform functionality or act as front-end mediums to a third party web-based service (Gjoka et al., 2008). Owing to its openness, social networks, such as Facebook, now attracts “more than one million developers and entrepreneurs around the world” and has “more than 550,000 active applications” on its platform (Facebook, 2010). The Internet has fostered such environments to support social interaction at an unprecedented scale of hundreds of millions of users. People are using the Internet in order to search for jobs, communicate with friends and family and exchange ideas. These social interactions can leave behind a trace of some sort such as: exchanged email messages, IM logs, newsgroup postings and blog entries. Hidden in these growing archives of interactions are useful social patterns that, if more easily perceived, could greatly improve the social dynamics of the online world (Crumlish & Malone, 2010). The end-goal as a designer is to create a ‘frictionless’ social interface that enables individuals to merge into large communities with no a priori knowledge or experience. The site hence eases their transition from an individual social context into the role of a community member. Social interfaces are hence designed and deployed to support ongoing, geographically rather dispersed gatherings of people drawn together by common interests and the conversational power of textual exchange (Dwyer et al., 2008). Designers need to be savvy of users tend to be drawn into, or distance themselves from, certain communities and groups. Such

understanding needs to be coupled with a technological understanding of how information may be presented and managed to stimulate debate and discussion. A central concept here is that of ‘critical mass’. For example a site perceived to be deserted, as a lack of frequent messages and updates is unlikely to attract users to contribute. The designers of a social interface thus need to focus on ways of attracting users into their application. The system should allow the user to engage with a service, build his identity, assert himself so others can interact with him, and develop a rich reputation built out of his activity within the network (Crumlish, 2010).

- MASELTOV considered **metrics of social activity and progress in learning** that can be considered as input for evaluative feedback with respect to community building within the mobile game. The specifics of MASELTOV will be to relate progress in the social network (in general) and the local community building activities (in detail) to measures of social inclusion, which can be discussed and determined within a forum with sociologists, NGOs, immigrant end users and intermediaries in future implementations.

The notion of Social Computing refers in general to the development of **social behaviours** and the genesis or strengthening of social ties through IT systems. In a narrower sense, it means the second generation of online communities and the tools and services related to them, and as such is closely linked to the Web 2.0, explained in definitive laymen’s terms by Tim O’Reilly in 2005 (O’Reilly, 2005). Social computing fosters the building of social capital - referring to the collective value of all social networks and the inclinations that arise from these networks to do things for each other. The term social capital emphasises a wide variety of quite specific benefits that flow from the trust, reciprocity, information, and cooperation associated with social networks. Social capital creates value for the people who are connected and – at least sometimes – for bystanders as well (Putnam, 2000; Diminescu, 2010). Social networks are seen then as an effective means of producing social capital insofar as they multiply the channels through which community members may meet, interact, communicate, and exchange information and resources (Prell, 2003). By facilitating the creation of what Granovetter calls weak ties (Granovetter, 1982), these networks enable participation in various social contexts and, in particular, contribute to economic and social integration. Bonding social capital is “the type that brings people who already know each other closer together” and bridging social capital is “the type that brings together people or groups who previously did not know each other” (Gittell et. al, 1998). The production of bridging social capital as this capital refers to connections that are above all ones involving information exchange or the opening up of prospects or opportunities – in particular professional ones – without implying any emotional involvement.

- MASELTOV aimed at extending existing social networks in a most fundamental dimension with respect to integration, namely by **special enforcement of the local community building**, towards communication and partnership building with local, prevalently native residents, motivating and fostering bottom-up integration. Normally, Social Computing may be likely to increase the social capital of an individual or a group by making face-to-face relationships less likely (Diminescu, 2010). MASELTOV counteracted this tendency since it implicitly incorporated a vector that (i) virtually established novel connectivities with previously unknown personal contacts, and (ii) naturally brought these persons into situations where they will meet face-to-face and therefore will be involved in real-world communication.

## 2.5 MOBILE MULTIMODAL INTERFACES

The problem of **text localisation and recognition** in real-world images has been receiving significant attention in the scientific community. Much of scientific work has been published in the past years (de Campos et al., 2009; Pan et al., 2009; Epshtein et al., 2010), yet these papers aimed to solve only parts of the problem and whilst they achieved some promising results, they are still well behind capabilities of a human. Recently, Neumann and Matas have proposed a method for text localisation and recognition (Neumann & Matas, 2010), which addresses the complete problem of text localisation and recognition at once. For given input image (taken by a camera or a mobile phone), the method localises all textual content (visualised by red bounding boxes in Figure 5) and “reads” the text so that it can be further processed by a computer (denoted by red text in the image below). On the standard and most cited dataset used in the real-world text recognition community (published at ICDAR 2003), the method is the first one to report both text detection and recognition results, thus establishing a new state-of-the-art.

- In the MASELTOV project, we have developed a **state-of-the-art text detection system** which opens the door to intuitive image based mobile interfaces. Observing that text in virtually any script is formed of strokes, we proposed a novel easy-to-implement stroke detector which is significantly faster and produces significantly less false detections than the detectors commonly used in scene text localization. First, stroke-specific keypoints are efficiently detected. Text fragments are subsequently extracted by local thresholding guided by keypoint properties. Classification based on effectively calculated features eliminates non-text segmentations.
- All stages of the proposed pipeline are scale- and rotation-invariant and support a wide variety of scripts (Latin, Hebrew, Chinese, etc.) and fonts. The results have been **published in a series of scientific contributions** to the international computer vision community (Neumann & Matas, 2013a; Neumann & Matas, 2013b; Neumann & Matas, 2015).

## 2.6 MULTISENSORY CONTEXT AWARENESS

**Context modelling.** Many different features have been considered as relevant units to define context models. For instance, in Information Retrieval (IR), context normally comprises a user’s long term and short term preferences (Shen et al., 2005; Jose and Urban, 2006; Vallet et al., 2007; Mylonas et al., 2008). Approaches in the Recommender Systems (RS) area complement these models with demographic user features such as gender, age, nationality, etc. (Brusilovsky, 2001), and information about the user’s social networks (Konstas et al., 2009). The Adaptive Hypermedia (AH) research area (Brusilovsky and Millan, 2007), and more specifically, adaptive educational systems, tend to focus on the user’s knowledge and background (Brailsford et al., 2002), the goals or tasks the user is trying to achieve (Brusilovsky et al., 2002), her cognitive and learning styles (Goren-Bar, 2005), and her affective state (Dey, 1998). Finally, the key contextual aspect in the Pervasive Computing (PC) area tends to be the user environment, which includes information about the user’s platform (Klyne et al., 2004), location, and time (Krüger et al., 2007). The rise of smartphones and tablet PCs has brought new opportunities in context-aware recommender systems development, the integration of real-time contextual information (Liu et al., 2014; Noguera et al., 2012). Smartphone sensors are used to monitor the daily activities of users and profile their preferences and behavior to provide effective recommendations by understanding the current situational context (Salah 2011). Bolchini, 2007 summarizes the benefits of context-



aware applications as follows: with the help of context-aware application it is possible to (a) adapt interfaces, (b) tailor the set of application-relevant data, (c) increase the precision of information retrieval, (d) discover services, (e) make the user interaction implicit, or (f) build smart environments. In fact, context-aware computing generally refers to pervasive computing in which mobile systems can sense their physical environment and adapt their behavior accordingly (Colombo-Mendoza et al. 2015).

- In the MASELTOV project, the mobile multisensory collection and interpretation of different contextual features to support immigrants in host urban environments were realised.
- MASELTOV extracts relevant context information and provides the background data for recommendations based on the user's preferences and current environment. The contextual features derived consist of information about the language learning lessons taken, the progress of the serious game, translated text, information read and personal input from the user profile.
- The recommender also exploits mobile sensor data such as the user's physical activity, places visited, the user's interests and information about the social interaction.
- With this context data MASELTOV is able to improve personalized recommendations and provide targeted information right where and when it is needed. E.g. language lessons can be provided based on personal interests, the current location or places of special interest or translated text making the learning process more interactive.
- MASELTOV makes sure to protect the privacy of the user and to strengthen the confidence of the immigrants in the service, and allows users to take full control over the collection of context data.

## 2.7 USABILITY RESEARCH

In order to understand the different requirements in terms of **usability** between groups with **various cultural backgrounds** two key frameworks provide insights: Hall's (1976) communicative distinction between high context/low content and low context/high content cultures, and Hofstede's (2001) distinction between individualist and collectivist cultures. Individualist cultures tend to correlate with low context cultures and collectivist cultures accordingly with high context cultures (Ess, 2007). (Nisbett, 2003) found fundamental differences in the way of reasoning and thinking between Easterners and Westerners that have a high impact on the interpretation of user interfaces. Various studies found different user preferences in terms of user interface design that could be set in relation with these insights on cultural differences (Abdat and Pervan, 2000; Postma, 2001; Heaton, 2002; Pohl, 2004; Chu et al., 2007). Based on the mentioned frameworks and previous studies (Ess, 2007) collected some basic guidelines for the user interface design for different cultures. Generally, sites designed for individualist cultures stress images of the individual alone, while sites more successful for collectivist cultures use more images of groups and families. The same applies in the matter of text: collectivist cultures use usual pronouns in plural form like "we" and "us" where more individualist cultures prefer "I" and "me" (Leonardi, 2002). (Callahan, 2005) stated that there are different colour preferences as well. User interfaces for individualist cultures should be more content-based focussing on text while collectivist cultures are appealed more to images that communicate emotions and show families and friends (Würtz, 2005). However, (Lübke, 2005) presented studies that not only confirmed the utility of these two frameworks but also outlined the limitations. More and more people are more accurately characterized in terms of being members of multiple and hybrid cultures. This especially applies to immigrants who have been out of their country of origin for longer periods of time.



However, the findings from (Chu et al., 2007) show similarities to the guidelines from Ess but outline the importance of involving users extensively. According to their study of Somali immigrants in the USA, particularities in designing for immigrants include a bilingual layout, images related to the country of origin as well as a simple and clear structure of a website. Designing for culturally heterogeneous users can be carried out by applying a shared context approach that is based on the work of (Searle, 1995) who argues that cultural knowledge evolves within a set of shared conventions.

In terms of user interfaces the application of a “shared representation of constitutive interface aspects” can avoid cultural misunderstandings and thus provide a user interface for all (Bourges-Waldegg & Scrivener, 1999; 2000). However, one could expect performance differences dependent on the familiarity with these aspects and therefore (Sapienza, 2008) suggests having menus and buttons in a universally accepted manner while forms that require more intensive attention should be customized. Designers also have to be aware that usability evaluations cannot provide the needed feedback due to cultural specialties and for this reason should adapt the methodology of testing (Hall et al., 2004; Clemmensen et al., 2009). As with the guidelines from Ess and Chu et al., much research in this area is based on differences of website design for various cultures. Insights on the usability of mobile user interfaces for immigrants could be inferred to some degree but meaningful evaluations have not been conducted yet.

- Based on the experiences from related work, in MASELTOV a method framework was developed for involving immigrants. However, a big challenge for UCD with immigrants is to find and recruit real users matching the target group definition (Aykin et al., 2006). Another problem especially in the first phase of the requirement analysis is the establishment of trust between immigrants and researchers (Hynes, 2003). For this reason we collaborated with three nongovernmental organizations (NGOs) in *Graz (Austria)*, *London (United Kingdom)* and *Madrid (Spain)* that are in frequent contact with immigrants and were responsible for the recruiting of all study participants. Being introduced to immigrants by co-workers of the NGOs is already a positive sign for certain trustfulness of for immigrants’ unknown researchers.
- Based on the user involving activities in the project concrete implications were formulated and discussed regarding our experiences with the methods coping with the different cultural backgrounds of researchers and target group (Bobeth et al., 2013), including
  - Collaborating with NGOs.
  - Supporting recruiting process.
  - Benefiting from NGOs experiences.
  - Interviewing in mother tongue and more implicit information.
  - Benefiting from reflections of long-term immigrants in focus groups.
  - Taking gender issues into account.
  - Fostering openness and creativity with playful methods.
  - Involving researchers with immigration background.

Based on these recommendations subsequent user involvement was organized in order to best collaborate with users and partners throughout the remaining project duration (field trials). Methodological challenges were gathered and analyzed and currently under scientific dissemination process planned as journal publication.

## 2.8 HUMAN FACTORS TECHNOLOGIES

**Usability engineering and attention.** Extracting attention is a crucial property of usability engineering; data derived from attentive information have been interpreted for decades. Usability researchers ever since relied on statistics of ‘recall’ or ‘recognition’ – typically, the measurement of the effect of specific product usage or advertisements in marketing strategies - as a measure of attention to the perception in question (Barlow and Wogalter, 1993). This approach traditionally follows the rationale that objects gaining more attention are in the focus of a given task and will also be remembered more likely. Developments go further towards mobile, i.e., light-weighted and low-cost eye tracking systems (Babcock and Pelz, 2004) to enable eye tracking in various situations and activities. Early attempts to obtain measurements of eye movements in a natural context and with free head and body movements typically concern everyday activities like driving a car (Land and Lee 1994, Harbluk et al., 2002), daily activities such as washing hands (Pelz and Canosa, 2001) or preparing food (Hayhoe and Ballard, 2005). In the context of usability analysis, mobile eye tracking is a promising and increasingly applied method, since it supplements subjective measures like questionnaires with objective data, telling if people really look at specific objects in their visual field. Eye tracking provides rich data about the gaze behaviour, is more accurate than questionnaires and can’t be easily manipulated by the person (Wessel et al., 2007).

**Attention, eye tracking and interaction design.** The evaluation of interaction designs in mobile applications requires the investigation of eye movements, similar to the use case of usability analysis of static websites and interaction schemes (Jacob & Karn, 2003). Mobile computing technology allows having electronic devices available whenever and wherever we want. However, designers and developers of mobile applications like palmtop computers, PDAs, and mobile phones have to face unique challenges, because location and environment are usually less predictable than in desktop applications (Barnard et al. 2007). Similar restrictions apply also to public displays. Furthermore mobile computing devices have the common problem of rather small visual displays and limited input techniques, wherefore performance is often substantially worse than in the desktop context (e.g., (Neerinx & Streefkerk, 2003). Multitasking and support for task interruption are of high relevance, since in a mobile context the frequency of distracting events is much higher than for a desktop application and tasks with interruptions take longer to complete on a mobile device than with a desktop application (Nagata 2003). Therefore special interest is on the increased competition with regard to attracting the users' attention and on interaction as a non-primary task in a certain context (Schrammel et al., 2011).

**Mobile devices and eye tracking.** Eye tracking devices have already been used in various combinations with smartphones. Mapping of PORs to mobile displays is usually performed - in indoor studies - by measuring with tightly mounted phones. For example, (Cauchard et al., 2011) screw the mobile device under a table, and enables evaluation of mobile interaction only when sitting. (Chynal et. al. 2012) investigated and proved the significance of eye tracking in mobile applications usability testing, using a head mounted eye tracker. Outdoors mobile applications, such as navigation, require to focus the user’s attention quickly on the desired interface functionality, since the frequency of distraction through events and context changes may cause inattention of the user to relevant information on the mobile display (Rohs et al., 2007). For these circumstances, (Kluge & Asche, 2012) developed an eye tracking pilot test on validating a smartphone based pedestrian navigation system, describing the relationship between reality and navigation instructions. Evaluation of eye movements was done on the basis of massive manual intervention using the SMI BeGaze Software. Alternative approaches use the smartphone camera directly with its rear view on the user to

estimate the eye gaze on the mobile phone (Miluzzo et al., 2010). However, so far this method achieves accuracies only in the few centimeters range, is vulnerable to harsh illumination conditions, and, furthermore, does not provide a video about the backstage environment as well. (Fritz & Paletta, 2010; Mardanbegi, D. & Hansen, 2011) demonstrated the use of static display localization in eye tracking tasks. However, their approach is rather specific and does not apply to the localization of mobile devices in eye tracking videos. (Gehring et al., 2012) mentions the concept to detect mobile devices but does not provide quantitative information on experimental data. [Giannopoulos et al., 2012] mentioned Dikablis based marker tracking which principally distracts the user's attention.

**Beyond the state-of-the-art.** The project objective in the context of human factors was to develop a novel technology that would enable to automatically analyse mobile interaction in the context of cultural diversity, enabling to quantify differences interaction with the environment. Lack of large scale studies enabling statistically significant results is due to high costs of manual penetration in eye tracking analysis.

- MASELTOV described for the first time **precise gaze estimation on mobile displays** and surrounding, its performance and without markers, demonstrated accurate point-of-regard (POR) recovery directly on the mobile device and enable heat mapping of visual tasks (Paletta et al., 2014a). In a benchmark test MASELTOV achieved a mean accuracy in the POR localization on the display by  $\approx 1.5$  mm, being very robust to illumination changes (Paletta et al., 2014b). It is concluded from these results that this system might open new avenues in eye tracking research for behavior analysis in mobile applications, in particularly, considering aspects of accessibility in modern user interfaces. In this manner, MASELTOV took advantage of modern miniaturised mobile eye tracking technology that does not impact the immigrant user in the usability experiments; it can even be used in daily activities and public spaces.

