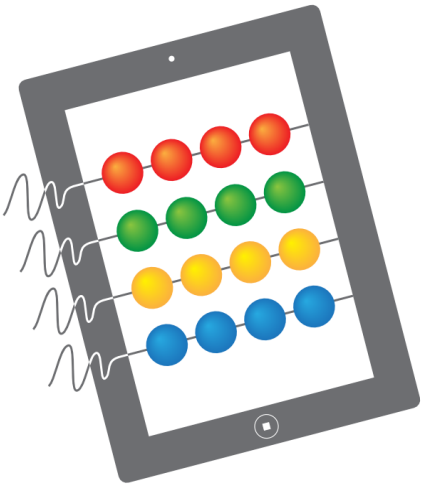
FP7 ICT STREP Project



LEARN PAD

Deliverable D10.4

Annual Progress and Financial Report – Final

http://www.learnpad.eu

LINAGORA

Project Number	:	FP7-619583
Project Title	:	Learn PAd Model Based Social Learning for Public Administrations

Deliverable Number	:	D10.4
Title of Deliverable	:	Annual Progress and Financial Report – Final
Nature of Deliverable	:	Report
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Reviewer(s)	:	Andrea Polini

Abstract

This report summarizes the work carried out in the Learn PAd project during the current reporting period spanning over M25 to M33 (Feb 2016 - Oct 2016). The report includes the following parts:
- Learn PAd publishable summary;
- Learn PAd objectives, work progress and achievements at the work package (WP) level, for those WPs that were active during the reporting period;
- Deliverables and Milestones tables;
- Learn PAd project management report with explanation of the use of resources, and activity progress reporting.

As for previous reports, we also include details of per-partner resource consumption, given as an appendix to the deliverable.

Keywords list

Periodic report, Publishable summary, Work progress and achievements during the period

Document History

Version	Changes	Author(s)
0.1	TOC	A. Bertolino, D. Mulas
1.0	First draft with (almost) all partners contributions	All
2.0	Complete draft with updated tables	A. Bertolino, D. Mulas
2.1	Complete draft with further missing data included	A. Bertolino, D. Mulas
3.0	Revised formatting and style	A. Bertolino
4.0	Final first draft for review (Costs and last month effort are provisional because submitted before end of reporting period)	A. Bertolino

Document Review

Release	Date	Ver.	Reviewers	Comments
ToC	29/09/2016	0.1	NA	
Draft	3/10/2016	1.0	NA	
Internal	15/10/2016	2.0	A. Bertolino	
Candidate Final	25/10/2016	3.0	A. Polini	

Glossary, acronyms & abbreviations

Item	Description
CA	Consortium Agreement
DoW	Description of Work
EL	Exploitation Leader
PAB	Project Advisory Board
PCB	Project Coordination Board
PMB	Project Management Board
SL	Scientific Leader
TL	Technical Leader
TRR	Technical Review Report
WP	Work Package

Table of Contents

PROJECT PERIODIC REPORT

Grant Agreement number: 619683

Project acronym: LEARN PAD

Project title: Model Based Social **Lear**ning for **P**ublic **Ad**ministrations

Funding Scheme: FP7-ICT-2013-11 - Information and Communication Technologies

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

Periodic report: **1st** □ **2nd** □ **3rd X** **4th** □

Period covered: **from** 01 Feb 2016 **to** 31 Oct 2016

Project Coordinator:

Antonia Bertolino, CONSIGLIO NAZIONALE DELLE RICERCHE (CNR)

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Project website[1] address: http://www.learnpad.eu

[1] The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: http://europa.eu/abc/symbols/emblem/index_en.htm logo of the 7th FP: http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos). The area of activity of the project should also be mentioned.

Declaration by the scientific representative of the project coordinator

I, as scientific representative of the coordinator of this project and in line with the 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) [2]:

  ☑ 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.

  ☐ has failed to achieve critical objectives and/or is not at all on schedule.

- The public website, if applicable

  ☑ is up to date

  ☐ is not up to date

- 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 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 Project Management section in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator: Antonia Bertolino

Date: ...../ ...../ .....

For most of the projects, the signature of this declaration could be done directly via the IT reporting tool through an adapted IT mechanism and in that case, no signed paper form needs to be sent

[2] If either of these boxes below is ticked, the report should reflect these and any remedial actions taken.

Publishable Summary

In modern society the processes underpinning the delivery of public services to citizens and enterprises are characterized by increasing complexity and continuous evolution. In most cases these processes require a collaborative activity shared among different administrations. Moreover, as laws and regulations are frequently modified, administrative processes are constantly transformed requiring the intertwined adaptation of related services and data.

Because of such fluid context, public administration (PA) officers are undergoing a transformation of their perceived role from authoritative and distant controllers to proactive and responsible service providers, and are thus under pressure to constantly improve service quality while coping with rapidly changing context and decreasing budgets. Thus, **civil servants are challenged to understand and put in action the latest procedures and rules within tight time constraints**. Indeed, public administrators are never done with learning how to carry out their tasks, and effective training is essential to maintaining and improving the quality of public services.

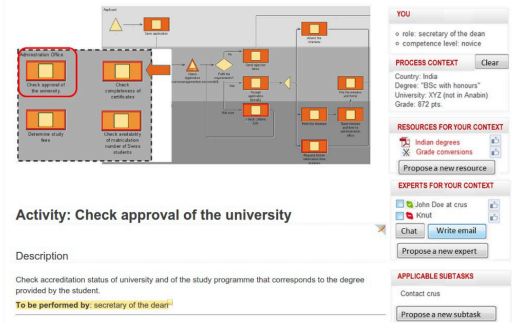
Learn PAd

Model-based Social Learning for Public Administrations

Learn PAd is an innovative holistic e-learning platform that assists civil servants in learning, managing and mastering the complexity of PA processes. Learn PAd supports collaborative knowledge sharing and process-driven improvement on a user-friendly wiki platform based on formalized models.

Learn PAd beneficiaries

Learn PAd is designed with and for PAs. The Learn PAd platform allows civil servants to manage and share knowledge and to access the learning contents needed for their daily activity. In addition to learning sessions, carried out through browsing, recommendations, or simulation, the platform can also help while working by giving access to contents according to the request to be served, and pointing to expert colleagues that can advice on demand. The ambition of Learn PAd is to **become the main access point to knowledge for civil servants in any working situation**, being it to serve a specified request in a well-known process or to enter a new role with new responsibilities.

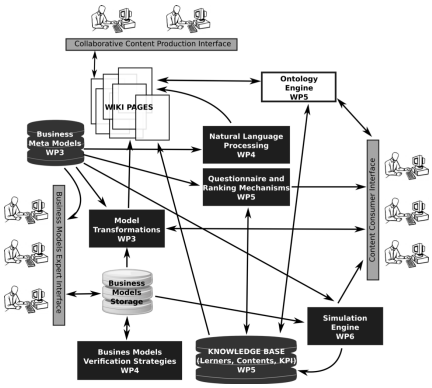


Learn PAd – Future Learning Environment

Learn PAd platform provides a learning environment for anyone involved in PA processes. Provided with advanced methods and tools, process managers can describe the PA Business Processes in a comprehensive way. The generated wiki pages, enriched with additional documentation for a clearer understanding of the process, provide a valuable source of information for civil servants. The platform supports both **an informative learning approach based on the enriched Business Process** models and **a procedural learning approach based on simulation** and monitoring (learning by doing).