## 2.9 SUMMARY OF PROGRESS BEYOND STATE-OF-THE-ART

The key research contributions of the MASELTOV project are represented in three major fields, as follows:

- **Mobile incidental learning & context sensitive technologies.** In the context of recent immigrants' mobile learning journeys, research focused on the situatedness of learning technology and the persuasiveness in the methodology (Gaved et al., 2012). This was implemented by means of feedback and progress indicators (Gaved et al., 2013), and by analyzing situations of the learner and the advantages of incidental learning, as well as its aspects for social inclusion. Mobile incidental learning and context-sensitive learning technology was implemented in the framework of a mixed reality game (Paletta et al., 2013), as well as with learning oriented geo-contextual processing of the multisensory mobile device, applying mobile context awareness of the learner's situations (Gaved et al., 2014). The work in this respect is beyond the state-of-the-art both in the direction of demonstrating the benefits of mobile service applications for the framework of incidental learning, as well as showing this framework's benefits for the sake of the recent immigrant user (Kukulska-Hulme et al., 2015).
- **Serious games & cultural understanding.** In the field of serious game research, MASELTOV focused on the ethical research aspects (Dunwell, 2012) that are in the context of playful intervention. MASELTOV demonstrated that pervasive games are a relevant contribution for behavior change (Schuller et al., 2013), in particular considering the development of social inclusion aspects in recent immigrants. Playful development of

cultural competences (Dunwell et al., 2014) was chosen as a serious game objective that is in the line of game based learning approaches, focusing on the role of narrative based serious games for a careful empowerment and abstraction of the learner's situation in the social inclusion process (Dunwell et al., 2015).

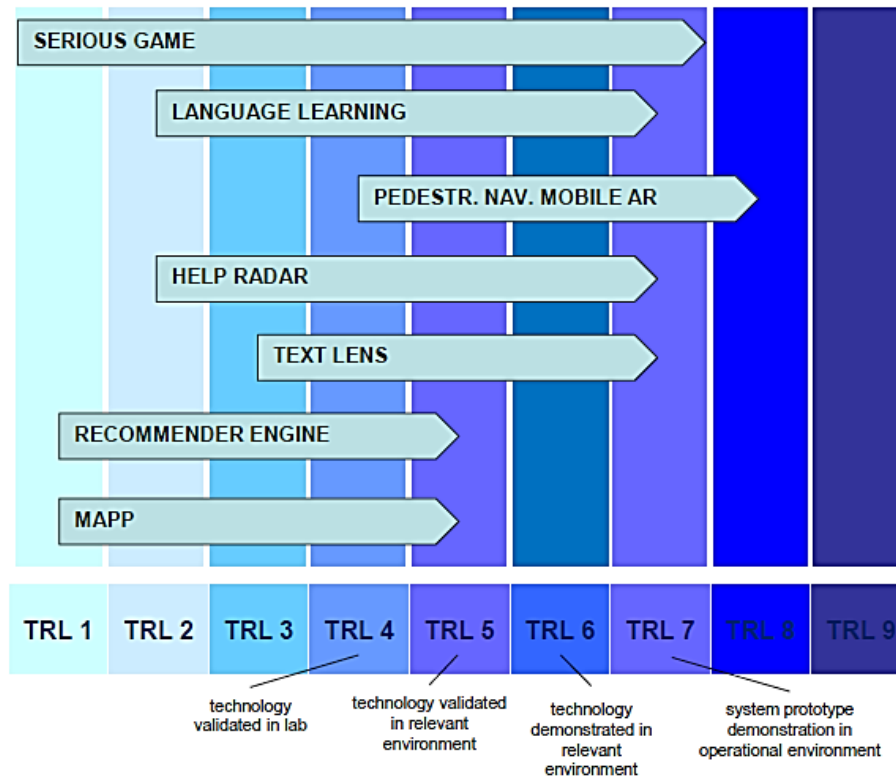
- **Mobile technologies for human factors analysis.** MASELTOV substantially advanced the state-of-the-art in technologies for mobile HCI research by enabling for the first time 3D gaze recovery on mobile displays (Paletta et al., 2014). Furthermore, it implemented the important principle of cross-modal resonance for multimodal attention analysis with cheap sensors such as mobile microphones that usually are only available with expensive multisensory lab equipment that eventually will enable dialogue analysis from mobile audio prosody data (Eyben et al., 2013). In addition, and in line with the objectives of the project for a more profound understanding of cultural understanding, differences of socio-cultural features between local and hosted users were investigated by means of the analysis of attention processes (Paletta et al., 2014) during wayfinding with various design and interaction styles in mobile navigation applications (Paletta et al., 2015). This research demonstrates that cultural differences can be researched with novel technologies that enable quantitative analysis beyond questionnaire based usability analysis.
- **Computer vision for intuitive language learning.** In the context of mobile interfaces that support incidental learning where the recent immigrant user has to perform her language understanding task, fundamental progress beyond the state-of-the-art was performed in the field of image based text detection. This methodology is pivotal for the automated analysis of imagery that is captured “in the wild” by informal learning users. The group of Prof. Matas has not only received a Google Research Award for his outstanding research expertise and results, but also published in top conferences in the field (Matas et al., 2012; Neumann & Matas, 2013; Neumann & Matas, 2013; Busta et al., 2014; Busta et al., 2015).

**Summarising the research results**, the MASELTOV project was investigating on various aspects of the **immigrant's learner journey**: the incidental learning framework, the aspects of the user-centered design, aspects of persuasive learning approach, and understanding the attention processes in mobile interaction.

## 2.10 OVERVIEW OF INNOVATION IN MASELTOV

There are two key innovations that determined the outcome of the project:

- (1) the Mapp (MASELTOV app) as an **intelligent suite of services**, and
  - (2) the narrative-style **serious game for immigrants (SPLIT)**.
- The objective of provide a means for mobile learning for immigrants (MApp) was implemented using an intelligent suite of services for immigrants. It provides all necessary tools and services, is available in multiple languages and provides pivotal services for recent immigrants, such as, persuasive mobile learning, a context sensitive recommender engine, mixed reality serious game, an intuitive text lens and seamless integration of additional mobile apps that are developed by other companies, so that external applications can be tightly linked. The user can get access to user profile, get insight into the application of the recommender engine, and get notifications.
  - The serious game for immigrants (Split) implements a playful cultural learning functionality. With this tool, the recent immigrant user can learn about cultural differences through play.



**Figure 42 - Various relevant service components of the MASELTOV suite of services and the associated technology readiness level<sup>5</sup> achieved at the end of the project.**

The service appeals to different audiences than formal learning. Its key elements are narrative based gaming, empowerment, abstraction, and experience. The purpose is to remove the player from the real world and to identify common cultural themes in alignment with Hofstede's principles on cultural understanding. There is the unique ability to travel between two "dimensions" and observe their distinct cultures. Problem-solving is performed towards a (world-saving) goal.

Figure 42 depicts various relevant service components of the MASELTOV suite of services and the associated technology readiness level achieved at the end of the project. From this schematic diagram it becomes obvious that the minimum level of technological readiness level (TRL) achieved in the progress of the components is TRL 5. Several relevant components have progressed more, such as, the serious game, the language learning component and the augmented reality based navigation component.

In total, the MASELTOV app (MApp) provides a robust, well working and positively evaluated suite of services with a high innovation value due to the intelligence of its recommender engine and context sensitive service functionalities.

<sup>5</sup> Technology readiness levels (TRL): TRL 1 – basic principles observed, TRL 2 – technology concept formulated, TRL 3 – experimental proof of concept, TRL 4 – technology validated in lab, TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies), TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies), TRL 7 – system prototype demonstration in operational environment, TRL 8 – system complete and qualified, TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space).



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- (Nemann & Matas, 2015)** Lukáš Neumann and Jiří Matas: Efficient Scene Text Localization and Recognition with Local Character Refinement, 13th ICDAR’2015 - International Conference on Document Analysis and Recognition, Nancy, 2015
- (Neumann & Matas, 2013a)** Lukas Neumann, Jiri Matas: Scene Text Localization and Recognition with Oriented Stroke Detection. *Proc. IEEE International Conference on Computer Vision*, 2013: 97-104.
- (Neumann & Matas, 2013b)** Lukas Neumann, Jiri Matas: On Combining Multiple Segmentations in Scene Text Recognition. *Proc. ICDAR 2013*: 523-527.
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## 7. SCIENTIFIC PRODUCTION AND DISSEMINATION – PP3

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The following items of scientific production and dissemination are labeled by, (i) the serial identifying number of production, (ii) the contributing beneficiaries of the MASELTOV consortium, and (iii) the work package in MASELTOV they are associated with.

Among these publications, there are *10 counted as joint work* between MASELTOV consortium members and/or with partners from the DGEI cluster.

### 7.1 KEYNOTES & INVITED TALKS

- [no 1.] [OU][WP7] Kukulska-Hulme, A. (2014). Imagining the Future of Language Learning. Seminar Keynote speaker at *National Institute of Education*, Nanyang Technological University, Singapore, presented 16/01/2014. (Agnes Kukulska-Hulme described the MASELTOV project as part of a broader review of technological developments and their impacts on teaching and learning)
- [no 2.] [OU][WP7] Kukulska-Hulme, A. (2014) Pedagogical Response to the Mobile Learning Revolution. Keynote speech at *Netbased learning in higher education* (Nätbaserat lärande I högre utbildning), Informa IBC, Stockholm, Sweden 16/09/2014. (Agnes described the MASELTOV project as part of a broader review of mobile learning and its implications for teaching and learning).
- [no 3.] [JR][WP4] Paletta, Lucas. Computational Human Factors Analysis and Preferred Looks, Keynote speaker at Workshop “Robots in Homes and Industry: Where to Look First<sup>6</sup>?”, *IEEE International Conference on Robotics and Automation*, Hongkong, China, 1 June, 2014. (Lucas Paletta described the human factors technologies developed in the MASELTOV project, the reference to the cultural differences that we investigated, and how this might refer to modelling of attention and transfer to collaborative robotics in the future)
- [no 4.] [CTU][WP4] Nemann, Lukas and Matas, Jiri: Text Reading in the Wild - How to make it useful? Asian Conference on Computer Vision - *First International Workshop on Robust Reading*, Singapore, November 2014.
- [no 5.] [JR][WP4] Lucas Paletta, Invited Talk, “Three-dimensional Recovery of Gaze from Mobile Eye Tracking and Human Attention Modeling”, *Institute of Cognitive Psychology, University of Vienna*, October 23, 2014, Vienna, Austria
- [no 6.] [JR][WP4] Lucas Paletta, Invited Talk, “Three-dimensional recovery of gaze for the modeling of attention in natural environments”, *International Symposium on Attention in Cognitive Systems*, ISACS 2014, December 1, 2014; CITEC, Bielefeld, Germany.

### 7.2 WORKSHOP ORGANISATION

- [no 7.] [JR,DGEI][WP10] Paletta, L., Schuller, B., Robinson, P., and Sabouret, N. (2014). IDGEI 2014 – 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion; *Proc. IUI Companion '14; Proceedings of the Companion Publication of the 19th International Conference on Intelligent User Interfaces*; pp: 49-50; Haifa, Israel, 24 February, 2014. ACM.
- [no 8.] [JR,DGEI][WP10] Paletta, L., Schuller, B., Robinson, P., and Sabouret, N. (2015). IDGEI 2015 – 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion; *Proc. IUI Companion '15; Proceedings of the*

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*Companion Publication of the 20th International Conference on Intelligent User Interfaces*; in print; Atlanta, GA, March 29, 2015. ACM.

- [no 9.] [JR][WP4] Paletta, L., Triesch, J., Metta, G., and Pfeiffer, T. (2014), *Proc. 7<sup>th</sup> International Symposium on Attention in Cognitive Systems*, arxiv.org, in print.
- [no 10.] [JR][WP4] Paletta, L., Itti, L., Schuller, B. and Fang, F. (2013), Attention in Cognitive Systems – an Introduction, in Paletta, L., Itti, L., Schuller, B., and Fang, F., editors. *Proceedings 6th International Symposium on Attention in Cognitive Systems* (ISACS 2013) held in conjunction with the 23rd International Joint Conference on Artificial Intelligence 2013 (IJCAI), Beijing, China, August 2013. arXiv preprint.

### 7.3 JOURNAL PUBLICATIONS

- [no 11.] [OU,JR][WP7,WP1] Kukulska-Hulme, A., Brasher, A., Gaved, M., Scanlon, E., Jones, A., Paletta, L. (2015) Mobile Incidental Learning to Support the Inclusion of Recent Immigrants, *The Technology Collection*, 2015, in print.
- [no 12.] [CTU][WP4] (submission to #1 journal, major revision, heading towards accept) Neumann, L., Matas, J. (2015): Real-time Lexicon-free Scene Text Localization and Recognition, *IEEE Transactions on Pattern Analysis and Machine Intelligence*.

### 7.4 CONFERENCE PUBLICATIONS

- [no 13.] [OU,JR][WP7,WP1] Kukulska-Hulme, A., Gaved, M., Paletta, L., (2015) Mobile Incidental Learning to Support the Inclusion of Recent Immigrants. *Proc. 11th International Conference on Technology, Knowledge, and Society*, 23-24 February 2015, Berkeley, CA, USA.
- [no 14.] [JR,ATE][WP4,WP9] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Luley, P., Ladstätter, S., Deutsch, S., Bobeth, J., Tscheligi, M. (2014). Attention in Mobile Interactions: Gaze Recovery for Large Scale Studies, *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems*, CHI 2014, CHI'14 extended abstracts, pp. 1717-1722, ACM New York, NY, USA. 26 April – 1 May, 2014, Toronto, Canada.
- [no 15.] [OU,JR,COV] Scanlon, E., Gaved, M., Jones, A., Kukulska-Hulme, A., Paletta, L., Dunwell, I. (2014). Representations of an incidental learning framework to support mobile learning. *Proceedings of IADIS Mobile Learning 2014*, 28 Feb-02 March 2014, Madrid, Spain.
- [no 16.] [JR][WP4] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Ladstätter, S., Luley, P. (2014), Smartphone Eye Tracking Toolbox: Accurate Gaze Recovery on Mobile Displays, *Proceedings of the Symposium on Eye Tracking Research and Applications*, ETRA 2014, Safety Harbor, Florida, pp. 367-68, <http://dl.acm.org/citation.cfm?id=2628813>, ACM New York, NY, USA.
- [no 17.] [OU][WP7] Gaved, M.; Kukulska-Hulme, A.; Scanlon, E.; Jones, A. (2014). MASELTOV - mobile incidental learning services to support language learning and the social inclusion of recent immigrants. *Proceedings of the Computers and Learning Research Group 2014*, 10-11 June 2014, The Open University, Milton Keynes, UK.
- [no 18.] [COV,OU][WP7] Dunwell, I., Petridis, P., Lameris, P., Hendrix, M., Doukianou, S., and Gaved, M. (2014). Assessing the Reach and Impact of Game-Based Learning Approaches to Cultural Competency. *Proceedings of the 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2014), Haifa, Israel, 24 February, 2014. ACM.

- [no 19.] [COV,OU][WP7] Dunwell, I., Petridis, P., Lameris, P., Hendrix, M., Doukianou, S., and Gaved, M. (2015). Addressing Cultural Competency and Integration through a Serious Game: The Role of Narrative, Empowerment and Abstraction. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM.
- [no 20.] [JR, OU, COV, ATE, AIT][WP10] Lucas Paletta, Agnes Kukulska-Hulme, Ian Dunwell, Stephanie Schwarz and Sofoklis Efremidis (2014). MASELTOV – Empowering Recent Immigrants with Mixed Reality Gaming Using a Mobile Ecology of Services. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM.
- [no 21.] [JR,ATE][WP4] Schwarz, S., Bobeth, J., Tscheligi, M., Schwarz, M. and Paletta, L. (2015), Culture Affects Wayfinding Styles: Attention and Preference in Navigation, submitted to *Proc. International Conference on Multimodal Interfaces*, ICMI 2015, to be submitted.
- [no 22.] [JR][DGEI][WP10] Sabouret, N., Schuller, B., Paletta, L., Marchi, E., Jones, H., and Ben Youssef, Atif (2015), Intelligent User Interfaces in Digital Games for Empowerment and Inclusion: Experience from three EU projects, *Proc. 12th International ACE 2015*, November 2015, Malaysia, submitted.
- [no 23.] [CTU][WP4] Busta, M., Drtina, T., Helekal, D., Neumann, L., Matas, J. (2014). Efficient Character Skew Rectification in Scene Text Images. Asian Conference on Computer Vision *First International Workshop on Robust Reading*, Singapore, November 2014, p. 134-146.
- [no 24.] [CTU][WP4] Libovicky, J., Neumann, L., Pecina, P., Matas, J.: Efficient Character Skew Rectification in Scene Text Images. Asian Conference on Computer Vision *First International Workshop on Robust Reading*, Singapore, November 2014, p 169-180.
- [no 25.] [CTU][WP4] (submission, reviews 3x accept -> acceptance very likely) Neumann, L., Busta, M., Matas, J. (2015). Efficient Scene Text Localization and Recognition with Local Character Refinement. International Conference on Document Analysis and Recognition, Gammarth, Tunisia, August 2015.
- [no 26.] [CTU][WP4] (submission to #1 conference) Busta, M., Neumann, L., Matas, J. (2015). FASTex: Efficient Unconstrained Scene Text Detector. International Conference on Computer Vision (ICCV). Santiago de Chile, Chile, December 2015. Submitted.

## 7.5 CONFERENCE PRESENTATIONS

- [no 27.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) From immigrants to emigrants: Challenges of a change in analytical perspective. *GRITIM-UPF Research seminar*, Universitat Pompeu Fabra, Barcelona, Spain, 14th February, 2014.
- [no 28.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) A qualitative approach to European mobilities in crisis time: The English dream. *YAMEC Network Start-Up Workshop: Mobilities in times of economic crisis*. Lisbon, Portugal, 27th February, 2014.
- [no 29.] [UOC][WP2] Gordano, Cecilia and Ros, Adela (2014) Youth, mobility and the digital: the case of Spanish-speaking immigrants in London, *XI IMISCOE Conference on Immigration, Social Cohesion and Social Innovation*, Madrid, Spain, 27-29th August, 2014.



- [no 30.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) Time to move, again. Advantages and difficulties of Latin American young adult immigrants in London, presented at the *Crisis, Mobility and New Forms of Migration Conference*, University College Cork, Cork, Ireland, 2-4th September, 2014.
- [no 31.] [JR][WP4] Paletta, Lucas, Ladstätter, Stefan, Manfred Klopschitz, Michael Schwarz, Gerald Lodron, Martin Pszeida, Albert Hofmann, Patrick Luley (2014). Continuous 3D recovery of human gaze using multisensory tracking, *IS&T/SPIE Electronic Imaging, Intelligent Robots and Computer Vision XXXI: Algorithms and Techniques*, EI 2014, San Francisco, CA, February, 2014.
- [no 32.] [OU][WP7] Gaved, M., Kukulska-Hulme, A., Scanlon, E., Jones, A. Mobile apps for the social inclusion of migrants. Open University "Equality through Innovation" seminar series, July 2014.
- [no 33.] [JR][WP4] Paletta, Lucas; Schwarz, Michael; Ladstätter, Stefan (2015). Continuous 3D Recovery of Human Gaze using Multisensory Pose, *European Conference on Eye Movements*, ECEM 2015, Vienna, Austria, August 2015.
- [no 34.] [JR][WP4] Neuhuber, Norah; Paletta, Lucas; Schwarz, Michael, Wagner, Verena, Kallus, K. Wolfgang (2015). Attentional Effect of Social Cueing in Orientation Tasks, *European Conference on Eye Movements*, ECEM 2015, Vienna, Austria, August 2015.
- [no 35.] [JR][WP4] Paletta, L., Neuhuber, N., Schwarz, M., Wagner, V., and Kallus, W., Social cueing in human attention within the context of orientation tasks, *Proc. 4th International Conference on Applied Digital Human Modeling*, AHFE 2015, Las Vegas, NE, August 2015.
- [no 36.] [JR][WP4] Paletta, L., Pittino, N., Schwarz, M., Wagner, V., and Kallus, W. (2015). Human factors analysis using wearable sensors in the context of cognitive and emotional arousal, *Proc. 4th International Conference on Applied Digital Human Modeling*, AHFE 2015, Las Vegas, NE, August 2015

## 7.6 DEMONSTRATIONS AT CONFERENCES

- [no 37.] [JR][WP4] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Ladstätter, S., Luley, P. (2014), The Smartphone Eye Tracking Toolbox, Symposium on Eye Tracking Research and Applications, ETRA 2014, Safety Harbor, Florida.

## 7.7 PhD THESES

- [no 38.] [UOC][WP2] Gordano, C. *Contested Discourses on Migrant Connectivity: Migrant Users and Corporations of Mobile Phone and Money Transfer Services in Catalonia. An interdisciplinary approach*, Information and Knowledge Society Doctoral Program, Internet Interdisciplinary Institute, Universitat Oberta de Catalunya, Barcelona, Spain, November 2013. (not cited in previous reports)

## 7.8 MASTER'S THESES

- [no 39.] [JR][WP4] Schwarz, M., *Modeling Text Saliency in Human Visual Attention*, Institute for Computer Graphics and Vision Graz University of Technology, Graz, February 2014.
- [no 40.] [CTU][WP4] Hollmann, Oscar (2015): *Text Recognition of Different Scripts in the Wild*. MSc thesis, Czech Technical University in Prague.



## 7.9 PRINT MEDIA

[no 41.] [JR][WP1] Spielerische Integrationshilfe für Migranten, Der Standard, Austria, 2 July, 2014.

## 7.10 ELECTRONIC MEDIA

[no 42.] „[MaseltoV: Spielerische Integrationshilfe für Migranten](#)“, derStandard.at, 2 July, 2014

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## 8. CONCLUSIONS

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Overall, the MASELTOV project has finalised on target with respect to all major objectives, and dealing with the diversity of its 14 partner organisations and 10 work packages including 37 tasks. Potential hotspots of problems in the development of the work plan have been recognised within a large number of coordination activities, and appropriate reaction and contingency planning has been performed.

The project has identified the scientifically challenging thematic areas as well as the most important issues for a successful development of the exploitation strategy. The cooperation within the European clustering initiative on “Digital Games for Empowerment and Inclusion” was intensified beyond the planning hat has been agreed with the EC before project start. International workshops were organized to broaden the outreach of dissemination.

In its essence, MASELTOV was a project to explore the use and the integration of mobile service components in the frame of user centred design, with the feedback of the immigrant end user. It finally managed to integrate a rather complex suite of services that is integrated in the framework of the recommendation engine and the mixed reality serious game that includes real interaction for social inclusion with playful learning.

The success story of the project is the enthusiastic feedback of the users in the Milton Keynes field trial where the integrated suite of services could demonstrate its capabilities. Furthermore, the MASELTOV Conference in London showed a high interest and approval of the performance of the MApp service. In this sense the project has finalised in time but the purpose is targeting towards future product oriented developments beyond the project end.

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## 9. SUMMARY OF MASELTOV SCIENTIFIC PUBLICATIONS (COMPLETE PROJECT)

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The following items of scientific production and dissemination are labelled by,

- (i) the serial identifying number of production,
- (ii) the contributing beneficiaries of the MASELTOV consortium, and
- (iii) the work package in MASELTOV they are associated with.

### 9.1 KEYNOTES (10)

- [no 1.] [OU][WP7] Kukulska-Hulme, Agnes. *Aligning Migration with Mobility*, Keynote speaker at *UNESCO Conference, Paris*, 18-19 Feb., 2013. <http://www.slideshare.net/AgnesKH/akh-unesco-paris-feb-2013-final>
- [no 2.] [OU][WP7] Agnes Kukulska-Hulme, "Mobile learning revolution: Implications for pedagogy." Keynote at *EdMedia, Denver, Colorado*, 25-29 June 2012
- [no 3.] [OU][WP7] Agnes Kukulska-Hulme, "Mobile language learning - the ultimate challenge?" Keynote at *IADIS Mobile Learning Conference*, Berlin. 11-13 March 2012.
- [no 4.] [OU][WP7] Agnes Kukulska-Hulme, Roles and functions of the smartphone in language learning" Keynote in *Fredericia, Denmark*. 28 September 2012".
- [no 5.] [OU][WP7] Kukulska-Hulme, A. (2014). Imagining the Future of Language Learning. Seminar Keynote speaker at *National Institute of Education, Nanyang Technological University, Singapore*, presented 16/01/2014. (Agnes Kukulska-Hulme described the MASELTOV project as part of a broader review of technological developments and their impacts on teaching and learning)
- [no 6.] [OU][WP7] Kukulska-Hulme, A. (2014) Pedagogical Response to the Mobile Learning Revolution. Keynote speech at *Netbased learning in higher education* (Nätbaserat lärande I högre utbildning), Informa IBC, Stockholm, Sweden 16/09/2014. (Agnes described the MASELTOV project as part of a broader review of mobile learning and its implications for teaching and learning).
- [no 7.] [JR][WP4] Paletta, Lucas. Computational Human Factors Analysis and Preferred Looks, Keynote speaker at Workshop "*Robots in Homes and Industry: Where to Look First?*", *IEEE International Conference on Robotics and Automation*, Hongkong, China, 1 June, 2014. (Lucas Paletta described the human factors technologies developed in the MASELTOV project, the reference to the cultural differences that we investigated, and how this might refer to modelling of attention and transfer to collaborative robotics in the future)
- [no 8.] [CTU][WP4] Nemann, Lukas and Matas, Jiri: Text Reading in the Wild - How to make it useful? *Asian Conference on Computer Vision - First International Workshop on Robust Reading*, Singapore, November 2014.

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<sup>7</sup> [http://workshops.acin.tuwien.ac.at/ICRA2014W\\_Attention/invited\\_talks.html](http://workshops.acin.tuwien.ac.at/ICRA2014W_Attention/invited_talks.html)

- [no 9.] [JR][WP4] Lucas Paletta, Invited Talk, “Three-dimensional Recovery of Gaze from Mobile Eye Tracking and Human Attention Modeling”, *Institute of Cognitive Psychology, University of Vienna*, October 23, 2014, Vienna, Austria
- [no 10.] [JR][WP4] Lucas Paletta, Invited Talk, “Three-dimensional recovery of gaze for the modeling of attention in natural environments”, *International Symposium on Attention in Cognitive Systems*, ISACS 2014, December 1, 2014; CITEC, Bielefeld, Germany.

## 9.2 WORKSHOP ORGANISATION (6)

- [no 11.] [JR,DGEI][WP10,WP1] *First International Workshop on Intelligent Games for Empowerment and Inclusion*, IDGEI 2013, associated with FDG 2013, Conference on Foundations for Digital Games), Chania, Greece, 14 May 2013. (URL: <http://idgei.fdg2013.org/>)
- [no 12.] [JR,DGEI][W10,WP4] *Sixth International Symposium on Attention in Cognitive Systems*, ISACS 2013, Beijing, China, 4 August 2013 (URL: <http://isacs2013.joanneum.at/>).
- [no 13.] [JR,DGEI][WP10] Paletta, L., Schuller, B., Robinson, P., and Sabouret, N. (2014). IDGEI 2014 – 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion; *Proc. IUI Companion '14; Proceedings of the Companion Publication of the 19th International Conference on Intelligent User Interfaces*; pp: 49-50; Haifa, Israel, 24 February, 2014. ACM.
- [no 14.] [JR,DGEI][WP10] Paletta, L., Schuller, B., Robinson, P., and Sabouret, N. (2015). IDGEI 2015 – 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion; *Proc. IUI Companion '15; Proceedings of the Companion Publication of the 20th International Conference on Intelligent User Interfaces*; in print; Atlanta, GA, March 29, 2015. ACM.
- [no 15.] [JR][WP4] Paletta, L., Triesch, J., Metta, G., and Pfeiffer, T. (2014), *Proc. 7th International Symposium on Attention in Cognitive Systems*, arxiv.org, in print.
- [no 16.] [JR][WP4] Paletta, L., Itti, L., Schuller, B. and Fang, F. (2013), Attention in Cognitive Systems – an Introduction, in Paletta, L., Itti, L., Schuller, B., and Fang, F., editors. *Proceedings 6th International Symposium on Attention in Cognitive Systems* (ISACS 2013) held in conjunction with the 23rd International Joint Conference on Artificial Intelligence 2013 (IJCAI), Beijing, China, August 2013. arXiv preprint.

## 9.3 JOURNAL PUBLICATIONS (5)

- [no 17.] [OU][WP7] Gaved, Mark; Jones, Ann; Kukulska-Hulme, Agnes and Scanlon, Eileen (2012). A citizen-centred approach to education in the smart city: incidental language learning for supporting the inclusion of recent migrants. *International Journal of Digital Literacy and Digital Competence*, 3 (4) pp. 50–64.
- [no 18.] [COV][WP7] Hendrix,M., Dunwell,I., Lamerar,P., Arnab,S., Petridis,P., Stewart,C., de Freitas, S., Backlund,P., Liarokapis,F. "Serious Games and E-

Learning Standards: Towards an Integrated Experience". *Journal of Advanced Distributed Learning Technology* (JADLeT) 1(1), 2013.

- [no 19.] [JR,COV,DGEI][WP4,WP1] Schuller, B., Dunwell, I., Weninger, F., Paletta, L., Pervasive Serious Gaming for Behaviour Change – The State of Play. *IEEE Pervasive Computing*, 2013, Special Issue on Understanding and Changing Behavior, July-September, 2013.
- [no 20.] [OU,JR][WP7,WP1] Kukulska-Hulme, A., Brasher, A., Gaved, M., Scanlon, E., Jones, A., Paletta, L. (2015) Mobile Incidental Learning to Support the Inclusion of Recent Immigrants, *The Technology Collection*, 2015, in print.
- [no 21.] [CTU][WP4] (submission to #1 journal, major revision, heading towards accept) Neumann, L., Matas, J. (2015): Real-time Lexicon-free Scene Text Localization and Recognition, *IEEE Transactions on Pattern Analysis and Machine Intelligence*.

#### 9.4 CONFERENCE PUBLICATIONS (34)

- [no 22.] [OU,COV,BUS][WP7] Gaved, M., Kukulska-Hulme, A., Jones, A., Scanlon, E., Dunwell, I., Lamerar, P., Akiki, O. (2013) Creating coherent incidental learning journeys on mobile devices through feedback and progress indicators. Paper accepted for *Proceedings of the 12th International conference on mobile and contextual learning* (mLearn2013).
- [no 23.] [COV][WP7] Dunwell, I. (2012). Conducting ethical research with a game-based intervention for groups at risk of social exclusion. In M. Herrlich, R. Malaka & M. Masuch (Eds.), *Proceedings of the 11th international conference on Entertainment Computing* (ICEC'12) (pp. 594-599). Berlin: Springer-Verlag.
- [no 24.] [JR][WP4] Paletta, L., Santner, K., Fritz, G., and Mayer, H. (2013). 3D recovery of human gaze in natural environments, *Proc. Intelligent Robots and Computer Vision XXX: Algorithms and Techniques*, Conference EI118, SPIE Electronic Imaging, San Francisco, CA, January 4-6, 2013, in print.
- [no 25.] [JR][WP4] Santner, K., Fritz, G., Paletta, L., and Mayer, H. (2013). Visual recovery of saliency maps from human attention in 3D environments. *Proc. IEEE International Conference on Robotics and Automation, ICRA 2013*, Karlsruhe, Germany, May, 2013, in print.
- [no 26.] [JR,CUR][WP4,WP2] Paletta, L., Santner, K., Fritz, G., Mayer, H., Schrammel, J. (2013, April). 3D Attention: Measurement of Visual Saliency Using Eye Tracking Glasses, *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems, CHI 2013*, Paris, 2013.
- [no 27.] [JR][WP4] Paletta, L., Santner, K., Fritz, G., Hofmann, A., Lodron, G., Thallinger, G., and Mayer, H. (2013), Semantic Mapping of Point-of-regard and Saliency in Automatically Acquired 3D Models of Indoor Environments, *Proc. 17th European Conference on Eye Movements, ECEM 2013*, Lund, Sweden, 11-16 August 2013, abstract, in print.
- [no 28.] [JR][WP4] Paletta, L., Santner, K., Fritz, G., Hofmann, A., Lodron, G., Thallinger, G., and Mayer, H. (2013) FACTS - A Computer Vision System for 3D Recovery and Semantic Mapping of Human Factors, *Proc. 9th International*

*Conference on Computer Vision Systems*, LNCS 7963, pp. 62-72, Springer-Verlag Berlin Heidelberg, ICVS 2013, Sankt Petersburg, Russia, July 16-18, 2013.