Dynamic Collaboration and Social Learning Environment

Learn PAd enables process-driven learning and fosters cooperation and knowledge-sharing. Learn PAd is inspired by **open-source communities principles and cooperation spirit**: contents are commented and enriched by the community, and meritocracy is naturally promoted, with key experts emerging because of their skill and active participation. Finally Learn PAd actively contributes to dissemination and evolution of BPMN and related modeling standards.



Architecture of Learn PAd

Learn PAd wiki pages result from automated transformation of learning-related models. The Learn PAd platform integrates several components that automatically reflect the structure of the specified Business Processes and related documents and offers runtime capabilities for consultation, learning assessments, collaboration, and learning while-doing and by-doing. The Learn PAd middleware provides mechanisms for Business Process formal verification, quality check and ranking of its content.

Learn PAd Demonstrators

European Project Budget Reporting (EPBR)	*Sportello Unico Attività Produttive (SUAP)*
refers to the activities that a public research body has to put in place in order to manage the administrative procedures related to the participation to a European Research Project. It regards the definition of models and documentation for a business process that does not cross the border of a single organization.	refers to the activities that the Italian Public Administrations have to put in place in order to permit to entrepreneurs to set up a new company. It refers to a more complex inter-organizational BP scenario involving many PAs.

Learn PAd Research

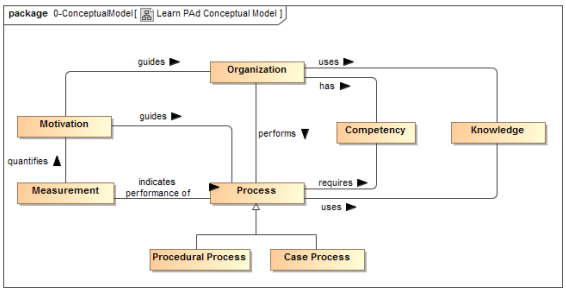
The ambitious goals of Learn PAd can only be achieved based on strong technical/scientific research contributions. Learn Pad innovation is based on four pillars:

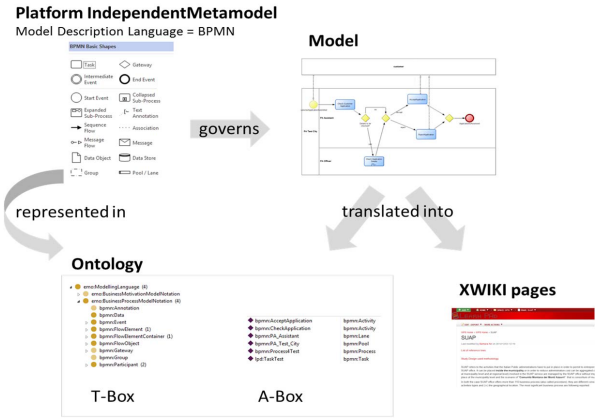
1. a new concept of model-based e-learning (of both process and knowledge)
2. open and collaborative e-learning content management
3. automatic, learner-specific and domain-based content quality assessment
4. automatic model-driven simulation-based learning and assessment

In particular, advanced formal verification and natural language processing techniques ensure quality of contents and documentation. Specialized learning-driven ontologies, knowledge-base repositories and KPIs have been defined to keep learners engaged, while session monitoring and automatically derived tests challenge their progress.

Learn PAd has now reached its completion. The focus during first year was on Requirements and Use Cases elicitation and from these on domain modeling and platform design. Indeed, modeling is extensive all through the project scope, including:

- Business Process Models represented using the Business Process Modeling Notation
- Business Case Models represented using the Case Management Modeling Notation
- Objectives of the organization represented using the Business Motivation Model
- Organizational models, and competency models
- Models to represent data to be managed by civil servants in performing their tasks
- KPI models to monitor the objectives of the organization and related learning activities





During the second year, the learning approach and platform functionalities have been refined with applicability and effectiveness in mind, and most effort has been devoted to reach a complete release of the integrated platform for the purpose of final validation.

Finally, during the third year, a complete instantiation has been released for validation with real users from PA, and exploitation strategy for the future of the platform has been developed.

Results highlights:

Extensive domain analysis:

- Common matured understanding on targetted PA learning approach and on functional capability of the Learn PAd technology and platform
- More than 320 Learn PAd requirements collected and organized, and subsequently assessed through collaborative approach

Model-driven contents production:

- A formalized set of metamodels to describe (extended) business processes together with organization, competences, skills and useful relations. Weaving models provide explicit correspondes among the modeling notations.
- A tooling chain that starting from extended process models authored in the modeling environment can automatically generate wiki structures reflecting the process and the associated information, which support informative learning models.

Quality and understandability validation:

- A formal verification prototype based on the transformation of the business processes into Petri nets, as well as contextualized guidelines to enhance their understandability.
- A quality model to identify the defects addressed by linguistic analysis, also based on several interviews with civil servants to highlight PA typical linguistic problems.

Proactive content management:

- The Learn PAd ontology supporting the representation of meta-models and models so to allow for reasoning as well as context-sensitive recommendations and case based reasoning.
- LearnPAd scorecard model of operational and learning goals and their relations, and KPIs for their measurement.

Simulation-based learning sessions:

- A prototype of BPMN-based simulation environment, supporting a gamification strategy for e-learning by-doing and including a Robot framework mocking civil servant interactions.
- Simulation-specific KPIs defined over business process paths.

Two real-world demonstrators:

- Detailed analysis, modelling and refinement of a number of scenarios from the involved Public Administrations, referring to both EPBR and SUAP
- An experiment on usage of released Learn PAd platform involving thirty PA officers and as many ones in a control group using traditional e-learning platform, with collection of qualitative and quantitative data about learning effectiveness and usability of Learn PAd, and useful hints for future improvements.

The Learn PAd Project in a Nutshell

Fact Sheet

Project acronym: Learn PAd
Project title: Model-Based Social Learning for Public Administrations
Grant agreement: 619583
Funded under: FP7-ICT (Funding scheme: Collaborative project)
Subprogramme: ICT-2013.8.2 - Technology-enhanced learning

Duration: 33 months (from February 1, 2014 to October 31, 2016)
Total cost: 3.5 M€ (EC contribution: 2.6 M€)
Total effort: 388 PM

Learn PAd Contacts

Project coordinator: Antonia Bertolino (email: antonia.bertolino@isti.cnr.it)
Project website: http://www.learnpad.eu (email: info@learnpad.eu)

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Learn PAd Consortium

	CNR	Italy	Public Research Body	Project Coordinator, Formal verification, Monitoring and testing
	BOC	Austria	SME	Business Process Management
	Linagora	France	SME	Simulation
	NME	Lithuania	SME	Model-based design
	Regione Marche	Italy	Public Administration	SUAP Demonstrator
	FHNW	Switzerland	University	Information and knowledge management, Ontology
	U. of Camerino	Italy	University	Formal verification, EPM demonstrator
	U. of L'Aquila	Italy	University	Metamodelling, MDE
	XWIKI	France	SME	Architecture and Integration

1. Project objectives for the period

Learn PAd ultimate goal is to provide a holistic process-driven approach to e-learning for Public Administrations, centered around usage of models and proactively supported by the Learn PAd platform that is conceived to foster cooperation and knowledge-sharing.

During the first year the activity was focused towards three main goals: consortium operative integration, domain analysis for requirements specification, and detailed design of the platform architecture.