- [no 29.] [COV,OU,JR][WP4] Dunwell, I., Lamer, P., Stewart, C., Petridis, P., Arnab, S., Hendrix, M., de Freitas, S., Gaved, M., Paletta, L. (2013). Developing a Digital Game to Support Cultural Learning amongst Immigrants. Paper presented at the *1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013)*, Satellite of the 8th Foundations of Digital Games 2013 (FDG), Chania, Greece (14-17 May 2013).
- [no 30.] [JR,DGEI][WP10] Schuller, B., Paletta, L., and Sabouret, N., editors. *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013)* held in conjunction with the 8th Foundations of Digital Games 2013 (FDG), Chania, Greece, May 2013. SASDG.
- [no 31.] [JR,DGEI][WP10] Schuller, B., Paletta, L., and Sabouret, N. Intelligent Digital Games for Empowerment and Inclusion – an Introduction, in Schuller, B., Paletta, L., and Sabouret, N., editors. *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013)* held in conjunction with the 8th Foundations of Digital Games 2013 (FDG), Chania, Greece, May 2013. SASDG.
- [no 32.] [OU,COV,JR][WP7,WP4] Scanlon, E., Gaved, M., Kukulska-Hulme, A., Jones, A., Dunwell, I., and Paletta, L. Representations of an incidental learning framework to support mobile learning. 10th International Conference on Mobile Learning. Madrid, IADIS, 28 February-2 March 2014.
- [no 33.] [JR,COV,OU,CUR][WP4,WP7,WP2] Paletta, L., Dunwell, I., Gaved, M., Bobeth, J., Efremidis, S., Luley, P., Kukulska-Hulme, A., de Freitas, S., Lamer, P., Deutsch, S. (2013) Advances in the MASELTOV Game - Mobile Assistance for Social Inclusion and Empowerment of Immigrants with Persuasive Learning Technologies and Social Network Services, *Proc. 10th International Conference on Advances in Computer Entertainment Technology (ACE 2013)*, Twente, The Netherlands, November 13-15, 2013.
- [no 34.] [JR,TUM][WP4] Paletta, L., Itti, L., Schuller, B., and Fang, F., editors. *Proceedings 6<sup>th</sup> International Symposium on Attention in Cognitive Systems (ISACS 2013)* held in conjunction with the 23<sup>rd</sup> International Joint Conference on Artificial Intelligence 2013 (IJCAI), Beijing, China, 5 August 2013. arXiv preprint arXiv:1307.6170.
- [no 35.] [JR][WP4] Paletta, L., Santner, K., and Fritz, G. (2013), An Integrated System for 3D Gaze Recovery and Semantic Analysis of Human Attention, in Paletta, L., Itti, L., Schuller, B., and Fang, F., editors. *Proceedings 6<sup>th</sup> International Symposium on Attention in Cognitive Systems (ISACS 2013)* held in conjunction with the 23<sup>rd</sup> International Joint Conference on Artificial Intelligence 2013 (IJCAI), Beijing, China, August 2013. arXiv preprint arXiv:1305.1163.
- [no 36.] [TUM,JR][WP4] Eyben, F., Weninger, F., Schuller, B., and Paletta, L., The acoustics of eye contact - Detecting visual attention from conversational audio cues, *Proc. 6th Workshop on Eye Gaze in Intelligent Human Machine Interaction, (GAZE-IN 2013)*, held in conjunction with the ACM ICMI 2013, Sydney, Australia, 13 December, 2013



- [no 37.] [JR][WP4] Paletta, L., Santner, K., Hofmann, A., Thallinger, G. (2013), 3D Gaze Recovery in Large Environments Using Visual SLAM, *Proc. 1st International Workshop on Solutions for Automatic Gaze Data Analysis, (SAGA 2013)*, Bielefeld, Germany, October 24-25, 2013.
- [no 38.] [CTU][WP4] Lukas Neumann, Jiri Matas: Scene Text Localization and Recognition with Oriented Stroke Detection. *Proc. IEEE International Conference on Computer Vision*, 2013: 97-104
- [no 39.] [CTU][WP4] Lukas Neumann, Jiri Matas: On Combining Multiple Segmentations in Scene Text Recognition. *Proc. ICDAR 2013*: 523-527
- [no 40.] [JR,CUR,FHJ][WP4] Paletta, L., Almer, A., Thallinger, G., Mayer, H., Pirker, K., Bischof, H., Behmel, A., Scheitz, W., Schrammel, J., Tscheligi, M., Semantic Mapping of Embodied Attention, *Proc. 5th International Conference on Cognitive Systems, COGSYS 2012*, Vienna, 22-23 February, 2012, pp. 88.
- [no 41.] [OU,JR][WP7] Kukulska-Hulme, A., Gaved, M., Brasher, A., Scanlon, E., Jones, A., and Paletta, L.; Designing for Inclusion through Incidental Language Learning, *Proc. 5<sup>th</sup> International Conference on ICT for Language Learning*, Florence, Italy, November 15-16, 2012.
- [no 42.] [CTU][WP4] Neumann L., Matas J., "Real-Time Scene Text Localization and Recognition", *Proceedings of the IEEE CVPR 2012*, Providence, Rhode Island, USA.
- [no 43.] [OU,JR][WP7,WP1] Kukulska-Hulme, A., Gaved, M., Paletta, L., (2015) Mobile Incidental Learning to Support the Inclusion of Recent Immigrants. *Proc. 11th International Conference on Technology, Knowledge, and Society*, 23-24 February 2015, Berkeley, CA, USA.
- [no 44.] [JR,ATE][WP4,WP9] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Luley, P., Ladstätter, S., Deutsch, S., Bobeth, J., Tscheligi, M. (2014). Attention in Mobile Interactions: Gaze Recovery for Large Scale Studies, *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems, CHI 2014*, CHI'14 extended abstracts, pp. 1717-1722, ACM New York, NY, USA. 26 April – 1 May, 2014, Toronto, Canada.
- [no 45.] [OU,JR,COV] Scanlon, E., Gaved, M., Jones, A., Kukulska-Hulme, A., Paletta, L., Dunwell, I. (2014). Representations of an incidental learning framework to support mobile learning. *Proceedings of IADIS Mobile Learning 2014*, 28 Feb-02 March 2014, Madrid, Spain.
- [no 46.] [JR][WP4] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Ladstätter, S., Luley, P. (2014), Smartphone Eye Tracking Toolbox: Accurate Gaze Recovery on Mobile Displays, *Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014*, Safety Harbor, Florida, pp. 367-68, <http://dl.acm.org/citation.cfm?id=2628813>, ACM New York, NY, USA.
- [no 47.] [OU][WP7] Gaved, M.; Kukulska-Hulme, A.; Scanlon, E.; Jones, A. (2014). MASELTOV - mobile incidental learning services to support language learning and the social inclusion of recent immigrants. *Proceedings of the Computers and*

*Learning Research Group* 2014, 10-11 June 2014, The Open University, Milton Keynes, UK.

- [no 48.] [COV,OU][WP7] Dunwell, I., Petridis, P., Lameris, P., Hendrix, M., Doukianou, S., and Gaved, M. (2014). Assessing the Reach and Impact of Game-Based Learning Approaches to Cultural Competency. *Proceedings of the 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2014), Haifa, Israel, 24 February, 2014. ACM.
- [no 49.] [COV,OU][WP7] Dunwell, I., Petridis, P., Lameris, P., Hendrix, M., Doukianou, S., and Gaved, M. (2015). Addressing Cultural Competency and Integration through a Serious Game: The Role of Narrative, Empowerment and Abstraction. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM.
- [no 50.] [JR, OU, COV, ATE, AIT][WP10] Lucas Paletta, Agnes Kukulska-Hulme, Ian Dunwell, Stephanie Schwarz and Sofoklis Efremidis (2014). MASELTOV – Empowering Recent Immigrants with Mixed Reality Gaming Using a Mobile Ecology of Services. *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion* (at IUI2015), Atlanta, GA, 29 March, 2015. ACM.
- [no 51.] [JR,ATE][WP4] Schwarz, S., Bobeth, J., Tscheligi, M., Schwarz, M. and Paletta, L. (2015), Culture Affects Wayfinding Styles: Attention and Preference in Navigation, submitted to *Proc. International Conference on Multimodal Interfaces*, ICMI 2015, to be submitted.
- [no 52.] [JR][DGEI][WP10] Sabouret, N., Schuller, B., Paletta, L., Marchi, E., Jones, H., and Ben Youssef, Atif (2015), Intelligent User Interfaces in Digital Games for Empowerment and Inclusion: Experience from three EU projects, *Proc. 12th International ACE* 2015, November 2015, Malaysia, submitted.
- [no 53.] [CTU][WP4] Busta, M., Drtina, T., Helekal, D., Neumann, L., Matas, J. (2014). Efficient Character Skew Rectification in Scene Text Images. Asian Conference on Computer Vision *First International Workshop on Robust Reading*, Singapore, November 2014, p. 134-146.
- [no 54.] [CTU][WP4] Libovicky, J., Neumann, L., Pecina, P., Matas, J.: Efficient Character Skew Rectification in Scene Text Images. Asian Conference on Computer Vision *First International Workshop on Robust Reading*, Singapore, November 2014, p. 169-180.
- [no 55.] [CTU][WP4] (submission, reviews 3x accept -> acceptance very likely) Neumann, L., Busta, M., Matas, J. (2015). Efficient Scene Text Localization and Recognition with Local Character Refinement. *International Conference on Document Analysis and Recognition*, Gammarth, Tunisia, August 2015.
- [no 56.] [CTU][WP4] (submission to #1 conference) Busta, M., Neumann, L., Matas, J. (2015). FASTex: Efficient Unconstrained Scene Text Detector. *International Conference on Computer Vision (ICCV)*. Santiago de Chile, Chile, December 2015. Submitted.

## 9.5 CONFERENCE PRESENTATIONS (14)

- [no 57.] [OU][WP7] Presentation at the OU Computers And Learning Research Group (CALRG) Creating coherent incidental learning journeys on mobile phones through feedback and progress indicators (June 2013).
- [no 58.] [OU][WP7] Presentation at COV's (WP7 partner) "Second Wednesday" event at the Serious Games Institute (Feb. 2013) MASELTOV: Can mobile phones support language learning and social inclusion of recent migrants? This event is a public and professional engagement seminar session, which aims to bring together speakers from academia, industry, government and public sector to discuss how human processes are framing the use of digital technologies, aiming to provide timely answers to research questions and posing new and radically different solutions for everyday problems and challenges.
- [no 59.] [OU][WP7] Promotion at the Open University's "LearnAbout Fair" (February 2013).
- [no 60.] [OU][WP7] Presentation at the OU's Institute of Educational Technology "Technology Coffee morning" Mobile phones, migrants and incidental learning: the MASELTOV project
- [no 61.] [JR,UOC,CUR,OU] [WP1,WP2,WP7] Paletta, L., Kluzer, S., Ros. A., Bobeth, J., Kukulska-Hulme, A., MASELTOV - Mobile assistance for social inclusion and empowerment of immigrants with persuasive learning technologies and social network services, *Proc. Conference on Digital Crossroads: Media, Migration and Diaspora in a Transnational Perspective*, Digital Crossroads 2012, Utrecht, 29 June 2012.
- [no 62.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) From immigrants to emigrants: Challenges of a change in analytical perspective. GRITIM-UPF Research seminar, Universitat Pompeu Fabra, Barcelona, Spain, 14th February, 2014.
- [no 63.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) A qualitative approach to European mobilities in crisis time: The English dream. YAMEC Network Start-Up Workshop: *Mobilities in times of economic crisis*. Lisbon, Portugal, 27th February, 2014.
- [no 64.] [UOC][WP2] Gordano, Cecilia and Ros, Adela (2014) Youth, mobility and the digital: the case of Spanish-speaking immigrants in London, XI IMISCOE Conference on Immigration, Social Cohesion and Social Innovation, Madrid, Spain, 27-29th August, 2014.
- [no 65.] [UOC][WP2] Ros, Adela and Gordano, Cecilia (2014) Time to move, again. Advantages and difficulties of Latin American young adult immigrants in London, presented at the *Crisis, Mobility and New Forms of Migration Conference*, University College Cork, Cork, Ireland, 2-4th September, 2014.
- [no 66.] [JR][WP4] Paletta, Lucas, Ladstätter, Stefan, Manfred Klopschitz, Michael Schwarz, Gerald Lodron, Martin Pszeida, Albert Hofmann, Patrick Luley (2014). Continuous 3D recovery of human gaze using multisensory tracking, IS&T/SPIE Electronic Imaging, *Intelligent Robots and Computer Vision XXXI: Algorithms and Techniques*, EI 2014, San Francisco, CA, February, 2014.

- [no 67.] [OU][WP7] Gaved, M., Kukulska-Hulme, A., Scanlon, E., Jones, A. Mobile apps for the social inclusion of migrants. *Open University "Equality through Innovation" seminar series*, July 2014.
- [no 68.] [JR][WP4] Paletta, Lucas; Schwarz, Michael; Ladstätter, Stefan (2015). Continuous 3D Recovery of Human Gaze using Multisensory Pose, *European Conference on Eye Movements*, ECEM 2015, Vienna, Austria, August 2015.
- [no 69.] [JR][WP4] Neuhuber, Norah; Paletta, Lucas; Schwarz, Michael, Wagner, Verena, Kallus, K. Wolfgang (2015). Attentional Effect of Social Cueing in Orientation Tasks, *European Conference on Eye Movements*, ECEM 2015, Vienna, Austria, August 2015.
- [no 70.] [JR][WP4] Paletta, L., Neuhuber, N., Schwarz, M., Wagner, V., and Kallus, W., Social cueing in human attention within the context of orientation tasks, *Proc. 4th International Conference on Applied Digital Human Modeling*, AHFE 2015, Las Vegas, NE, August 2015.
- [no 71.] [JR][WP4] Paletta, L., Pittino, N., Schwarz, M., Wagner, V., and Kallus, W. (2015). Human factors analysis using wearable sensors in the context of cognitive and emotional arousal, *Proc. 4th International Conference on Applied Digital Human Modeling*, AHFE 2015, Las Vegas, NE, August 2015

#### 9.6 DEMONSTRATIONS AT CONFERENCES (3)

- [no 72.] [no.17] [CTU] [WP4] Jiri Matas and Lukas Neumann; Real-Time Scene Text Localization and Recognition, *Demonstration at CVPR 2012*, Providence, RI, USA
- [no 73.] [no.18] [CTU] [WP4] Jiri Matas and Lukas Neumann; A Real-time Scene Text to Speech System", *Demonstration at ECCV 2012*, Florence, Italy
- [no 74.] [JR][WP4] Paletta, L., Neuschmied, H., Schwarz, M., Lodron, H., Pszeida, M., Ladstätter, S., Luley, P. (2014), The Smartphone Eye Tracking Toolbox, *Symposium on Eye Tracking Research and Applications*, ETRA 2014, Safety Harbor, Florida.

#### 9.7 PhD THESES (1)

- [no 75.] [UOC][WP2] Gordano, C. Contested Discourses on Migrant Connectivity: Migrant Users and Corporations of Mobile Phone and Money Transfer Services in Catalonia. An interdisciplinary approach, Information and Knowledge Society Doctoral Program, *Internet Interdisciplinary Institute, Universitat Oberta de Catalunya, Barcelona*, Spain, November 2013. (not cited in previous reports)

#### 9.8 MASTER'S THESES (2)

- [no 76.] [JR][WP4] Schwarz, M., Modeling Text Saliency in Human Visual Attention, *Institute for Computer Graphics and Vision Graz University of Technology*, Graz, February 2014.
- [no 77.] [CTU][WP4] Hollmann, Oscar (2015): Text Recognition of Different Scripts in the Wild. MSc thesis, *Czech Technical University* in Prague.

## 9.9 PRINT MEDIA (1)

[no 78.] [JR][WP1] Spielerische Integrationshilfe für Migranten, Der Standard, Austria, 2 July, 2014.

## 9.10 ELECTRONIC MEDIA (1)

[no 79.] „[Maseltov: Spielerische Integrationshilfe für Migranten](#)“, derStandard.at, 2 July, 2014

# 10. CERTIFICATES

List of Certificates which are due for this period, in accordance with Article II.4.4 of the Grant Agreement.

Beneficiary	Organisation short name	Certificate on the financial statements provided? yes / no	Any useful comment, in particular if a certificate is not provided
01	JR	Yes	
02	CUR	no	Expenditure threshold not reached
03	AIT	no	Expenditure threshold not reached
04	UOC	no	Expenditure threshold not reached
05	OU	no	Expenditure threshold not reached
06	COV	no	Expenditure threshold not reached
07	CTU	no	Expenditure threshold not reached
08	FHJ	no	Expenditure threshold not reached
09	TI	no	Expenditure threshold not reached
10	FLU	no	Expenditure threshold not reached
11	BUS	no	Expenditure threshold not reached
12	FUN	no	Expenditure threshold not reached
13	DAN	no	Expenditure threshold not reached
14	MRC	no	Expenditure threshold not reached

The CFS for JR was uploaded to the NEF.

The Original will be attached to the signed Form C.



## 11. EXPLANATION OF THE USE OF THE RESOURCES

**Table 26 - Human effort per work package (in person-months) - for PP3**

Participant's short name	WP01	WP02	WP03	WP04	WP05	WP06	WP07	WP08	WP09	WP10	TOTAL
P01 - JR	12,73		5,57	13,57		7,72		3,07	0,30	5,30	<b>48,26</b>
P02 - CUR	0,65	0,60		0,90					3,90		<b>6,05</b>
P03 - AIT			1,70		15,20				5,70	0,60	<b>23,20</b>
P04 - UOC		1,00								2,11	<b>3,11</b>
P05 - OU	2,99	0,19	3,00		1,04		4,22	1,00	10,82	3,46	<b>26,72</b>
P06 - COV		0,10	0,09				2,58	0,30		2,69	<b>5,76</b>
P07 - CTU			2,53				11,76		23,51	6,77	<b>44,57</b>
P08 - FHJ		0,16				3,67				0,29	<b>4,12</b>
P09 - TI		0,20	1,80					13,48		4,87	<b>20,35</b>
P10 - FLU		1,43	1,98			14,16			1,76	0,80	<b>20,13</b>
P11 - BUS											<b>0,00</b>
P12 - BUS_UK											<b>0,00</b>
P13 - FUN*									0,78	0,60	<b>1,38</b>
P14 - DAN		0,40							2,51	2,95	<b>5,86</b>
P15 - MRC									3,25	3,30	<b>6,55</b>
P16 - PP			0,67				17,65	2,52		2,69	<b>23,53</b>
P17 - ATE	0,37	0,13		0,97					15,82	1,33	<b>18,62</b>
<b>TOTAL</b>	<b>16,74</b>	<b>4,21</b>	<b>17,34</b>	<b>15,44</b>	<b>16,24</b>	<b>25,55</b>	<b>36,21</b>	<b>20,37</b>	<b>68,35</b>	<b>37,76</b>	<b>258,21</b>

\* Only accepted PM for FUN

**Table 27 - Cumulative effort per beneficiary (in person-months) – for complete project**

Participant's short name	Old total, carried over from last report	This period's effort	New total	Planned effort (as in DoW)	Relation planned / actual effort in % (column 4/5)
P01 - JR	47,99	48,26	96,25	83	115,96%
P02 - CUR	42,3	6,05	48,35	48,35	100,00%
P03 - AIT	22,8	23,20	46,00	40	115,00%
P04 - UOC	17,21	3,11	20,32	21	96,76%
P05 - OU	26,57	26,72	53,29	48,5	109,88%
P06 - COV	25	5,76	30,76	32	96,13%
P07 - CTU	28,31	44,57	72,88	36	202,44%
P08 - FHJ	8,1	4,12	12,22	12	101,83%
P09 - TI	48,76	20,35	69,11	68,49	100,91%
P10 - FLU	36,15	20,13	56,28	31	181,55%
P12 - BUS_UK	9,27	0,00	9,27	7,43	124,76%
P13 - FUN*	7,97	0,00	7,97	6,39	124,73%
P14 - DAN	10,24	1,38	11,62	14	83,00%
P15 - MRC	7,45	5,86	13,31	14	95,07%
P16 - PP	7,9	6,55	14,45	13,5	107,04%
P17 - ATE	0	23,53	23,53	23,9	98,45%
P12 - BUS_UK	0	18,62	18,62	12,32	151,14%
<b>TOTAL</b>	<b>346,02</b>	<b>258,21</b>	<b>604,23</b>	<b>511,88</b>	<b>118,04%</b>

**Table 3.5 Key personnel effort (in person-months)**

Participant's short name	Name of the key personnel (as in DoW)	Old total, carried over from last report	PM for this period	New total
P01 – JR	Lucas Paletta	12,25	7,17	19,42
	Alexander Almer	4,37	3,20	7,57
P02 – CUR	Tscheligi, Bobeth, Deutsch	16,90	3,25	20,15
P03 – AIT	Sofoklis Efremidis	8,83	12,32	21,14
	Lazaros Polymenakos	3,33	0,00	3,33
P04 – UOC	Adela Ros	8,82	1,54	10,36
	Mihaela Vancea	4,12	0,00	4,12
P05 – OU	Agnes Kukulska-Hulme	2,28	1,63	3,91
	Ann Jones	1,40	0,46	1,86
	Eileen Scanlon	1,28	1,11	2,39
P06 – COV	S de Freitas	0,10	0,00	0,10
	P Petridis	4,85	0,00	4,85
P07 – CTU	J. Matas	2,78	4,03	6,81
P08 – FHJ	W. Scheitz	8,80	3,20	12,00
P09 – TI	Graziella Spinelli	4,35	2,9	7,25
	Nicoletta Bersia	6,83	10,58	17,41
	Massimo Cappello	9,32	4,77	14,09
P10-FLU	Michael Kieslinger	1,12	0,00	1,12
	Belal Abu Naim	6,92	3,99	10,91
	Eva Potrusil	2,07	1,39	3,46
P12 – FUN*	Samuel Ricardo Ruiz	10,24	1,38	11,62
P13 – DAN	Marianne Hammani-Birnstingl	2,46	2,43	4,89
P14 – MRC	Sara Wickert	7,90	4,90	12,80
P15 – PP	Charlie Pearson	0,00	9,90	9,90
	George Pearson	0,00	1,80	1,80
P16 – ATE	Manfred Tscheligi	0,00	1,00	1,00
	Jan Bobeth	0,00	3,70	3,70
	Stefanie Deutsch	0,00	8,35	8,35
<b>TOTAL</b>		119,07	87,83	206,89

\* Only accepted PM for FUN

Please note that the **cost declarations below** (as identical with the NEF information) contain all data covering the PP3 period, i.e., between January 1, 2014 – March 31, 2015.

# Use of Resources

Period 3 (25 - 39)  
(01-01-2014 - 31-03-2015)

Project Number	288587	Project Acronym	MASELTOV
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Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 10	Subcontracting	1,500 €	Subcontracting	Lavovic Marina: MASELTOV CONFERENCE - London March 15-17- video development, support at the conference
WP 10	Subcontracting	1,000 €	Subcontracting	Dr. Alex Games: Keynote Talk on international Workshop IDGEI 2015 (Satellit Workshop at Intl ACM conference Intelligent User Interfaces)
WP 10	Subcontracting	500 €	Subcontracting	Prof. James C. Lester: Keynote Talk on international Workshop IDGEI 2015 (Satellit Workshop at Intl ACM conference Intelligent User Interfaces)
WP 10	Subcontracting	500 €	Subcontracting	Prof. James M. Rehg: Keynote Talk on international Workshop IDGEI 2015 (Satellit Workshop at Intl ACM conference Intelligent User Interfaces)
WP 3 WP 4 WP 6	Other direct cost	259 €	Travel	Luley Patrick Morris; Vienna, Austria; 14.01.2014 - 14.01.2014; MASELTOV Projekt Meeting
WP 4	Other direct cost	3,604 €	Travel	Paletta Lucas; San Francisco, USA; 01.02.2014 - 08.02.2014; SPIE,Electronic conference

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 4 WP 6	Other direct cost	803 €	Travel	Ladstätter Stefan, Luley Patrick Morris, Weber Anna; Vienna, Austria; 19.02.2014 - 21.02.2014; MASELTOV 7th Plenary Meeting
WP 10	Other direct cost	2,337 €	Travel	Paletta Lucas; Haifa, Israel; 23.02.2014 - 28.02.2014; management at Workshop IDGEI 2014 (2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion)
WP 3	Other direct cost	35 €	Travel	Luley Patrick Morris; Graz, Austria; 13.03.2014 - 13.03.2014; Maseltov Meeting
WP 3 WP 4 WP 6	Other direct cost	1,033 €	Travel	Luley Patrick Morris; Luxembourg, Luxembourg; 19.03.2014 - 21.03.2014; MASLETOV YR2 Review Meeting
WP 4	Other direct cost	3,197 €	Travel	Paletta Lucas; Tampa, USA; 23.03.2014 - 29.03.2014; scientific presentation at ERTA 2014 conference
WP 3 WP 4 WP 6	Other direct cost	1,020 €	Travel	Ladstätter Stefan; Madrid, Spain; 25.05.2014 - 29.05.2014; Project MALSETOV 8. Plenarmeeting
WP 3 WP 4 WP 6	Other direct cost	1,237 €	Travel	Luley Patrick Morris; Alicante, Spain; 19.06.2014 - 22.06.2014; Invited Talk: Maseltov AR Navigation
WP 3 WP 4 WP 6	Other direct cost	2,460 €	Travel	Ladstätter Stefan, Luley Patrick Morris; Prague,

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				Czech Republic; 07.09.2014 - 10.09.2014; MASELTOV 9th Plenary Meeting
WP 10	Other direct cost	956 €	Travel	Paletta Lucas; Torino, Italy; 07.10.2014 - 14.10.2014; MASELTOV Exploration Workshop
WP 4	Other direct cost	271 €	Travel	Paletta Lucas; Bratislava, Slovakia and Vienna Austria; 22.10.2014 - 24.10.2014; 1) InfoDay IKT der Zukunft 2) Univ.Bratislava 3) Discussion
WP 4	Other direct cost	1,175 €	Travel	Paletta Lucas; Bielefeld, Germany; 30.11.2014 - 02.12.2014; chairing and speech at ISACS conference
WP 10	Other direct cost	1,382 €	Travel	Luley Patrick Morris; London, England; 15.03.2015 -19.03.2015; MASELTOV Conference and Plenary Meeting
WP 10	Other direct cost	3,059 €	Travel	Francesco Adolini, Dana Diminescu, Maria Garrido, Marina Lalovic, Etzlinger Phillip ; London, England; 15.03.2015 - 19.03.2015; MASELTOV Plenary Meeting -NGO External Experts
WP 10	Other direct cost	797 €	Travel	Stefano Kluzer, Francesco Zingales; London, England; 15.03.2015 - 19.03.2015; MASELTOV Plenary Meeting -xternal Experts
WP 3 WP 4 WP 6	Other direct cost	1,207 €	Travel	Luley Patrick Morris; Luxembourg,



Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				Luxembourg; 10.05.2015 -12.05.2015; MASELTOV final review meeting
WP 4	Other direct cost	624 €	Durable equipment	Laser distance measurement device, Swarovski 95mm Objektivmodul, Stativ, Orniwelt
WP 4	Other direct cost	2,118 €	Durable equipment	eyes tracking equipment
WP 4	Other direct cost	333 €	Remaining direct costs	• Smartphone Google Nexus 5, 16 GB schwarz
WP 4	Other direct cost	24 €	Remaining direct costs	EasyAcc external charger
WP 4	Other direct cost	155 €	Remaining direct costs	Motorola Moto G Smartphone 8GB
WP 4	Other direct cost	1,298 €	Remaining direct costs	Motorola Moto G Smartphone X 10
WP 4	Other direct cost	2,355 €	Remaining direct costs	Fujitsu Celsius M730 Power
WP 4	Other direct cost	40 €	Literature	Gaze-Following
WP 4	Other direct cost	688 €	Remaining direct costs	HP Q1428A Univ.Fotopaper glossy. 8 * ink 130ml
WP 4	Other direct cost	138 €	Literature	"Current Trends in Eye Traching Research" and "Eye Tracking in User Experience Design"
WP 4	Other direct cost	50 €	Remaining direct costs	Amazon,Viking Universal Smartphone Digiskopie Adap
WP 1 WP 4	Other direct cost	25 €	Remaining direct costs	MaseltoV, Skype 16.6.14
WP 4	Other direct cost	29 €	Remaining direct costs	Amazon,Google Chromecast HDMI Streaming Media Play
	Other direct cost	92 €	Remaining direct costs	Amazon,Huawei E3276 Surf-Stick
WP 4	Other direct cost	24 €	Remaining direct costs	Amazon.de, Easy Acc 8400mAh 2
WP 4	Other direct cost	397 €	Remaining direct costs	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				diverse computing materials, small parts
WP 4	Other direct cost	62 €	Remaining direct costs	transport charges
WP 1 WP 4	Other direct cost	614 €	Remaining direct costs	communication costs
WP 10	Other direct cost	177 €	Remaining direct costs	costs occurred with meeting with Prof. Norbert Krüger from Southern Denmark University 14.5.2014 Graz
WP 1 WP 4	Other direct cost	128 €	Remaining direct costs	costs occurred with meeting 3.9 and 6.8.2014 with FH Joanneum and Partner Danaida - Mr.Scheitz, Mr. Neurohr, Mrs. Hammani-Birnstingl, Mrs. Morozova
WP 10	Other direct cost	2,225 €	Remaining direct costs	Catering for the MASELTOV conference, The Open University
WP 8 WP 6	Personnel costs	6,631 €	personnel costs	Andrae-Hämmerle Astrid, Scientist 1 (1,10 PM)
WP 4	Personnel costs	2,962 €	personnel costs	Deutscher Janik, Technician (0,74 PM)
WP 4	Personnel costs	765 €	personnel costs	Dini Amir, Trainee (0,44 PM)
WP 10	Personnel costs	43 €	personnel costs	Ehgarter Stephan, Junior Scientist (0,01 PM)
WP 10	Personnel costs	250 €	personnel costs	Foggenberger Isabella, Technician (0,05M)
WP 8	Personnel costs	4,945 €	personnel costs	Granica Klaus, Scientist 2 (0,74 PM)
WP 9	Personnel costs	1,702 €	personnel costs	Golja Ferdinand, Scientist 3 (0,24 PM)
WP 6	Personnel costs	11,119 €	personnel costs	Hirschmugl Manuela, Scientist 2 (1,63 PM)
WP 9	Personnel costs	839 €	personnel costs	Kornberger Birgit, Scientist 1 (0,14 PM)

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 4 WP 6	Personnel costs	25,292 €	personnel costs	Ladstätter Stefan, Technician (5,48 PM)
WP 10	Personnel costs	570 €	personnel costs	Lodron Gerald, Technician (0,12 PM)
WP 3 WP 4	Personnel costs	52,499 €	personnel costs	Luley Patrick Morris, Scientist 3 (7,22 PM)
WP 4	Personnel costs	765 €	personnel costs	Mauerhofer Thomas, Trainee (0,44 PM)
WP 10	Personnel costs	143 €	personnel costs	Murg Sandra, Technician (0,03 PM)
WP 10	Personnel costs	90 €	personnel costs	Neuhuber Norah Joana, Trainee (0,05 PM)
WP 10	Personnel costs	23,920 €	personnel costs	Paletta Lucas, Scientist 3 (3,49 PM)
WP 10	Personnel costs	569 €	personnel costs	Pittino Nina, Trainee (0,33 PM)
WP 6	Personnel costs	7,634 €	personnel costs	Proske Herwig , Senior Scientist 2 (0,94 PM)
WP 4 WP 10	Personnel costs	4,236 €	personnel costs	Pszeida Martin, Junior Technician (1,36 PM)
WP 3	Personnel costs	28,060 €	personnel costs	Schmitt Ursula, Scientist 2 (4,11 PM)
WP 4 WP 6	Personnel costs	1,850 €	personnel costs	Schrei Monika, Technician (0,43 PM)
WP 4	Personnel costs	10,964 €	personnel costs	Schwarz Michael, Technician (2,39 PM)
WP 10	Personnel costs	431 €	personnel costs	Schwarzl Manuela, Junior Scientist (0,11 PM)
WP 10	Personnel costs	2,711 €	personnel costs	Uray Martina, Scientist 2 (0,40 PM)
WP 4 WP 6 WP 8	Personnel costs	12,160 €	personnel costs	Weber Anna Maria, Junior Scientist (3,08 PM)
WP 4	Personnel costs	3,133 €	personnel costs	Wimmer Andreas, Scientist 2 (0,51 PM)
WP 4 WP 6 WP 8	Personnel costs	26,549 €	personnel costs	Almer Alexander, Senior Scientist 2 (3,20 PM)

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 4	Subcontracting	525 €	Subcontracting	Eye Tracking compensation for 42 test persons (26.11.2014 - 20.12.2014)
WP 1	Personnel costs	544 €	Personnel costs	Foggenberger Isabella, Technician (0,11 PM)
WP 1	Personnel costs	1,549 €	Personnel costs	Paar Gerhard, Head of Research Group (0,17 PM)
WP 1	Personnel costs	29,078 €	Personnel costs	Paletta Lucas, Scientist 3 (4,23 PM)
WP 1	Personnel costs	925 €	Personnel costs	Pszeida Martin, Junior Technician (0,30 PM)
WP 1	Personnel costs	4,821 €	Personnel costs	Schwarz Michael, Technician (1,06 PM)
WP 1	Personnel costs	115 €	Personnel costs	Schwarzl Manuela, Junior Scientist (0,03 PM)
WP 1	Personnel costs	31,626 €	Personnel costs	Uray Martina, Scientist 2 (4,98 PM)
WP 1	Personnel costs	1,691 €	Personnel costs	Berner Felizitas, Scientist 1 (0,30 PM)
WP 1	Subcontracting	1,400 €	Subcontracting	Binder&Co; audit costs for 1CS and 2 CS
WP 1	Subcontracting	1,300 €	Subcontracting	Binder&Co; audit costs for 3 CS
WP 1	Subcontracting	624 €	Subcontracting	ICMPD - International Centre for Ethical review - Task 3
WP 1	Other direct cost	393 €	Travel	Paletta Lucas, Uray Martina; Vienna, Austria; 19.02.2014 - 21.02.2014; MASELTOV 7th Plenary Meeting
WP 1	Other direct cost	611 €	Travel	Kluzer Stefano; Vienna, Austria; 19.02.2014 - 21.02.2014; MASELTOV 7th Plenary Meeting - Advisory Board
WP 1	Other direct cost	1,950 €	Travel	Paletta Lucas, Uray Martina;

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				Luxembourg, Luxembourg; 19.03.2014 - 21.03.2014; MASLETOV YR2 Review Meeting
WP 1	Other direct cost	1,580 €	Travel	Paletta Lucas; Madrid, Spain; 25.05.2014 - 29.05.2014; Project MALSETOV 8. Plenarmeeting
WP 1	Other direct cost	210 €	Travel	Paletta Lucas; Vienna, Austria; 18.06.2014 - 18.06.2014; Meeting with Partner CURE (AIT), coordination of the evaluation for WP9
WP 1	Other direct cost	1,880 €	Travel	Paletta Lucas, Paar Gerhard; Prague, Czech Republic; 07.09.2014 - 10.09.2014; MASELTOV 9th Plenary Meeting
WP 1	Other direct cost	3,111 €	Travel	Paletta Lucas, Uray Martina; London, England; 15.03.2015 -19.03.2015; MASELTOV Conference and Plenary Meeting
WP 1	Other direct cost	3,035 €	Travel	Paletta Lucas; Atlanta, USA; 27.03.2015 - 02.04.2015; Workshop at IUI conference (approved by PO; 13.10.2014)
WP 1	Other direct cost	2,119 €	Travel	Paletta Lucas, Uray Martina; Luxembourg, Luxembourg; 10.05.2015 -12.05.2015; MASELTOV final review meeting
WP 1	Other direct cost	227 €	Remaining direct costs	transport charges
WP 1	Other direct cost	25 €	Remaining direct costs	costs occured with meeting 6.5.2014 - management

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				meeting with Mr.Scheitz and Mr. Neurohr from FH Joanneum
WP 10 WP 1	Other direct cost	1,119 €	Remaining direct costs	conference costs for speaker at IDGEI 2015 Prof. James C. Lester
WP 10 WP 1	Other direct cost	1,119 €	Remaining direct costs	conference costs for speaker at IDGEI 2015 James M. Rehg
WP 1	Other direct cost	153 €	Remaining direct costs	day delegate rate, conference costs Luxembourg 11.5.2015
	Indirect costs	245,623 €		
TOTAL COSTS		608,113 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 2 for the period. CURE CENTRUM FÜR DIE UNTERSUCHUNG UND REALISIERUNG ENDBENUTZERORIENTIERTER INTERAKTIVER SYSTEME				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2 WP 4 WP 9	Personnel costs	24,583 €	RTD personnel	1,85 pm Senior researcher (3 – Tscheligi, Murtinger, Deutsch), 3,55 pm HCI Researcher (5 - Bobeth, Lahner, Müller, Zillinger, Krottenberger)
WP 9	Subcontracting	154 €	minor subcontracting	interpreter / translator fee wp4 study (Caran,) catering costs wp9 meeting 14.1.14
WP 4	Other direct cost	232 €	Travel costs	Bobeth, 18.-20.3.14, WP4 study Graz
WP 9	Other direct cost	928 €	Travel costs	Deutsch, 19.-21.3.14 Review Meeting Luxembourg
WP 4 WP 9	Other direct cost	690 €	Study costs	Remuneration study participants for affordability study and WP4 study
WP 2 WP 4 WP 9	Other direct cost	770 €	equipment costs	depreciation SMI eyetracking software, tobii test equipment, laptop mobile eyetracking