The main objectives for the second year included the development of a first complete release of the platform, which was live demonstrated at the Y2 review, a focused study of related projects and learning needs of users, and fostering dissemination and exploitation.

In the final period that is the subject of this report, the main objectives were:

(i) to provide a stable release of the platform (stated as Milestone 4 at M27);

(ii) to validate both the approach concerning its usefulness in learning and platform usability, by assessing its usage from civil servants;

(iii) to finalize the project exploitation strategy.

Objectives (ii) and (iii) constitute the 5th Milestone, originally targeted for M30, and set to M33 after GA amendment with a three months extension (as explained later).

Considering the project work package structure and the amended DOW, the following deliverables were planned for the reporting period:

- WP2 - D2.4 - Core Platform Implementation – Second Version (M27)
- WP4 - D4.3 - Quality Assessment Mechanisms Implementation (M27)
- WP5 - D5.4 - KPI Ontology and Learners Assessment Mechanisms (M27)
- WP5 - D5.5 - Semantics for the Wiki – Final Iteration (M27)
- WP6 - D6.3 - Learn PAd Simulation Environment: Final Release (M27)
- WP7 - D7.4 - Integration Testing Procedures – Final Iteration (M27)
- WP8 - D8.4 - Demonstrators Assessment (M33)
- WP9 - D9.6 - Learn PAd Dissemination and Standardization Activities Report – Final Iteration (M33)
- WP9 – D9.7 - Learn PAd Exploitation Plan – Final Iteration (M33)
- WP10 - D10.4 - Annual Progress and Financial Report – Final (M33) (*This document*)
- WP10 – D10.5 Final Report (M33)

1.1 Work progress and achievements during the period

In a summary, we can state that the activity carried out in the third period took three main paths: platform completion, experimental validation, exploitation planning.

The activity was carried out in conformance to the pre-established objectives and deliverables in the DOW, but has also taken into account the extensive feedback and recommendations coming from the Y2 Review report. In particular, after Y2 review, also based on reviewers' recommendations, the Learn PAd PMB agreed on the opportunity of submitting a request of a three months extension, as the time between platform first delivery (M27) and project termination (M30) was not considered sufficient to perform an adequate validation.

Platform completion: The technical WPs that were still active in the third year (namely WP2, WP4, WP5, WP6, and WP7) completed the pending tasks towards the release of a fully integrated first release of Learn PAd platform. Nominally all the above listed WPs terminated at M27 (i.e., April 2016). Thus the active period from Y2 report only consisted of 3 months. In reality, although the complete integrated platform has been released according to plans (see Deliverable D2.4 and all other M27 deliverables), further adjustments and refinements have continued to be performed until the actual release of the platform to the civil servants in September.

Experimental validation: This activity was planned within WP8. At the Y2 review, the reviewers recommended to "*collect more user data to come to statistically meaningful conclusions about usability and usefulness of the system*." We made our best to fulfil such request ad carried out with advance notice an intensive recruitment campaign to enrol enough volunteers from administrative offices (set in the review report as 30+30). In fact, an issue with our early validation at M18, as evidenced at Y2 review, was the low number of recruited subjects, mostly due to lack of advance planning. The results of the validation are reported in Deliverable D8.4, due at M33.

Exploitation planning: Learn PAd exploitation strategy is described in Deliverable D9.7, due at M33. We followed the recommendations from Y2 review report to develop a more concrete and detailed joint strategy, and a Memorandum of Understanding that is included in copy in D9.7 is currently being signed by all partners.

Another concerns raised at Y2 review is that the contribution to the state of the art of each WP should be clearly reported and included in the final report. We have made so in Part 1 of D10.5 (See section 1.3 of that report).

More specific responses to Y2 review report also come in the following sections within the activity reports from each WP. More precisely, in the following we report in more detail for each work package:

1. objectives,
2. progress towards objectives
3. related publications (where applicable), which are also available from the project's Web site at www.learnpad.eu
4. significant results
5. any deviation from workplan and corrective actions

6. list of deliverables, further indicating estimated (at the time of project start) and used person-months (the latter are indicative as accurate Forms C are being prepared by the Administrative & Financial services of partners).

We recall that WP1 on “Requirements Analysis” and WP3 on “Approaches Enabling Model-Based Learning” terminated during second year.

1.2 WP2 - Learn PAd Platform

WP2 Objectives

The overall goal of WP2 is to implement a prototype of the Learn PAd platform by connecting the work of all the partners, i.e.:

- Implement the Learn PAd core platform
- Provide the connectors between all components

In the third year in particular, we focused on completion of the platform so to provide a stable release for validation.

WP2 Progress towards the objectives

- Task 2.2: Learn PAd : Implementation of the Core

As this task was active for only 3 months in the 3rd period, the effort on implementation was mostly concentrated on maintenance and fine-tuning such as tweaking of the user interface and development of in-product documentation and help.

- Task 2.3: Architecture Assessment

During the period, there was ongoing evaluation of the architecture in terms of the design laid out in D2.1. This was used to inform minor changes made in the finalization of T2.2.

WP2 Publications during the reporting period

NA

WP2 Significant results

During this period, we carried out the final polishing and released the second functional instance of Learn PAd platform (D2.4). All of the main functionalities have been completed on time and no significant stability issues or functional discrepancies have been reported.

WP2 Deviation from workplan and corrective actions

The LearnPAd meta-model did not finally provide the imagined interoperability between modelling environments. Where we had imagined a single universal standard that could represent the models produced by any modelling environment, we found the differences between environments too significant to provide a feature-complete common representation that remained semantically meaningful. As modelling environment agility is a strong objective of the workpackage, we opted for a compromise by semantically representing only a common core of features but allowing modelling-environment-dependent extensibility. The practical result of which is that for practical usage, the Learn PAd Platform requires some adaptation to new modelling environments and currently is most complete when used with the Adoxx modelling

environment. However we expect that adaptation to an organization's preferred modelling environment will be achievable as part of normal service/consulting work to assist in adoption.

WP2 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D2.1	Platform Architectural Description	2	XWIKI	8.00	10,77	M9	31/10/2014
D2.2	Core Platform Implementation – First Version	2	XWIKI	19.00	20,6	M18	31/07/2015
D2.3	Architectural Assessment of the First Version of the Platform	2	NO-MAGIC	6.00	5,45	M21	31/10/2015
D2.4	Core Platform Implementation – Second Version	2	XWIKI	18.00	20,7	M27	30/04/2016

1.3 WP4- Models and Contents Quality Assessment

WP4 Objectives

WP4 investigates on the quality assessment of the BP model specifications, and its related learning contents. The quality assessment will be based on both: formal verification and natural languages processing techniques. To this purpose the following objectives have been identified:

1. to provide support for quality assessment both of BP model specifications, and related contents.

2. to look for automatic tools for quality assessment to be used to improve the quality of learning material.

3. to adopt analysis of BP models based on formal verification techniques to discover possible structural problems of the specification.

4. to investigate on interaction patterns for BPs modelling typically used within the public administrations.

5. to use natural language processing techniques for quality assessment of the collaboratively provided contents.

The work has been split in 3 tasks:

Task 4.1: Formal Verification of Business Processes

Task 4.2: Linguistic Quality Evaluation

Task 4.3: Feedback-based Quality Evaluation

With reference to the third year, more specific objectives included:

1. Establish an approach for feedback-based quality assessment
2. Develop the Content Analysis Component and Model Verification Component for the LearnPAd platform (Deliverable D 4.3).

WP4 Progress towards the objectives

Task 4.1:Formal Verification of Business Processes
This task was no more active in the last period of the project.

Task 4.2: Linguistic Quality Evaluation
This task was no more active in the last period of the project.

Task 4.3: Feedback-based Quality Evaluation
With reference to Objective 1 for the third year (i.e., Establish an approach for feedback-based quality assessment), a practical scenario with feedback-based quality evaluation was performed. The goal was to understand to which extent machine learning techniques could be used to improve the quality of Learn PAd content during the usage of the platform. To this end, a set of 23 procedure descriptions was collected from the Web. Defects were annotated on the dataset by 17 members of the consortium. Machine learning was first applied to classify each sentence as defective/not-defective. Results of this research were inconclusive, with the classifier resulting over-trained on the dataset. Therefore, a specific defect, not addressed with the rule-based strategies (see Task 4.2), was chosen for further analysis. The specific defect concerned sentences with unclear deadlines or time intervals. We accurately defined features for this task, and experimented with decision trees. In this case, results appeared more encouraging. However, from our evaluation we saw that further research is required to successfully plug feedback-based strategies into the Learn PAd platform. Hence, we have defined a human-intensive approach for gathering feedback on defective sentences, and used this feedback to manually improve the descriptions. As the platform evolves, the defective sentences can be used to construct a dataset for feedback-based quality assessment, and eventually automate the process.

With reference to the activity described above – which was concluded in Y3 but was in large part conducted during Y2 -- the reviewers at the Y2 review observed the following: *Feedback-based quality evaluation focussed on a specific type of defection, namely sentences with unclear deadlines or time intervals. This narrow perspective is certainly practically understandable but problematic with regard to the provision of a usable platform. Moreover it appears as if intended automatic detection procedures failed to perform adequately, which led to the usage of labour intensive annotation procedures. It can be questioned in how far this change compromises the overall project goals*

As a response to this observation, it is worth highlighting that the focus on a single defect (i.e., deadline-time interval unclear) is surely limited, by this is compensated by the implementation of 14 other defect-detection rules (with sub-rules for sub-classes of defects) in our Content Analysis Component. These rules address most of the defect classes identified during interviews with stakeholders and during the literature review. It is worth noting that this set of addressed defects was not initially planned in the DoW (in which only *ambiguity* was considered), but was considered only after understanding the relevance of certain types of linguistic defects (e.g., juridical jargon, difficult jargon,

unclear presentation), which were highlighted in interviews and questionnaires with PA stakeholders.

We argue that the large perspective of rule-based defect detection techniques mitigates the impact of the narrow perspective on feedback-based quality evaluation. Only defects that cannot be successfully identified with rule-based natural language (NLP) approaches, and that in principle required machine learning, were left uncovered at this stage. In addition, the feedback-based quality evaluation mechanism defined, which does not leverage machine learning, is regarded as *preparatory* for future machine learning implementation. The *labour intensive activities* mentioned by the reviewers will be only on the side of the maintainers of the platform, and only at the early stages: Learn PAd users will highlight defects in the procedure descriptions, and the maintainers of the platforms will in turn use the defective sentences to build a dataset to be used for machine learning.

It is also worth noticing that some ambiguity defects encountered in our dataset of 24 documents appeared as difficult to be addressed automatically, since we could not find in the literature a proper way to classify them. Hence, we conducted a grounded-theory study to better understand the complex phenomenon of ambiguity. To study the problem of language defects, the problem of ambiguity in spoken language was analysed and a model of ambiguity perception was defined (results of this activity are published in Ferrari et al.: Ambiguity and tacit knowledge in requirements elicitation interviews, see below).

With reference to Objective 2 for the third year (i.e., Development of the Content Analysis Component and Model Verification Component for the LearnPAd platform, described in Deliverable D 4.3.) the two components for quality evaluation of content and models were developed. Within this task, and to understand the usability of the Content Analysis component from the user point of view, a prototype Web application was also defined to interact with the current version of the Content Analysis component. It is provided as a complement to the software Deliverable D4.3. For each component developed, we provide an overview of the architecture and behaviour, and we give the guidelines on how to download and run each component.

WP4 Publications during the reporting period

- Ferrari, A., Spoletini, P., Gnesi, S. “Ambiguity and tacit knowledge in requirements elicitation interviews” Requirements Engineering Journal. Volume 21, Issue 3, pp 333–355. ISSN: 0947-3602, 2016
- De Angelis, G., Ferrari, A., Gnesi, S., Polini, A. “Collaborative requirements elicitation in a european research project”. In Proceedings of the 31st Annual ACM Symposium on Applied Computing (pp. 1282-1289). ACM, 2016
- Pierantonio, R. Woitsch, B. Thonssen, A. Polini, B. Re. Modeling for learning in public administrations. Domain-Specific Conceptual Modelling: Concepts, Methods and Tools. D. Karagiannis, H. C. Mayr, J. Mylopoulos (Editors), Springer, pp. 575 - 594, 2016.

WP4 Significant results

- Refinement of the Content Analysis Component for analysis and defect identification in BP descriptions expressed in natural language;
- Development of a prototype Web application to interact with the component;

- Experimentation of feedback based quality assessment for LearnPAd;
- Design of the UI and interface between Content Analysis component and platform;
- Implementation of a use case around feedbacks;
- Architecture design for the integration of collaborative quality evaluation.

WP4 Deviation from workplan and corrective actions

No major deviations are reported

WP4 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D4.1	Quality assessment strategies for BP models	4	UNICAM	16.00	19,5	M18	31/07/2015
D4.2	Quality Assessment Strategies for Contents	4	CNR	17.00	13,8	M21	31/10/2015
D4.3	Quality Assessment Mechanisms Implementation	4	CNR	10.00	8,01	M27	30/04/2016

1.4 WP5- Collaborative Contents Management

WP5 Objectives

The overall objective of WP5 is the management of Collaborative Content based on semantic metamodel (ontology), enabling shared understanding and automated reasoning.

In the reporting period specific objectives included:

- Finalization of design and implementation of the learning scorecard and dashboard (Tasks 5.4 / 5.6)
- Finalization of prototype and implementation of integration interfaces for ontology-enhanced browsing and personalisation in the Wiki (Task 5.5).

WP5 Progress towards the objectives

To reach the objectives listed above, all artifacts were cooperatively developed and constantly assessed by Marche Region. Therefore we conducted interviews and workshops with the business representatives and they signed off on every artifact (requirements, design and implementation of goals, KPIs and relations amongst entities as well as sources for, content of and representation of the dashboard).

As all metamodels and models in the project, like the BPMN (Business Process Model Notation), the OMM (Organizational Meta Model), the DKM (Document Knowledge Model), etc., also the KPI metamodel and its model are formally represented in the web ontology language OWL. The KPI value and score calculation during system

runtime is based on gathered runtime data, the background knowledge provided by the domain ontology and on data from other integrated systems.

The properties of a calculated KPI value are encapsulated in the PerformanceValue class with the property's value, score, trend and timestamp. All KPI model instances are also subclasses of this performance value class. KPI values are calculated once on an individual level, means specific for performers respectively employees, and on the other hand on an organizational unit level.

The KPI calculation is based on data gathered during runtime of the Learn PAd system. From the process simulation component several user specific scores as an outcome of a user's process simulation are provided. Since the Learn PAd project is embedded in the Wiki implementation XWiki, specific platform actions of the users are stored as well in the ontology repository. This contribution to process improvements through feedbacks is of special interest. Additionally with an Excel adapter many heterogeneous data related to KPIs can be integrated.