<b>Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 2 for the period.</b> <b>CURE CENTRUM FUR DIE UNTERSUCHUNG UND REALISIERUNG</b> <b>ENDBENUTZERORIENTierter INTERAKTIVER SYSTEME</b>				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 9	Other direct cost	3,425 €	equipment costs	18 mobiles for study tests
WP 9	Other direct cost	268 €	meeting costs	lunch costs plenary meeting 19.-21.2.14
WP 1	Personnel costs	3,192 €	MGM personnel	0,55 pm Senior researcher (2 - Tscheligi, Deutsch), 0,10 pm HCI Researcher (1- Bobeth)
	Indirect costs	16,665 €		
TOTAL COSTS		50,907 €		

<b>Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 3 for the period.</b> <b>RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES</b>				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 4 WP 5 WP 10	Personnel costs	93,235 €	Corresponds to 23.20 PMs performed by 5 persons	
WP 3 WP 4 WP 5 WP 10	Other direct cost	594 €	EFREMIDIS 19-21/02/2014 AUSTRIA-VIENNA PROJECT MEETING	
WP 3 WP 4 WP 5 WP 10	Other direct cost	849 €	EFREMIDIS 19-21/03/2014 LUXEMBOURGH PROJECT MEETING	
WP 3 WP 4 WP 5 WP 10	Other direct cost	951 €	EFREMIDIS 10-12/05/2015 LUXEMBOURGH REHEARSAL & FINAL REVIEW MEETING	
WP 3 WP 4 WP 5 WP 10	Other direct cost	293 €	Room rental for meetings	
WP 3 WP 4 WP 5 WP 10	Other direct cost	1,059 €	EFREMIDIS 15-19/03/2015 UK - LONDON CONFERENCE- PLENARY MEETING	
WP 3 WP 4 WP 10 WP 5	Other direct cost	708 €	EFREMIDIS 26-28/05/2014 SPAIN- MADRID PLENARY MEETING	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 3 for the period. RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 4 WP 10 WP 5	Other direct cost	901 €	GEORGIOU 26-29/05/2014 SPAIN- MADRID PLENARY MEETING	
WP 3 WP 4 WP 10 WP 5	Other direct cost	1,039 €	EFREMIDIS 08-11/09/2014 CZECH REPUBLIC- PRAGUE PLENARY MEETING	
WP 3 WP 4 WP 10 WP 5	Other direct cost	150 €	EQUIPMENT & CONSUMABLES	
	Indirect costs	55,941 €		
TOTAL COSTS		155,720 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 4 for the period. FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2	Personnel costs	5,795 €	Adela Ros, Senior Researcher x 0,90 PM	
WP 10	Personnel costs	4,121 €	Adela Ros, Senior Researcher x 0,64 PM	
WP 2	Personnel costs	235 €	Cecilia Gordano, Junior Researcher x 0,10 PM	
WP 10	Personnel costs	3,459 €	Cecilia Gordano, Junior Researcher x 1,47 PM	
WP 2 WP 10	Other direct cost	477 €	Travel. Cecila Gordano. Cork. Congress Crisis, Mobility and New Forms of Migration 02/04/2014 - 4/09/2014	
WP 1 WP 2	Other direct cost	759 €	Travel. Cecila Gordano. London. Project Meeting. 04/06/14 -7/06/14	
WP 1 WP 2	Other direct cost	336 €	Travel. Cecila Gordano. London. Project Meeting. 11/06/14 -14/06/14	
WP 2 WP 1	Other direct cost	863 €	Travel. Cecila Gordano. Luxemburg. Project	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 4 for the period. FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA				
Work Package	Item description	Amount in €	Explanation	Free Text
			Meeting. 19/03/14 -22/03/14	
WP 1 WP 2	Other direct cost	471 €	Travel.Adela Ros. Madrid. Project Meeting. 26/05/2014 - 28/05/2014	
WP 1 WP 2	Other direct cost	491 €	Travel. Cecilia Gordano. Madrid. Project Meeting. 26/05/2014 - 29/05/2014	
WP 2 WP 10	Other direct cost	167 €	Travel. Cecilia Gordano. Madrid. Congress IMISCOE_2708/ 2014 - 29/08/2014	
WP 2 WP 1	Other direct cost	1,094 €	Travel. Cecilia Gordano. Praga. Project Plenary Meeting. 07/09/2014 - 13/09/2014	
WP 1 WP 2	Other direct cost	674 €	Travel. Adela Ros. Vienna. Project Meeting. 19/02/2014 - 22/02/2014	
WP 2 WP 10	Other direct cost	200 €	Other costs. Congress IMISCOE (2708/2014 - 29/08/2014)	
WP 2 WP 10	Other direct cost	90 €	Other costs. Congress Crisis, Mobility and New Forms of Migration	
WP 1 WP 2	Other direct cost	238 €	Other costs. Meetings: room rental and lunches	
	Indirect costs	11,682 €		
TOTAL COSTS		31,152 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 5 for the period. THE OPEN UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 10	Other direct cost	176 €	Travel and Subsistence	February-March 2014, IADIS conference, Spain, Mark Gaved
WP 10	Other direct cost	408 €	Travel and Subsistence	March 2015, ICT & Migration Conference, Agnes Kukulska- Hulme

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 5 for the period.				
THE OPEN UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 9	Other direct cost	38 €	Travel and Subsistence	May 2014, London Field Trials, UK, Mark Gaved
WP 9	Other direct cost	511 €	Consumables	March 2015, Transcription of interviews from Spanish into English for MK field trials
WP 10	Other direct cost	951 €	Travel and Subsistence	February 2015, Technology, Society and Knowledge conference in California, USA, Agnes Kukulska-Hulme
WP 7	Other direct cost	2,018 €	Travel and Subsistence	March 2014, Year 2 Review Meeting, Luxembourg, Agnes Kukulska-Hulme, Mark Gaved
WP 10	Other direct cost	187 €	Travel and Subsistence	September 2014, LUCIDE conference, UK, Agnes Kukulska-Hulme
WP 7	Other direct cost	32 €	Travel and Subsistence	March 2014, Partner Meeting with MRC, UK, Mark Gaved
WP 9	Other direct cost	134 €	Travel and Subsistence	January-February 2015, MK Field Trial, UK, Andrew Brasher, Jan Jones, Lucy Norris
WP 3 WP 5 WP 7 WP 8 WP 9 WP 10	Personnel costs	13,053 €	Personnel	Agnes Kukulska-Hulme: 1.4PM
WP 9	Other direct cost	375 €	Consumables	January-February 2015, venue hire, hospitality, Smart-Phone accessories and taxi for MK field Trials, UK
WP 9	Other direct cost	1,013 €	Consumables	January-February 2015, token of appreciation for participants, MK Field Trials, UK
WP 9	Other direct cost	206 €	Consumables	January-February 2015, token of appreciation for facilitator and translator, MK Field Trials, UK

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 5 for the period.				
THE OPEN UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 5 WP 7 WP 8 WP 9 WP 10	Personnel costs	14,314 €	Personnel	Jan Jones: 2.98PM
WP 7 WP 8 WP 9 WP 10	Personnel costs	6,045 €	Personnel	Eileen Scanlon: 0.43PM
WP 2 WP 3 WP 5 WP 7 WP 8 WP 9 WP 10	Personnel costs	46,936 €	Personnel	Mark Gaved: 9PM
WP 10	Other direct cost	553 €	Travel and Subsistence	February 2015, Berkeley Conference, USA, Agnes Kukulska-Hulme
WP 7 WP 9	Other direct cost	1,275 €	Travel and Subsistence	May 2015, Final Review Meeting, Luxembourg, Agnes Kukulska-Hulme
WP 7	Other direct cost	34 €	Consumables	January 2014, token of appreciation for work related to serious game
WP 9	Other direct cost	381 €	Consumables	June 2014, Smart-Phone accessories for London field trials, UK
WP 9	Other direct cost	7,981 €	Consumables	January-February 2015, Smart-Phones and accessories for MK Field Trial
WP 10	Other direct cost	82 €	Consumables	March 2015, Chinese Visa for Agnes Kukulska-Hulme to present a keynote at ChinaCALL, Beijing
WP 7	Other direct cost	2,318 €	Travel and Subsistence	May 2014, Plenary 8, Spain, Agnes Kukulska-Hulme, Mark Gaved
WP 7 WP 9	Other direct cost	1,671 €	Travel and Subsistence	September 2014, Plenary 9, Prague, Andrew Brasher, Mark Gaved
WP 7	Other direct cost	1,082 €	Consumables	November 2014, mLearn conference registration
WP 7	Other direct cost	548 €	Consumables	February 2015, Technology, Learning and Society conference

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 5 for the period.				
THE OPEN UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
				reigstration, Agnes Kukulska-Hulme
WP 5 WP 9 WP 10	Personnel costs	25,757 €	Personnel	Lucy Norris: 5.68PM
WP 3 WP 7 WP 8 WP 9 WP 10	Personnel costs	17,655 €	Personnel	Andrew Brasher: 3.16PM
WP 9	Other direct cost	250 €	Travel and Subsistence	March 2015, Plenary meeting 10, UK, Agnes Kukulska-Hulme, Ann Jones, Andrew Brasher, Jan Jones
WP 7	Other direct cost	2,323 €	Travel and Subsistence	February 2014, Plenary 7, Vienna, Agnes Kukulska-Hulme, Mark Gaved
WP 5 WP 7 WP 8 WP 9 WP 10	Personnel costs	7,269 €	Personnel	Ann Jones: 1.09PM
WP 1	Personnel costs	2,076 €	Personnel	Agnes Kukulska-Hulme: 0.23PM
WP 1	Personnel costs	13,006 €	Personnel	Jan Jones: 2.7PM
WP 1	Personnel costs	20 €	Personnel	Mark Gaved: 0.003PM
WP 1	Personnel costs	183 €	Personnel	Ann Jones: 0.03PM
WP 1	Personnel costs	400 €	Personnel	Eileen Scanlon: 0.03PM
	Indirect costs	102,756 €		
TOTAL COSTS		274,017 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 6 for the period.				
COVENTRY UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2 WP 3 WP 7 WP 8 WP 10	Personnel costs	23,664 €	Ian Dunwell Senior Reseracher	WP2 0.09PM, WP3 0.09PM, WP7 2.42PM, WP8 0.3PM, WP10,2.69PM
WP 7	Personnel costs	471 €	Samantha Clarke Researcher	0.16 PM
WP 7	Other direct cost	986 €	Vienna - Maseltov Plenary	Feb-14, Ian Dunwell Senior Researcher, Travel & subsistance
WP 7	Other direct cost	1,217 €	Israel - Maseltov-Hafia Conference	Feb-14, Ian Dunwell Senior Researcher, Travel & subsistance
WP 7	Other direct cost	182 €		



Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 6 for the period.				
COVENTRY UNIVERSITY				
Work Package	Item description	Amount in €	Explanation	Free Text
			Milton Keynes - Maseltov Plenary	Oct 13 Ian Dunwell Senior Researcher, Travel & subsistence
WP 7	Other direct cost	1,380 €	Luxembourg-Conference ACE13	Mar 14 Ian Dunwell Senior Researcher, Travel & subsistence
WP 7	Other direct cost	1,084 €	Prague - Malestov Plenary Meet	Sep 14 Samantha Clarke Researcher, Travel & subsistence
WP 7	Other direct cost	769 €	Madrid - Malestov 8th Plenary Meeting	May 14 Ian Dunwell Senior Researcher, Travel & subsistence
WP 10	Other direct cost	830 €	London - MASELTOV conference and plenary	Mar 15 Ian Dunwell Senior Researcher, Travel & subsistence
WP 10	Other direct cost	1,454 €	Luxembourg - Final Review Meeting	Apr 15 Ian Dunwell Senior Researcher, Travel & subsistence
	Indirect costs	19,222 €		
TOTAL COSTS		51,259 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 7 for the period.				
CESKE VYSOKE UCENI TECHNICKE V PRAZE				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 7 WP 9	Other direct cost	878 €	Travel costs	2x (Busta+Neumann) MASELTOV Plenary Meeting, 19.-21.2.2014, Vienna, AT
WP 3 WP 7 WP 9	Other direct cost	501 €	Travel costs	1x (Busta) MASELTOV Review Meeting projektu, 19.-22.3.2014, Luxembourg LU
WP 10	Other direct cost	1,331 €	Travel costs	1x (Hadacek) International Document Imaging Processing Summer School 2014, 25.-31.5.2014 Fourni GR
	Other direct cost	638 €	Travel costs	1x (Neumann), Maseltov plenary meeting, 26.-28.5.2014 Madrid, ES
WP 10	Other direct cost	4,134 €	Travel costs	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 7 for the period. CESKE VYSOKE UCENI TECHNICKE V PRAZE				
Work Package	Item description	Amount in €	Explanation	Free Text
				2x (Busta+Neumann), "The 12th Asian Conference on Computer Vision" Singapore SG
WP 7 WP 9 WP 10	Other direct cost	2,093 €	Travel costs	2x (Busta+Neumann), MASELTOV Project meeting, 16.-19.3.2015 London GB
WP 3 WP 7 WP 9 WP 10	Other direct cost	2,474 €	Travel costs	2x (Matas+Busta), MASELTOV Project final review, 10.-12.5.2015, Luxembourg
WP 3 WP 7 WP 9 WP 10	Personnel costs	113,620 €	Personnel costs	1x professor (4PM), 4x Senior Researcher (24,68PM), 3x junior researcher/PhD students (15,86PM)
	Indirect costs	75,401 €		
TOTAL COSTS		201,070 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 8 for the period. FH JOANNEUM GESELLSCHAFT M.B.H.				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 6 WP 2 WP 3 WP 10	Personnel costs	27,494 €	Personnel Costs	W. Scheitz, 4,12 PM, Senior researcher
WP 6 WP 10	Other direct cost	3,762 €	Travelcosts	Walter Scheitz, Vienna, 7th Plenary Meeting. 19.-21.02.2014; Walter Scheitz, Louxemburg, 2nd Year Review Project MASELTOV 19.-21.03.2014; Walter Scheitz, Vienna, eHealth Summit Austria 22.-23.05.2014; Walter Scheitz, Madrid, 8th Plenary Meeting. 26.-29.05.2014; Walter Scheitz, Prag, 9th MASELTOV

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 8 for the period. FH JOANNEUM GESELLSCHAFT M.B.H.				
Work Package	Item description	Amount in €	Explanation	Free Text
				Plenary Meeting 08.-10.09.2014;
WP 6 WP 10	Other direct cost	228 €	Equipment	Samsung G4 - Rep
WP 6 WP 10	Other direct cost	810 €	Translationcosts	MASELTOV Health Translation (EN, SE, Arab, Turkey)
	Indirect costs	19,375 €		
TOTAL COSTS		51,669 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 9 for the period. TELECOM ITALIA S.p.A				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2	Personnel costs	1,258 €	Personnel costs	0,2 PMs - 1 person
WP 3	Personnel costs	11,355 €	Personnel costs	1,8 PMs - 3 persons
WP 8	Personnel costs	84,980 €	Personnel costs	13,48 PMs - 5 persons
WP 10	Personnel costs	30,717 €	Personnel costs	4,87 PMs - 3 persons
	Indirect costs	69,187 €		
TOTAL COSTS		197,497 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 10 for the period. FLUIDTIME DATA SERVICES GMBH				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 6	Personnel costs	63,823 €	Personnel costs	Total 14,17 PM: Mirjana Artukovic, Key Personnel (3,10 PM); Philipp Weisskopf, Programmer (0,20 PM); Claudia Altenburger, Programmer (2,01 PM); Dieter Meinhard, Senior Researcher (0,03 PM); Klemens Kehrer, Senior Researcher (0,20 PM); Belal Abu-Naim, Key Personnel (2,70 PM); Roman Pickl, Senior Researcher (0,38 PM); Eva Potrusil, Key Personnel (0,28 PM); Kai Hacker,