The KPI performance values and scores are calculated with formal rules based on the SPARQL Inferencing Notation (SPIN).

With respect to the development of a recommendation system we emphasize that for all recommendations, the context of the user is considered. That is (1) the working context i.e. the task he/she is actually working (be it real or in the simulation environment) and (2) his/her personal context i.e. his/her competencies, EQF level and learning preferences. To improve context-sensitive recommendations, the navigation in the wiki is enhanced by injecting entry points and context menus into wiki articles. Text of wiki pages is analysed in order to identify references of ontology concepts of the type of persons, links to documents and organisational units. These references are highlighted and equipped with a context menu that learners can use to navigate the ontology. That is, they can choose among various options to navigate to representations of other ontology concepts that are related to the one mentioned in the text that they are currently reading. Thus, from within the context of their learning (i.e. while reading a wiki page), they can traverse relevant parts of the Learn PAd ontology to get broader insights.

Further, personalisation concepts are also based on the recognition of ontological concepts and on being able to bookmark them. Learners can decide to create an association between a bookmarked entity and the current context in which they encountered it. This leads to a process-oriented categorization of bookmarks that – when reviewed later by that person – will support process-based learning.

Another kind of recommendation is made based on case-based reasoning. Together with Marche Region we determined the characteristics of cases dealt with within a business process. We also determined similarity measures in order to find closed cases similar to a case a user/learner is actually working on. Implementation and evaluation was done on a small repository consisting of 10 cases provided by Marche Region. As setting up case description manually is time consuming, we did not enlarge the repository. In a real setting case, the descriptions would be automatically created by extracting the respective information out of case description, for example stored in legacy systems of the PA.

WP5 Publications during the reporting period

- Sanne, U., Witschel, H.F., Ferrari, A.& Gnesi, S. (2016). Ensuring action: identifying unclear actor specifications in textual business process descriptions. In Proceedings of the 8th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (KMIS), accepted for publication.
- Emmenegger, S., Hinkelmann, K., Laurenzi, E., Thönssen, B., Witschel, H. F., & Zhang, C. (2016). Workplace Learning - Providing Recommendations of Experts and Learning Resources in a Context-sensitive and Personalized Manner. In Proceedings of the 4th International Conference on Model-Driven Engineering and Software Development (MODELSWARD) (pp. 753–763). Rome, Italy.
- Emmenegger, S., Hinkelmann, K., Laurenzi, E., Martin, A., Thönssen, B., Witschel, H. F., & Zhang, C. (2016). An Ontology-based and Case-based Reasoning supported Workplace Learning Approach. Communications in Computer and Information Science. Springer.
- De Angelis, G., Pierantonio, A., Polini, A., Re, B., Thönssen, B., & Woitsch, R. (2016). Modelling for Learning in Public Administrations – The Learn PAd approach. In Domain-Specific Conceptual Modelling: Concepts, Methods and Tools. Springer.

WP5 Significant results

- Enhancement of the LearnPAd ontology for learning scorecard, i.e. KPI meta model and its model are formally represented in the web ontology language OWL
- Development of rules for KPI value and score calculation during system runtime based on gathered runtime data, the background knowledge provided by the domain ontology and on data from other integrated systems.
- Development of a new and enhanced navigation and personalization concept for content represented in a WIKI and formalized in an ontology

WP5 Deviation from workplan and corrective actions

Deviations from the planned work are explained by long absence of employees due to prolonged illness. Work was again taken over by senior researchers to comply with agreements but with the side effect that the hourly costs were higher than planned. On the other hand senior researchers were more efficient and thus able to achieve the planned objectives within the budget.

WP5 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D5.1	Models for Setting the Wiki	5	FHNW	8.00	7,52	M12	31/01/2015
D5.2	Semantics for the Wiki – First Iteration	5	BOC	13.00	8,29	M21	31/10/2015
D5.3	Experience Knowledge	5	FHNW	7.00	7,07	M24	31/01/2016

	Mechanisms and Representation						
D5.4	KPI Ontology and Learners Assessment Mechanisms	5	FHNW	14.00	13	M27	30/04/2016
D5.5	Semantics for the Wiki – Final Iteration	5	BOC	7.00	7,55	M27	30/04/2016

1.5 WP6- Simulation Based Learning

WP6 Objectives

The Simulation Based Learning work package concentrates on the construction of a simulation environment that also includes a monitoring feature providing feedbacks for the evaluation of learners, business processes, and associated learning contents.
During the third and last year of the project (from February to April 2016), the work package targeted to provide a release that covers the consolidation of the Infrastructure Simulation-based Learning. Precisely, it focuses on both the validation and the assessment of all the activities covered by Work Package 6.

WP6 Progress towards the objectives

Task 6.4: Consolidation of the Infrastructure Simulation Based Learning.

The main objective of this task is to address the implementation of the infrastructure, the validation and the assessment of all WP6 activities.
During the first quarter of third year of the Learn Pad project, we have continued the implementation in order to provide a release of the Business Process Simulation Engine and the monitoring environment of the Learn PAd platform with a focus on both validation and assessment of all activities covered by the work-package. This release includes single, mixed and collaborative simulation and integrates the final implementation of the Gamifications Mechanisms and all the APIs that go with them, the final implementation of a Robot framework for the simulation of civil servant behavior based on historical cases.

WP6 Publications during the reporting period

- Zribi, S., Calabrò, A., Lonetti, F., Marchetti, E., Jorquera, T., and Lorré, J-P. Design of a Simulation Framework for Model-based Learning. Modelsward 2016. Rome, Italy, February 19-21, 2016: 631-639
- Calabrò, A., Lonetti, F., Marchetti, E., Zribi, S., and Jorquera, T. Model-based Learning Assessment Management. Modelsward 2016. Rome, Italy, February 19-21, 2016: 743-752.
- Zribi, S., Jorquera, T., and Lorré, J-P. Towards a flexible gamification model for an interoperable e-learning business process simulation platform. I-ESA 2016. Guimaraes, Portugal. March 31st- April 1st 2016
- Calabrò, F. Lonetti, E.Marchetti and G. O. Spagnolo. "Enhancing Business Process Performance Analysis through Coverage-based" 10th International Conference on the Quality of Information and Communications Technology (QUATIC), IEEE 2016.
- Subramanian, V., Bertolino, A. Learning Path Specification for Workplace Learning based on Business Process Management. CSEDU (1) 2016: 172-180

- Subramanian, V., Bertolino, A. Monitoring of Learning Path for Business Process Models. AMARETTO@MODELSWARD 2016: 62-72

WP6 Significant results

- Release of the Learn PAd Simulation and Monitoring platform.
- Integration of the simulation as a part of the whole Learn PAd platform.

WP6 Deviation from workplan and corrective actions

NA

WP6 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D6.1	Learn PAd Simulation Environment: Specification and Design	6	CNR	12,50	14,14	M12	31/01/2015
D6.2	Learn PAd Simulation Environment: Refined Architecture and Prototype Implementation	6	LINAGORA	19.00	18,09	M21	31/10/2015
D6.3	Learn PAd Simulation Environment: Final Release	6	LINAGORA	12.00	14,36	M27	30/04/2016

1.6 WP7- Coordination Activities Supporting Integration

WP7 Objectives

Provide the methodology and tools to collaborate on the implementation of the Learn PAd platform and guarantee that the status of the platform is always working.

WP7 Progress towards the objectives

Task 7.1: Facilitate a Process of Continuous Release

The software build infrastructure and documentation established in periods 1 and 2 has had only slight revisions for improved stability, especially in the face of changes made by developers. The software development and release process has become stable and “second nature” to the developers and thus little education has been necessary.

Task 7.4: Enable Integration Testing Procedures

In the third period we have only done cursory work in finalizing the testing and verification of the functionalities defined in D2.1. As the testing methodology and infrastructure were already established for D7.3, no new significant changes were made.

WP7 Publications during the reporting period

NA.

WP7 Significant results

The platform has functioned well and the codebase has been available for developer contributions through the period. Developer contributions have been simplified by the automated build/deploy system as well as the Travis-CI based continuous integration.

WP7 Deviation from workplan and corrective actions

As this work-package was only active for 3 months during the 3rd period, most effort was concentrated on maintenance of procedures established in the first and second periods. No deviations are reported.

WP7 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D7.1	Project best practices, support tools and integration Plan	7	BOC	4.00	1,53	M6	31/07/2014
D7.2	Integration Tools and Systems	7	XWIKI	4.00	2,1	M9	31/10/2014
D7.3	Integration Testing Procedures – First Iteration	7	LINAGORA	8.00	8,04	M21	31/10/2015
D7.4	Integration Testing Procedures – Final Iteration	7	LINAGORA	7.00	6,23	M27	30/04/2016

1.7 WP8-Demonstrators

WP8 Objectives

- The demonstrators help the technical and research work packages to better focus their activities.
- The demonstrators permit to assess the applicability, acceptance and effectiveness of the proposed solution within real working contexts.

In the reporting period, the WP activity mostly focused on the final assessment studies.

WP8 Progress towards the objectives

Considering the project objectives, we refer to the tasks active in the third year that are the following.

- Task 8.2: EPBR: Contents Production
- Task 8.3: EPBR: Learning Platform Assessment

- Task 8.5: SUAP: Contents Production
- Task 8.6: SUAP: Learning Platform Assessment

More specifically:

- Task 8.2: EPBR: Contents Production
- Task 8.5: SUAP: Contents Production

These tasks were active during Months 25-27. Contents production activity was performed in order to consolidate the models and information already provided. All the model descriptions were revised involving expert end users.

- Task 8.3: EPBR: Learning Platform Assessment
- Task 8.6: SUAP: Learning Platform Assessment

The final validation was carried out considering the latest running instance of the Learn PAd platform available, which included all the Learn PAd components. The validation mainly involved the SUAP scenario. From a methodological point, in the final validation we submitted a questionnaire ex-ante to assess learners' competences and experiences, and a questionnaire ex-post to assess their eventual improvement of knowledge, skills and competence, acquired at the conclusion of a training session lasting two working weeks. The ex post questionnaire also aimed to survey the degree of user satisfaction and to verify their opinion as far usability, efficacy and completeness of the Learn PAD Platform. The final validation overall involved 60 users (30 learners were involved in using the Learn Pad platform and 30 learners, referring to as the matching control group, worked within another traditional e-learning platform called MARLENE). This followed the precise recommendations from Y2 review.

WP8 Publications during the reporting period

No significant results yet coming up in term of publications. A paper reporting the results from final assessment is planned.

WP8 Significant results

The activities have been concentrated on the validation preparation, running and reporting, according to the following results:

- Learning contents.
- End User feedback resulting from the final validation.

WP8 Deviation from workplan and corrective actions

It was originally planned to carry out a final validation with users on both SUAP and EPBR scenario. However, we instead concentrated all efforts for final validation only on SUAP. One reason was that the Y2 review report requested to collect a sufficient number of users in the final validation (30 + 30) to get statistically significant results and the number of EPBR users would be quite far from such target. Moreover, we considered risky to divide the consortium efforts and attention on two demonstrators in the relatively limited time available, and preferred to focus all attention in one study.

WP8 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D8.1	Demonstrators BP and Knowledge models	8	UNICAM	16.50	19,562	M12	31/01/2015
D8.1 addendum	User Perspective and Project Evaluation Strategies	8	UNICAM	NA	NA	M18	31/07/2015 (*)
D8.2	Platform Prototype Early Validation Results	8	UNICAM	4.00	9,2	M21	30/11/2015 (**)
D8.3	Demonstrators Populated Learning Platform	8	UNICAM	24.00	17,59	M24	31/01/2016
D8.4	Demonstrators Assessment	8	MARCHE	17.50	17,49	M33	31/10/2016

(*) Additional deliverable not included in DOW required in TRR
(**) The delivery date has been postponed to M22 with permission of Eu Officer

1.8 WP9 - Dissemination And Exploitation

WP9 Objectives

WP9 aims to

- disseminate Learn PAd results to target audiences – researchers, educators, public administrators, and software vendors;
- facilitate transfer of its technology for the interested parties.

Learn PAd plans to use the following means for achieving these objectives:

- publishing Learn PAd results via its website and various social networks;
- building a community around open source Learn PAd components;
- contributing model examples and improvement suggestions to BPMN and related modelling standards from OMG consortium;
- preparing Learn PAd e-learning content for facilitating take up of Learn PAd concepts, methodology and technological components;
- disseminating Learn PAd results at industrial and academic conferences and journals.

The work package is split into the following tasks:

- Task 9.1: Dissemination;
- Task 9.2: Standardization;
- Task 9.3: Community Building, Industrialization, and Exploitation.

WP9 Progress towards the objectives

During the third year, the focus was on dissemination (task 9.1), creation and adoption of exploitation strategy, exploitation process, identifying exploitation items, assessing TRL levels of software that was developed for exploitation items and community building (task 9.3). The overall progress of WP9 activities is pretty good. A more detailed description of progress of WP9 tasks can be found in the two deliverables produced by the WP at M33 that are D9.6 and D9.7. Here we only report a brief summary.

Task 9.1: Dissemination

Third year was also quite active in dissemination activities as the second one. The Consortium made many presentations and other dissemination activities, including presentations to several Municipalities and PA offices, as well as to scientific events (see D9.6).

Task 9.2: Standardization

Influential Learn PAd presentations were delivered by Dr. Darius Silingas (NME) and Prof. Knut Hinkelmann (FHNW) at Object Management Group (OMG) technical meeting in Berlin, Germany during the second year of activity (June 15-19, 2015). OMG acts a standardization body for modeling languages. The presentations initiated intensive and heated discussions and contributed to a currently ongoing initiative at OMG to integrate business modeling languages BPMN, CMMN, and DMN and provide better mechanisms for integrating various existing modeling languages into a single metamodel such as the Learn PAd metamodel. Accordingly, during the reporting period the consortium has worked on improvement of Learn PAd metamodel in order to prepare final integration version for business languages BPMN, CMMN, and DMN.

Task 9.3: Community Building, Industrialization, and Exploitation

Exploitation strategy/process and plan (defined in D9.3) was redefined/renewed after Y2 review. These changes were made in order have a concrete final process and plan of exploitation. The plan now covers on how the innovative Learn PAd approach and software platform will be introduced into the market and how it will generate business for Learn PAd project partners either working collaboratively or on individual bases. The plan includes the following elements: definition of a **value proposition** and **business use cases**, market analysis, which includes profiles of a **typical Learn PAd user** and **early Learn PAd adopter**, estimation of market size, assessment of Learn PAd platform, a **collaborative exploitation plan**, which emphasizes the process of **incremental and adaptive deployment** of Learn PAd approach and platform, and **individual exploitation plans** that reflect Learn PAd partners' interests to exploit specific Learn PAd ideas, software components or other artifacts in their business.