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 10 for the period.				
FLUIDTIME DATA SERVICES GMBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				Designer (0,22 PM); Philipp Schaden, Programmer (1,00 PM); Stefan Schreiner, Programmer (4,05 PM)
WP 9	Personnel costs	8,575 €	Personnel costs	Total 1,83 PM: Mirjana Artukovic, Key Personnel (0,66 PM); Eva Potrusil, Key Personnel (0,45 PM); Gerardo Valido Gonzalez, Programmer (0,25 PM); Philipp Schaden, Programmer (0,22 PM); Roman Pickl, Senior Researcher (0,08 PM); Belal Abu-Naim, Key Personnel (0,17 PM)
WP 10	Personnel costs	6,264 €	Personnel costs	Total 1,31 PM: Claudia Altenburger, Programmer (0,55 PM); Werner Nöbauer, Programmer (0,02 PM); Dieter Meinhard, Senior Researcher (0,11 PM); Mirjana Artukovic, Key Personnel (0,54 PM); Nicole Schnait, Senior Researcher (0,03 PM); Rita Landauer, Senior Researcher (0,06 PM)
WP 2	Personnel costs	6,454 €	Personnel costs	Total 1,43 PM: Eva Potrusil, Key Personnel (0,67 PM); Kai Hacker, Designer (0,76 PM)
WP 3	Personnel costs	9,802 €	Personnel costs	Total 1,98 PM: Belal Abu-Naim, Key Personnel (1,19 PM); Roman Pickl, Senior Researcher (0,03 PM); Werner Nöbauer, Programmer (0,01 PM); Mirjana Artukovic, Key Personnel (0,62

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 10 for the period.				
FLUIDTIME DATA SERVICES GMBH				
Work Package	Item description	Amount in €	Explanation	Free Text
				PM); Philipp Weisskopf, Programmer (0,13 PM)
WP 6	Other direct cost	2,451 €	Other direct costs	Travel costs: 19.-21.02.14, Vienna, Plenary Meeting, Mirjana Artukovic, EUR 48; 19.-21.03.14, Luxembourg, Y2 Review Meeting, Roman Pickl, EUR 924; 26.-28.05.14, Madrid, Plenary Meeting, Mirjana Artukovic, EUR 705; 08.-10.09.14, Prague, Plenary Meeting, Mirjana Artukovic, Belal Abu-Naim, EUR 774
WP 9	Other direct cost	889 €	Other direct costs	Travel costs: 17.-20.03.15, London, MASELTOV Conference and Plenary Meeting, Mirjana Artukovic, EUR 889
WP 10	Other direct cost	999 €	Other direct costs	Travel costs: 10.-12.05.15, Luxembourg, Final Review Meeting, Mirjana Artukovic, EUR 999
	Indirect costs	59,554 €		
TOTAL COSTS		158,811 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 11 for the period.				
BUSUU ONLINE S.L				
Work Package	Item description	Amount in €	Explanation	Free Text
	Indirect costs	0 €		
TOTAL COSTS		0 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary -999 for the period.				
BUSUU LIMITED				
Work Package	Item description	Amount in €	Explanation	Free Text
	Indirect costs	0 €		
TOTAL COSTS		0 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 12 for the period.				
FUNDACION DESARROLLO SOSTENIDO				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2 WP 9 WP 10	Personnel costs	7,956 €	personnel costs	Samuel Ricardo, Senior Researcher (2,38PM)
WP 9	Other direct cost	3,060 €	Consumables	Surveys and first trials
WP 9	Other direct cost	2,357 €	Travel	Samuel Ricardo Viena-Austria (/th Plenary Meeting); Luxemburg (2nd Review meeting). Madrid
WP 9	Other direct cost	154 €	Consumables	Costs occurring with trials
	Indirect costs	8,116 €		
TOTAL COSTS		21,643 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 13 for the period.				
VEREIN DANAIDA				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 9 WP 10	Personnel costs	11,864 €	Marianne Hammani-Birnstingl	(0,56 PM done on WP9 and 1,88PM on WP10)
WP 2 WP 10 WP 9	Personnel costs	7,158 €	Maria Morozova	(0,4PM done on WP2, 1,74PM on WP9 and 0,32PM on WP10)
WP 10 WP 9	Personnel costs	2,878 €	Kerstin Fischer	(0,21PM done on WP9 and 0,66PM on WP10)
WP 10	Personnel costs	569 €	Irene Windisch	0,09PM
WP 9	Other direct cost	2,150 €	Compensation	Compensation for participation at field trials as "volunteers". 5 participants
WP 2 WP 9 WP 1 WP 10	Other direct cost	973 €	Travels	Maria Morozova: project meetings Vienna (24.2.2014) Madrid (26.-27.5.2014), Prague (8.-10.9.2014), London Conference and meeting (17.-18.3.2015)
	Indirect costs	5,118 €		
TOTAL COSTS		30,710 €		



Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 14 for the period.				
THE MIGRANTS' RESOURCE CENTRE				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 2 WP 9 WP 10	Personnel costs	16,400 €	Sara Wickert, Project Coordinator	(4,9PM made up of 3,25 PM on WP 9 and 1,65 PM on WP 10)
WP 10	Personnel costs	5,523 €	Laura Marziale, Training Coordinator	1,65PM Coordinating training for WP 10
	Personnel costs	3,347 €	Sylvia Lemanska, Health coordinator	(1 PM overseeing, creating and editing content for MApp Info service)
WP 9 WP 2	Subcontracting	8,821 €	Field trials facilitators and volunteers costs	Help Radar Volunteer (X. Aguilar) for 1st Maseltov field trials 05-12/06/2014 €246,61 Help Radar Volunteer (N. Beltran) for 1st Maseltov field trials 05-12/06/2014 €246,61 1st Field Trial Facilitator (P. Mendez); June14 €1208,38 WP 10 MASELTOV Training workshop Teacher/Tutor (S. Gonzalez) September – December 2014: €1219,51 Final field trials (Nov 2014 – Jan 2015) Help Radar Volunteer (N. Beltran) €460,18 Final field trials (Nov 2014 – Jan 2015) Help Radar Volunteer (M. Ramirez) €460,18 Final field trials (Nov 2014 – Jan 2015) Help Radar Volunteer (J. Estrada) €460,18 Final field trials (Nov 2014 – Jan 2015) Help Radar Volunteer (B. Zaraa ) €460,18 Final field trials (Nov 2014 – Jan 2015) Help Radar Volunteer (A. Barri) €281,22 Final field trials

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 14 for the period.				
THE MIGRANTS' RESOURCE CENTRE				
Work Package	Item description	Amount in €	Explanation	Free Text
				Latin American facilitator (P. Mendez) €2334,14 Final field trials Arabic facilitator (L. Alsaafin) €1444,44
WP 2 WP 10 WP 6 WP 9	Other direct cost	2,638 €	Project travel	Sara Wickert. 18.02.14 - 21.02.14, Vienna. Plenary meeting – Flights, accommodation, subsistence and transport €558,87 Sara Wickert. 19.03.14 - 21.03.14, Luxembourg. 2nd Review meeting. Flights, accommodation, subsistence, transport. €502,- Sara Wickert 24.05.14 – 29.04.14, Madrid 8th Plenary meeting. Flights, accommodation, subsistence, transport. €492,31 Sara Wickert 07.09.14 – 10.09.14, Prague Plenary meeting. Flights, accommodation, subsistence, transport. €639,54 Travel to and from MRC for volunteers assisting with WP 10 training. Local transport September-December 2014. €445,47
WP 10	Other direct cost	201 €	Equipment	Sanberg Headset for training workshops as part of WP 10
WP 9 WP 2 WP 10	Other direct cost	1,480 €	Event venues and refreshments	First field trials workshops and planning meeting 04–11.06.14 refreshments for facilitator, volunteers and participants €136,57 Room hire for WP10 training workshops Sept-Dec 2014 €1132,79

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 14 for the period.				
THE MIGRANTS' RESOURCE CENTRE				
Work Package	Item description	Amount in €	Explanation	Free Text
				Final field trials workshops and planning meeting Nov 14 – Jan 15 €211,42
	Indirect costs	0 €		
TOTAL COSTS		38,410 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 15 for the period.				
PEARSON PUBLISHING LIMITED				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 3 WP 7 WP 8 WP 10	Personnel costs	125,456 €	Personnel Costs	Charlie Pearson, Content developer (PM:9,97); Matt Folwell, Programmer (PM:2,56); Will Haynes, Junior designer (PM:1,10); Matthew Woodcraft, Programmer (PM:1,54); Hannah Rose, Editor (PM:1,90); Sarah Hardstaff, Editor (PM: 2,30); Pieter van Beesten, Accountant (PM:0,24); Matt Foster-Smith, Senior graphic designer (PM:2,44); George Pearson, Director (PM:1,66)
WP 7	Subcontracting	8,127 €	Subcontracting	Comm-unique, translation agency, €4.742; The Voiceover Gallery, audio recording, €3.384
WP 3 WP 8 WP 7 WP 10	Other direct cost	1,190 €	Consumables	2 Moto G Smartphones; Image downloads; Microsoft Office software; Time tracking software
WP 3 WP 7 WP 8 WP 10	Other direct cost	4,547 €	Travels	Charlie Pearson, Vienna Plenary €632 (18-21 Feb 2014); Charlie Pearson, Luxembourg Review Meeting €794 (19-21 Mar 2014); Charlie Pearson, Madrid Plenary €834 (26-28

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 15 for the period.				
PEARSON PUBLISHING LIMITED				
Work Package	Item description	Amount in €	Explanation	Free Text
				May 2014); Charlie Pearson, Prague Plenary, €522 (8-10 Sep 2014); Charlie Pearson, London Plenary and Conference, €778 (16-19 Mar 2015) Charlie Pearson, Luxembourg Review Meeting (11-12 May 2015) – €987.47
	Indirect costs	78,715 €		
TOTAL COSTS		218,035 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period.				
AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
	Other direct cost	60 €	travelling	Karaduman Serpil: T9.4 Final Field Trials, Closing workshop in Graz, 16.12.2014 - 16.12.2014
	Other direct cost	171 €	travelling	Karaduman Serpil: T9.4 Final Field Trials, Introduction workshop in Graz, 21.10.2014 - 22.10.2014
	Other direct cost	184 €	travelling	Schwarz Stephanie: T9.3 first field trials (introduction workshop) in Graz, 14.05.2014 - 14.05.2014
	Other direct cost	160 €	travelling	Schwarz Stephanie: T9.3 first field trials (introduction workshop) in Graz, 21.05.2014 - 21.05.2014
	Other direct cost	635 €	travelling	Schwarz Stephanie: T9.3 first field trials (introduction workshop) in London, 04.06.2014 - 05.06.2014
	Other direct cost	123 €	travelling	Schwarz Stephanie: T9.4 Final Field Trials, Closing workshop in Graz,

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period.				
AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
				16.12.2014 - 16.12.2014
	Other direct cost	717 €	travelling	Schwarz Stephanie: T9.4 Final Field Trials, Closing workshop in London, 14.01.2015 - 15.01.2015
	Other direct cost	255 €	travelling	Schwarz Stephanie: T9.4 Final Field Trials, Introduction workshop in Graz, 21.10.2014 - 22.10.2014
	Other direct cost	618 €	travelling	Schwarz Stephanie: T9.4 Final Field Trials, Introduction workshop in London, 02.11.2014 - 05.11.2014
	Other direct cost	128 €	travelling	Schwarz Stephanie: T9.4 Planning Meeting in Graz, 27.08.2014 - 27.08.2014
WP 2	Personnel costs	578 €	Salary for SCHWARZ STEPHANIE: Researcher, T2.2 Affordability study results interpretation support D2.2,D2.2 Quality review, PM 0,13	
WP 4	Personnel costs	771 €	Salary for BOBETH JAN: Researcher, T4.2 ImmigrantNavigation Study analysis: errors, T4.2 ImmigrantNavigation Study analysis: SOD questionnaires, T4.2 ImmigrantNavigation Study analysis: spatial abilities , PM 0,19	
WP 4	Personnel costs	322 €	Salary for OLAVERRI MONREAL CRISTINA: Senior researcher, T4.2 ImmigrantNavigation Study analysis: results QA, PM 0,06	

<b>Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period.</b> <b>AIT Austrian Institute of Technology GmbH</b>				
Work Package	Item description	Amount in €	Explanation	Free Text
WP 4	Personnel costs	2,884 €	Salary for SCHWARZ STEPHANIE: Researcher, T4.2 Eye tracking study: analysis (Mobile HCI publication), T4.2 Eye tracking study: video files screenings, T4.2 ImmigrantNavigation Study analysis, PM 0,65	
WP 4	Personnel costs	619 €	Salary for TSCHELIGI MANFRED: Head of Business Unit, T4.2 Eye tracking study results discussion, PM 0,07	
WP 9	Personnel costs	631 €	Salary for Freier DV Estefania Palacio Salazar 2015 Ergebnis: Masterstudent, Masterthesis: Data analysis / writing, PM 1,45	
WP 9	Personnel costs	1,148 €	Salary for Freier DV Serpil Karaduman 2014 Ergebnis: Turkish study facilitator, Workshop moderation/ study facilitation in Turkish, PM 0,55	
WP 9	Personnel costs	9,491 €	Salary for BOBETH JAN: Researcher, T9.4 Coordination log outputs, processing, T9.4 final field trials: log file analyse, Social Forum analysis, D9.4 review, T9.4 Financial planning, recruiting support, T9.4 set up devices, prototypes , T9.4 NGOs, facilitator support, PM 2,37	
WP 9	Personnel costs	2,424 €	Salary for EGGER SEBASTIAN: Researcher, T9.3 Prototypes testing translation tool,	



Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period. AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
			T9.3 Prototypes UI translations, T9.4 update translation files for final trials, PM 0,46	
WP 9	Personnel costs	5,298 €	Salary for MATTHEISS ELKE: Researcher, T9.4 MK Trial method support, T9.4 translation tool captured pictures collection, T9.4 Debriefings volunteers , PM 0,93	
WP 9	Personnel costs	718 €	Salary for MAURER KATHARINA BAKK PHIL: Expert Advisor, T9.4 London Arabic users trouble shooting support, PM 0,18	
WP 9	Personnel costs	8,893 €	Salary for OLAVERRI MONREAL CRISTINA: Senior researcher, T9.4 Quality Assurance-methods, T9.4 Quality Assurance-security and privacy information , T4.2 ImmigrantNavigation Study analysis: sense of direction measures, T9.4: final field trials: Analyses (D9.4), Masetlov Journal publication , T9.4: final field trials: Analyses (D9.4), PM 1,53	
WP 9	Personnel costs	26,184 €	Salary for SCHWARZ STEPHANIE: Researcher, Publication writing: NordiCHI 2014, T9.3 Preparation Intro Workshops Madrid, T9.3 Workshops London, T9.4 final field trials Preparation, T9.4: final field trials: coordination, conduction, T9.4:	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period. AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
			final field trials: Usability qualitative feedback (D9.4), Plenary Meeting Prague, T9.4 trial trouble shooting: connectivity, MApp issues, PM 5,89	
WP 9	Personnel costs	7,135 €	Salary for STEINBRUNNER SILVIA: Expert Advisor, T9.4 information support NGOs status Procedures, recruitings, T9.4 participant materials preparation, T9.4 prototype check: forum, check with TI, T9.4: Participant incentivations: coordination, distribution, T9.4: Questionnaires collection, scans, transfers, T9.4: Materials collection, archivation, PM 1,52	
WP 9	Personnel costs	2,860 €	Salary for TSCHELIGI MANFRED: Head of Business Unit, D9.3 review, T9.4 Planning support, T9.4 Trial status Procedure discussion, Quality assurance, PM 0,33	
WP 9	Personnel costs	2,802 €	Salary for WOLKERSTORFER PETER: Technician, T9.4 data collection, Server, ESM outputs, T9.4 Setup Surveys, translation, plug ins, T9.4 Esm trouble shooting, PM 0,63	
WP 10	Personnel costs	1,329 €	Salary for BOBETH JAN: Researcher, D10.3 Standardization , PM 0,34	
WP 10	Personnel costs	671 €	Salary for KRAMER MARGHERITA MBE: Expert	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period. AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
			advisor, TRL communication, telcos, PM 0,14	
WP 10	Personnel costs	3,187 €	Salary for MATTHEISS ELKE: Researcher, Final field trials dissemination materials, T4.2 Eye tracking study: state of the art, T10.3 standards description, PM 0,56	
WP 10	Personnel costs	78 €	Salary for OLAVERRI MONREAL CRISTINA: Senior researcher, Dissemination materials, PM 0,01	
WP 10	Personnel costs	732 €	Salary for STEINBRUNNER SILVIA: Expert Advisor, T10.1: Dissemination - Final conference preparation, T10.1: Dissemination - update materials, PM 0,17	
WP 10	Personnel costs	866 €	Salary for TSCHELIGI MANFRED: Head of Business Unit, T9.3 internal AIT dissemination , T10.1 Dissemination presentations final, PM 0,1	
WP 9	Subcontracting	420 €	T9.3 First field trials, Arabic translations	
WP 9	Subcontracting	336 €	T9.3 First field trials, Material preparations	
WP 9	Subcontracting	540 €	T9.3 First field trials, Turkish translations	
WP 9	Subcontracting	5 €	T9.4 58 Motorola Moto G 8GB test mobile phones	
WP 9	Other direct cost	117 €	consumables	T9.4 48 UK power adapters
WP 9	Other direct cost	9,618 €	consumables	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period. AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
				T9.4 58 Motorola Moto G 8GB test mobile phones
WP 9	Other direct cost	2,596 €	consumables	T9.4 UK Study participants Incentives
WP 9	Other direct cost	1,012 €	other	T9.4 AT Study participants Incentives
WP 9	Other direct cost	718 €	other	T9.4 mobile data credits AT
WP 9	Other direct cost	2,928 €	other	T9.4 mobile data credits UK
WP 9	Other direct cost	440 €	other	T9.4 mobile data credits, upgrade
WP 9	Other direct cost	1,000 €	consumables	T9.3 First field trials, AT - Study participants Incentives
WP 9	Other direct cost	1,000 €	consumables	T9.3 First field trials, Spain - Study participants Incentives
WP 9	Other direct cost	1,233 €	consumables	T9.3 First field trials, UK - Study participants Incentives
WP 1	Personnel costs	2,507 €	Salary for SCHWARZ STEPHANIE: Researcher, WP1 Ethical Issues documentation, Final Review, Luxembourg, Final Reporting, PM 0,56	
WP 1	Personnel costs	1,529 €	Salary for TSCHELIGI MANFRED: Head of Business Unit, Reporting update, D9.3 review, Final field trials finances, PM 0,18	
WP 1	Other direct cost	522 €	travelling	Bobeth Jan, Dipl.Inf.: 10.Plenary Meeting in London, 17.03.2015 - 19.03.2015
WP 1	Other direct cost	772 €	travelling	Bobeth Jan, Dipl.Inf.: 8.Plenary Meeting in

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 16 for the period. AIT Austrian Institute of Technology GmbH				
Work Package	Item description	Amount in €	Explanation	Free Text
				Madrid, 26.05.2014 - 28.05.2014
WP 1	Other direct cost	1,659 €	travelling	Schwarz Stephanie: 10.Plenary Meeting in London, 15.03.2015 - 19.03.2015
WP 1	Other direct cost	974 €	travelling	Schwarz Stephanie: 8.Plenary Meeting in Madrid, 26.05.2014 - 28.05.2014
WP 1	Other direct cost	731 €	travelling	Schwarz Stephanie: 9.Plenary Meeting/ T9.4 Workshop in Prag, 07.09.2014 - 10.09.2014
WP 1	Other direct cost	981 €	travelling	Schwarz Stephanie: Final Review Meeting in Luxemburg, 10.05.2015 - 13.05.2015
	Indirect costs	55,247 €		
TOTAL COSTS		169,557 €		

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## **12. FINANCIAL STATEMENTS – FORM C AND SUMMARY FINANCIAL REPORT**

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All Form C's have been submitted online. In the following, the collection of all partners' Form C's are displayed.