The major elements of Learn PAd exploitation strategy and plan are as follows:

- Value proposition of Learn PAd – is a promise of value to be delivered and acknowledged by Learn PAd solution. It is also defines how value (benefit) will be delivered and experienced.
- Target Market Assessment – defined profile of typical Learn PAd customer, estimated market size, made competitor analysis;
- Collaborative Exploitation Approach – renewed a high-level Learn PAd promotion & exploitation process with emphasis on lead generation and exploitation activities identifying performer roles, and exploitation items to be used in these activities;

- Shared exploitation items – items that are used in the collaborative exploitation approach and its process activities. Indicated Learn PAd partner(s) responsibility for each exploitation item. Made assessment of each exploitation item technology readiness
- Renewed plans for individual Contributions to Exploitation – defined expected individual partner contributions to the collaborative exploitation process, their performed roles, supervised exploitation items and additional individual exploitation intentions.

Started exploitation activities by collecting information about organizations that could be potential users of Learn PAd solution. Identified potential early adopters of Learn PAd solution. Organized open talks about e-learning needs in large organizations.

Dissemination activities served as an instrument for generating high quality leads to the exploitation process. It helped to establishing contacts with organizations who are interested in deploying Learn PAd approach and/or software platform. Since early adopters were mostly likely to appear within the region of one of Learn PAd partners, a special forum BPM in Public Sector was organized in Vilnius, Lithuania in order to attract Lithuanian PA organizations and disseminate Learn PAd approach. The event, which attracted over 100 participants mostly from public sector and presented BPM and Learn PAd as the future approach for organizing work managing knowledge in PA organizations. The forum featured a conference with presentations on the first day and a day of workshops, which included a workshop specifically addressing mapping process knowledge in BPMN and using Learn PAd approach to share this knowledge and facilitate collaboration. As a result, NME was able to initiate a consulting engagement with Lithuanian Police Department on establishing a business process modeling practice. It also resulted in a similar engagement with Lithuanian Post, which is non-PA organization, but it is a large state-owned organization, which faces similar challenges and is a potential early adopter of Learn PAd approach and software platform.

In order to sustain Learn PAd platform, the Learn PAd consortium needs to continue collaboration after the project ends. Learn PAd project members signed a Memorandum of Understanding (MoU), where they commit to further supporting their developed software components and provide assistance in case of potential exploitation cases. In a long run, such a collaboration will be sustainable only if there are sufficient business opportunities that generate revenue for Learn PAd partners. A study on Expected Impacts provided measurable impact objectives that indicate expectations of 10 early adopters and a direct income of €1,000,000 in the initial 5 years after the project end, and 100 adopters in the next 5 years with revenue of €5,000,000 within that period. This makes it clear that the first 5 years will be a critical live-or-die timeframe for Learn PAd approach and platform to prove its value in practice and ensure its sustainability. In case of successful initial 5 years period, there will sufficient growing business opportunities to sustain and further evolve Learn PAd approach and supporting software platform. However, an adoption of Learn PAd in some very large PA organizations such as European Commission (EC) itself would be a success factor that should ensure Learn PAd sustainability.

WP9 Significant results

- Presentation and demonstration of Learn PAd in conference and workshop BPMN in practice 2016. Practice of Process Management in Public Administration, Vilnius on April 27-28.
- Presentation of Learn PAd in tutorial BPM Europe 2016, London on June 13-16.
- Presentation, demonstration and verification of Learn Pap platform in relevant environment with getting feedbacks from stakeholders and users.
- Organized an open event around the project topics, which was featured as a special session within MODELSWARD conference in Rome (Feb. 2016). Sabine Moebs, the coordinator of closely related project: EAGLE EnhAnced Government Learning, also attended the event and participated to a panel. Coordinators of project EAGLE exchanged ideas and results during a panel in which they discussed similarities, differences and synergies of the two projects.
- Made significant progress in creating detailed plan of exploitation activities:
- Defined value proposition of Learn PAd
- Created profile of typical Learn PAd user and early adopters
- Made detailed market analysis
- Made competitor analysis
- Made assessment of Learn PAd components readiness
- Refined exploitation plan and Learn PAd adoption strategy
- Identified potential early adopters
- Renewed plans of individual exploitation.

WP9 Publications during the reporting period

The publications done during the third year are reported in the report relative to the WP to which they are more closely related and are not duplicated here.

WP9 Deviation from workplan and corrective actions

The overall progress is in general satisfactory. Overall dissemination activities reached primary plans. More precisely, some dissemination activities are little bit lower than planned (LinkedIn channel) but other dissemination channels reached the planned or even higher results.

WP9 List of deliverables

Del. no.	Deliverable name	WP #	Lead beneficiary	Estimated indicative person-months	Used indicative person-months	Planned delivery date	Actual delivery date
D9.1	Learn PAd Website	9	CNR	2.00	4,13	M3	30/04/2014
D9.2	Learn PAd Dissemination, and Initial Exploitation Plans	9	NO MAGIC	4.00	3,178	M3	30/04/2014
D9.3	Learn PAd Dissemination And Standardization Activities Report – First Iteration	9	NO MAGIC	4.00	9,173	M15	31/07/2015(*)
D9.4	Business oriented	9	BOC	2.00	2,14	M12	31/01/2015

	Learn PAd whitepaper						
D9.5	Technology oriented Learn PAd whitepaper	9	XWIKI	2.00	5,02	M24	31/01/2016
D9.6	Learn PAd Dissemination And Standardization Activities Report – Final Iteration	9	NO MAGIC	6.00	7,44	M33	31/10/2016
D9.7	Learn PAd Exploitation Plan – Final Iteration	9	NO MAGIC	6.00	10,52	M33	31/10/2016

(*) Following Y1 Technical Review, the due date of Deliverable D9.3 has been postponed to M18, since TRR asked to also include a first exploitation plan.

1.9 Deliverables and Milestones

While in the previous sections the individual WPs that were active during Y3 have reported the respective due deliverables, in following table we summarize altogether the deliverables due in the reporting period.

Del. no.	Deliverable name	WP	Lead beneficiary	Nature	Dissemination level	Estimated indicative PM	Used indicative PM	Delivered Yes/No	Delivery date
D2.4	Core Platform Implementation – Second Version	2	9	P	PU	18	**20,7**	yes	M27
D4.3	Quality Assessment Mechanisms Implementation	4	1	P	PU	10	**8,01**	yes	M27
D5.4	KPI Ontology and Learners Assessment Mechanisms	5	6	P	PU	14	**13**	yes	M27
D5.5	Semantics for the Wiki – Final Iteration	5	2	R	PU	7	**7,55**	yes	M27
D6.3	Learn PAd Simulation Environment: Final Release	6	3	P	PU	12	**14,36**	yes	M27
D7.4	Integration Testing Procedures – Final Iteration	7	3	R	PU	7	**6,23**	yes	M27
D8.4	Demonstrators Assessment	8	5	R	PU	17,5	**17,49**	yes	M33
D9.6	Learn PAd Dissemination and Standardization Activities Report – Final Iteration	9	4	R	PU	6	**7,44**	yes	M33
D9.7	Learn PAd Exploitation Plan – Final Iteration	9	4	R	CO	6	**10,52**	yes	M33
D10.4	Annual Progress and Financial Report – Final	10	1	R	PU	4	**5,01**	yes	M33
D10.5	Final report	10	1	R	PU	1	**1**	yes	M33

Finally, in the following table we also report the milestones of the reporting period, and comment about their assessment:

Milestone number	Milestone name	WPs involved	Delivery date from Annex I	Achieved Yes/No	Actual / Forecast Achievement date	Comments: Means of verification
4	Stable Release	WP2, WP3, WP4, WP5, WP6, WP7, WP8	M27	yes	M27	The platform has been released at M27th as Deliverable D2.4, with contributions from WP2-WP8. Further improvements have anyhow been performed until the platform has been used in validation with end users. Current version will be demonstrated at Y3 review.
5	Demonstrations, and Exploitation	WP8, WP9, WP10	M33	yes	M33	The planned validation has been completed (see D8.4), dissemination and standardization are reported (see D9.6), and exploitation strategy has been finalized (see D9.7). WP10 has completed reporting and final deliverables.