# FP7 - Grant Agreement - Annex VI - Collaborative project

## Summary Financial report - Collaborative project

Project acronym				MASELTOV		Project nr	288587	Reporting period from	01/01/2014	to	31/03/2015	Page		1/1		
Funding scheme		CP		Type of activity								Total				
				RTD (A)		Demonstration (B)		Management (C)		Other (D)		Total (A+B+C+D)				
Benef. nr	If 3rd Party, linked to benef.	Adjustment (Yes/No)	Organisation Short Name	Total	Max EC Contrib.	Total	Max EC Contrib.	Total	Max EC Contrib.	Total	Max EC Contrib.	Total	Max EC Contrib.	Req. EC Contrib.	Receipts	Interest
1		No	JR	459,401	344,550	0	0	148,712	148,712	0	0	608,113	493,262	493,262	0	0
1		Yes (2)	JR	5,255	3,941	0	0	-2,556	-2,556	0	0	2,699	1,385	1,385	0	0
2		No	CUR	45,800	34,350	0	0	5,107	5,107	0	0	50,907	39,457	39,457	0	
3		No	AIT	155,720	116,790	0	0	0	0	0	0	155,720	116,790	116,790	0	
3		Yes (1)	AIT	-1,659	-1,244	0	0	0	0	0	0	-1,659	-1,244	-1,244	0	
3		Yes (2)	AIT	7,507	5,630	0	0	0	0	0	0	7,507	5,630	5,630	0	
4		No	UOC	31,152	23,364	0	0	0	0	0	0	31,152	23,364	23,364	0	
5		No	OU	248,921	186,690	0	0	25,096	25,096	0	0	274,017	211,786	169,184	0	
5		Yes (2)	OU	-494	-370	0	0	0	0	0	0	-494	-370	-370	0	
6		No	COV	51,259	38,444	0	0	0	0	0	0	51,259	38,444	38,444	0	
7		No	CTU	201,070	150,802	0	0	0	0	0	0	201,070	150,802	150,802	14,342	
8		No	FHJ	50,009	37,506	0	0	0	0	1,660	1,660	51,669	39,166	39,166	0	
9		No	TI	197,497	98,748	0	0	0	0	0	0	197,497	98,748	98,748	0	
9		Yes (2)	TI	-13,940	-6,970	0	0	0	0	0	0	-13,940	-6,970	-6,970	0	
10		No	FLU	158,811	119,108	0	0	0	0	0	0	158,811	119,108	119,108	0	
-999	11	Yes (2)	BUS_UK	9,736	7,302	0	0	0	0	0	0	9,736	7,302	7,302	0	
12		No	FUN	21,643	16,232	0	0	0	0	0	0	21,643	16,232	16,232	0	
13		No	DAN	30,710	15,355	0	0	0	0	0	0	30,710	15,355	15,355	0	
14		No	MRC	38,410	28,807	0	0	0	0	0	0	38,410	28,807	28,807	0	
15		No	PP	218,035	163,526	0	0	0	0	0	0	218,035	163,526	163,526	0	
16		No	ATE	157,330	117,997	0	0	12,227	12,227	0	0	169,557	130,224	130,224	0	
Total				2,072,173	1,500,558	0	0	188,586	188,586	1,660	1,660	2,262,419	1,690,804	1,648,202	14,342	

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH	Participant Identity Code	999981537
Organisation Short Name	JR	Beneficiary nr	1
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				Total (A+B+C+D)
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	
Personnel costs	230,832	0	70,349	0	301,181
Subcontracting	4,025	0	3,324	0	7,349
Other direct costs	36,428	0	17,532	0	53,960
Indirect costs	188,116	0	57,507	0	245,623
Total costs	459,401	0	148,712	0	608,113
Maximum EU contribution	344,550	0	148,712	0	493,262
Requested EU contribution					493,262

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 3. Declaration of interest yielded by the pre-financing (to be completed only by the coordinator)

Did the pre-financing you received generate any interest according to Art.II.19 ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

Name of the auditor	Binder&Co.	Cost of the certificate (in €)	1,300
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Renate Reinisch, MSc
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	2
Legal Name	JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH	Participant Identity Code	999981537
Organisation Short Name	JR	Beneficiary nr	1
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	-3,303	0	-5,270	0	-8,573
Subcontracting	0	0	0	0	0
Other direct costs	2,243	0	0	0	2,243
Indirect costs	6,315	0	2,714	0	9,029
Total costs	5,255	0	-2,556	0	2,699
Maximum EU contribution	3,941	0	-2,556	0	1,385
Requested EU contribution					1,385

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 3. Declaration of interest yielded by the pre-financing (to be completed only by the coordinator)

Did the pre-financing you received generate any interest according to Art.II.19 ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

Name of the auditor	Binder&Co.	Cost of the certificate (in €)	1,300
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

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- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Renate Reinisch
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	CURE CENTRUM FUR DIE UNTERSUCHUNG UND REALISIERUNG ENDBENUTZERORIENTIERTER INTERAKTIVER SYSTEME	Participant Identity Code	999629912
Organisation Short Name	CUR	Beneficiary nr	2
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	24,583	0	3,192	0	27,775
Subcontracting	154	0	0	0	154
Other direct costs	6,313	0	0	0	6,313
Indirect costs	14,750	0	1,915	0	16,665
Total costs	45,800	0	5,107	0	50,907
Maximum EU contribution	34,350	0	5,107	0	39,457
Requested EU contribution					39,457

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Gerhard Helletzgruber
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES	Participant Identity Code	999582382
Organisation Short Name	AIT	Beneficiary nr	3
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				Total (A+B+C+D)
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	
Personnel costs	93,235	0	0	0	93,235
Subcontracting	0	0	0	0	0
Other direct costs	6,544	0	0	0	6,544
Indirect costs	55,941	0	0	0	55,941
Total costs	155,720	0	0	0	155,720
Maximum EU contribution	116,790	0	0	0	116,790
Requested EU contribution					116,790

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Didoe PREVEDOUROU
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	1
Legal Name	RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES	Participant Identity Code	999582382
Organisation Short Name	AIT	Beneficiary nr	3
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	0	0	0	0	0
Subcontracting	0	0	0	0	0
Other direct costs	0	0	0	0	0
Indirect costs	-1,659	0	0	0	-1,659
Total costs	-1,659	0	0	0	-1,659
Maximum EU contribution	-1,244	0	0	0	-1,244
Requested EU contribution					-1,244

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Didoe PREVEDOUROU
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	2
Legal Name	RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES	Participant Identity Code	999582382
Organisation Short Name	AIT	Beneficiary nr	3
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	4,692	0	0	0	4,692
Subcontracting	0	0	0	0	0
Other direct costs	0	0	0	0	0
Indirect costs	2,815	0	0	0	2,815
Total costs	7,507	0	0	0	7,507
Maximum EU contribution	5,630	0	0	0	5,630
Requested EU contribution					5,630

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Didoe PREVEDOUROU
	Date & signature



# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA	Participant Identity Code	995992024
Organisation Short Name	UOC	Beneficiary nr	4
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	13,610	0	0	0	13,610
Subcontracting	0	0	0	0	0
Other direct costs	5,860	0	0	0	5,860
Indirect costs	11,682	0	0	0	11,682
Total costs	31,152	0	0	0	31,152
Maximum EU contribution	23,364	0	0	0	23,364
Requested EU contribution					23,364

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

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- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	ANTONI CAHNER
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	THE OPEN UNIVERSITY	Participant Identity Code	999923337
Organisation Short Name	OU	Beneficiary nr	5
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	131,029	0	15,685	0	146,714
Subcontracting	0	0	0	0	0
Other direct costs	24,547	0	0	0	24,547
Indirect costs	93,345	0	9,411	0	102,756
Total costs	248,921	0	25,096	0	274,017
Maximum EU contribution	186,690	0	25,096	0	211,786
Requested EU contribution					169,184

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Jo Vango
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	2
Legal Name	THE OPEN UNIVERSITY	Participant Identity Code	999923337
Organisation Short Name	OU	Beneficiary nr	5
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	0	0	0	0	0
Subcontracting	0	0	0	0	0
Other direct costs	-309	0	0	0	-309
Indirect costs	-185	0	0	0	-185
Total costs	-494	0	0	0	-494
Maximum EU contribution	-370	0	0	0	-370
Requested EU contribution					-370

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Joanne Vango
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	COVENTRY UNIVERSITY	Participant Identity Code	999612161
Organisation Short Name	COV	Beneficiary nr	6
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	24,135	0	0	0	24,135
Subcontracting	0	0	0	0	0
Other direct costs	7,902	0	0	0	7,902
Indirect costs	19,222	0	0	0	19,222
Total costs	51,259	0	0	0	51,259
Maximum EU contribution	38,444	0	0	0	38,444
Requested EU contribution					38,444

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Bikramjeet Singh
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	CESKE VYSOKE UCENI TECHNICKE V PRAZE	Participant Identity Code	999848744
Organisation Short Name	CTU	Beneficiary nr	7
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	113,620	0	0	0	113,620
Subcontracting	0	0	0	0	0
Other direct costs	12,049	0	0	0	12,049
Indirect costs	75,401	0	0	0	75,401
Total costs	201,070	0	0	0	201,070
Maximum EU contribution	150,802	0	0	0	150,802
Requested EU contribution					150,802

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

Yes

14,342

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## . Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Ing. Igor Mraz
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	FH JOANNEUM GESELLSCHAFT M.B.H.	Participant Identity Code	999489456
Organisation Short Name	FHJ	Beneficiary nr	8
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	27,494	0	0	0	27,494
Subcontracting	0	0	0	0	0
Other direct costs	3,762	0	0	1,038	4,800
Indirect costs	18,753	0	0	622	19,375
Total costs	50,009	0	0	1,660	51,669
Maximum EU contribution	37,506	0	0	1,660	39,166
Requested EU contribution					39,166

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## . Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	GEF Dr. Günter Riegler, Kaufmännischer Geschäftsführer; GEF o. Univ.-Prof. DI Dr. Karl P. Pfeiffer, Rektor (FH) / Wissenschaftlicher Geschäftsführer
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	TELECOM ITALIA S.p.A	Participant Identity Code	999908496
Organisation Short Name	TI	Beneficiary nr	9
Funding % for RTD activities (A)	50.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				Total (A+B+C+D)
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	
Personnel costs	128,310	0	0	0	128,310
Subcontracting	0	0	0	0	0
Other direct costs	0	0	0	0	0
Indirect costs	69,187	0	0	0	69,187
Total costs	197,497	0	0	0	197,497
Maximum EU contribution	98,748	0	0	0	98,748
Requested EU contribution					98,748

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Manuela Carra
	Date & signature



# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	2
Legal Name	TELECOM ITALIA S.p.A	Participant Identity Code	999908496
Organisation Short Name	TI	Beneficiary nr	9
Funding % for RTD activities (A)	50.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	1,100	0	0	0	1,100
Subcontracting	0	0	0	0	0
Other direct costs	0	0	0	0	0
Indirect costs	-15,040	0	0	0	-15,040
Total costs	-13,940	0	0	0	-13,940
Maximum EU contribution	-6,970	0	0	0	-6,970
Requested EU contribution					-6,970

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Manuela Carra
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	FLUIDTIME DATA SERVICES GMBH	Participant Identity Code	997688263
Organisation Short Name	FLU	Beneficiary nr	10
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	94,918	0	0	0	94,918
Subcontracting	0	0	0	0	0
Other direct costs	4,339	0	0	0	4,339
Indirect costs	59,554	0	0	0	59,554
Total costs	158,811	0	0	0	158,811
Maximum EU contribution	119,108	0	0	0	119,108
Requested EU contribution					119,108

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Michael Kieslinger, MA (Managing Partner)
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by Third Party) Only applicable if special clause nr 10 is used

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	Yes
To	31/03/2015	Adjustment relates to Period :	2
3rd party legal Name	BUSUU LIMITED		
3rd party Organisation Short Name	BUS_UK	Working for beneficiary nr	11
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	9,736	0	0	0	9,736
Subcontracting	0	0	0	0	0
Other direct costs	0	0	0	0	0
Indirect costs	0	0	0	0	0
Total costs	9,736	0	0	0	9,736
Maximum EU contribution	7,302	0	0	0	7,302
Requested EU contribution					7,302

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	BUSUU LIMITED
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	FUNDACION DESARROLLO SOSTENIDO	Participant Identity Code	963982412
Organisation Short Name	FUN	Beneficiary nr	12
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	7,956	0	0	0	7,956
Subcontracting	0	0	0	0	0
Other direct costs	5,571	0	0	0	5,571
Indirect costs	8,116	0	0	0	8,116
Total costs	21,643	0	0	0	21,643
Maximum EU contribution	16,232	0	0	0	16,232
Requested EU contribution					16,232

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	JOAQUIN ARRIBAS GARCIA, FUNDESO LIQUIDATOR
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	VEREIN DANAIDA	Participant Identity Code	963808491
Organisation Short Name	DAN	Beneficiary nr	13
Funding % for RTD activities (A)	50.0	If flat rate for indirect costs, specify %	20

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	22,469	0	0	0	22,469
Subcontracting	0	0	0	0	0
Other direct costs	3,123	0	0	0	3,123
Indirect costs	5,118	0	0	0	5,118
Total costs	30,710	0	0	0	30,710
Maximum EU contribution	15,355	0	0	0	15,355
Requested EU contribution					15,355

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Marianne Hammani-Birnstingl
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	THE MIGRANTS' RESOURCE CENTRE	Participant Identity Code	963754365
Organisation Short Name	MRC	Beneficiary nr	14
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	25,270	0	0	0	25,270
Subcontracting	8,821	0	0	0	8,821
Other direct costs	4,319	0	0	0	4,319
Indirect costs	0	0	0	0	0
Total costs	38,410	0	0	0	38,410
Maximum EU contribution	28,807	0	0	0	28,807
Requested EU contribution					28,807

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Ros Lucas
	Date & signature

# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	PEARSON PUBLISHING LIMITED	Participant Identity Code	949666376
Organisation Short Name	PP	Beneficiary nr	15
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	60

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	Total (A+B+C+D)
Personnel costs	125,456	0	0	0	125,456
Subcontracting	8,127	0	0	0	8,127
Other direct costs	5,737	0	0	0	5,737
Indirect costs	78,715	0	0	0	78,715
Total costs	218,035	0	0	0	218,035
Maximum EU contribution	163,526	0	0	0	163,526
Requested EU contribution					163,526

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
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## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
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## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	George Pearson
	Date & signature



# FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

Project Number	288587	Funding scheme	Collaborative project
Project Acronym	MASELTOV		
Period from	01/01/2014	Is this an adjustment to a previous statement ?	No
To	31/03/2015		
Legal Name	AIT Austrian Institute of Technology GmbH	Participant Identity Code	999584128
Organisation Short Name	ATE	Beneficiary nr	16
Funding % for RTD activities (A)	75.0	If flat rate for indirect costs, specify %	N/A

## 1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

	Type of Activity				Total (A+B+C+D)
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	
Personnel costs	79,621	0	4,036	0	83,657
Subcontracting	1,301	0	0	0	1,301
Other direct costs	23,713	0	5,639	0	29,352
Indirect costs	52,695	0	2,552	0	55,247
Total costs	157,330	0	12,227	0	169,557
Maximum EU contribution	117,997	0	12,227	0	130,224
Requested EU contribution					130,224

## 2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?  
If yes, please mention the amount (in €)

No

## 4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €), if charged under this project	
---------------------	--	---	--

## 5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

Name of the auditor		Cost of the certificate (in €)	
---------------------	--	--------------------------------	--

## 6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Alexander Svejksky
	Date & signature