2 Project Management

This chapter summarizes project management activities during the reporting period, which are formally carried out under the following three tasks:

- T10.2 Project Assessment and Risk Management:
- T10.3 Admin and Financial Management
- T10.4 Quality Management

In the following we briefly report about progress regarding Project Assessment and Risk Management (Section 3.1), Admin and Financial Management (Section 3.2), and Quality Management (Section 3.3). Other specific management activities are reported in dedicated sections correspondingly to Project Web site (Section 3.4), Project meetings and PAB (Section 3.5) and finally Project Planning and status (Section 3.6).

2.1 Project Assessment and Risk Management

This task covers the governance procedures and measures put in place to monitor consortium performance and assure project progress. As already noted in Y2 report, the consortium has reached a strong integration and adequate structure, which is based on principle of practicality and responsibility sharing.

The detailed control and coordination of scientific and technological activities within each WP is demanded to the respective WP leaders. At global level, the Project Coordination Board (PCB), formed by the Project Coordinator and three more members: the Scientific Leader (Andrea Polini, Unicam), Technical Leader (Guglielmo De Angelis, CNR) and Exploitation Leader (Darius Silingas, NME), provided a lightweight yet effective approach for constantly monitoring project progress along all directions, ensuring proper coordination among workpackages and flexibly drawing decisions that did not require formal voting within the Project Management Board. In the last months of the project the Exploitation Leader has moved to a US site of the company, however transition has been prepared with advance time, so that exploitation strategy was not affected. Moreover, even from remote, the previous EL still follows project progress and provides support to the new appointed person (Tomas Skersys). We also continued the series of monthly conference call among WP leaders for those months in which a f2f meeting was not planned.

Also the communication tools in place in Y1 and Y2 have been confirmed: the internal WIKI platform has continued to be the primary means for exchange, management and update of working documents, deliverable development, meeting planning and reporting. Regular meetings have been held, mostly in electronic form (via Skype and Go-to-meeting platform), and also face-to-face according to the schedule planned in the Dow. A summary of Y3 meetings is provided in Section 3.5.

Most notable risk management action to report concerns the requested and obtained amendment to GA for extending project duration of 3 months, until M33. The PMB decided to apply for such extension following the advice obtained at Y2 review concerning the need for testing the developed platform with real users in PA contexts and assessing the

learning potential of the proposed solutions after recruiting a basis of 30+30 civil servants. The PMB considered that the time available until M30 was not sufficient for making proper planning of the experiment, recruiting a sufficient number of PA workers available for running the testing experiment, and finally drawing proper conclusions. Also, another practical risk to account for was that in June and July employees could be on vacation and hence this could have hindered the successful conduction of experiment.

The amendment was submitted in April 2016, and was officially accepted by EU in July. Project duration has thus been extended until end of October 2016, and deliverables foreseen at M30 all moved to M33.

2.2 Admin and Financial Management

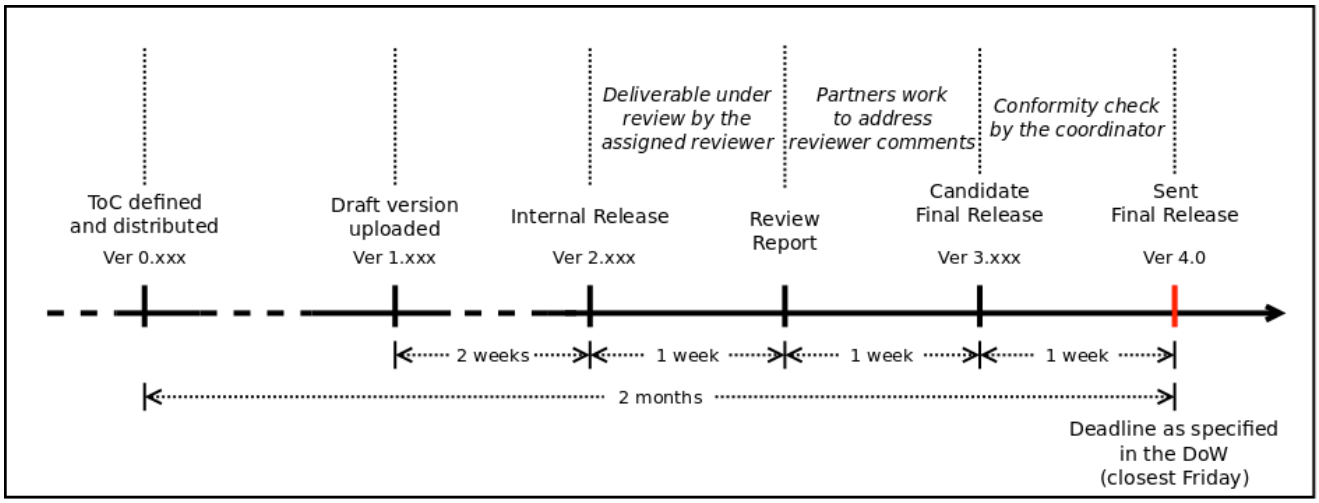
As from Consortium Agreement, the second tranche (50%) of interim payment has been distributed to each contractor after the second review.

The following table gives more details of the payment distribution:

LearnPAd II tranche of Y1 payment	*Y1*		*distributed on APRIL 2016*
	requested	*accepted from EC*	*50%*
CNR	210124	210124	**105062,00**
BOC	59943	59943	**29971,50**
Linagora	108813	108813	**54406,50**
No Magic	52323	52323	**26161,50**
Marche	59581	59581	**29790,50**
FHNW	145624	145624	**72812,00**
UNICAM	84536	84536	**42268,00**
UNIVAQ	114774	114774	**57387,00**
XWIKI	119834	119834	**59917,00**
Total	955552	955552	**477776**

2.3 Quality Management

Also for quality management we have confirmed the same process established in Y1, with a thorough internal review process of all deliverables (as illustrated in the figure below) and a final quality check by the project coordinator, helped by the scientific and technical leaders.



2.4 Project web site management

The public Learn PAd Web site is located at: http://www.learnpad.eu/
The page provides an overview of the Learn PAd project (i.e., introduces objectives, consortium, ongoing research) and is regularly updated with news on latest news and achievements and access links to latest public material released by the consortium (i.e., publications, training, software).

Open access to Learn PAd publications is given through the institutional repository PUMA managed by CNR ISTI library. A space in PUMA has been dedicated to Learn PAd project, and as soon as the partners upload their publications or reports, these are immediately accessible from the public web site.

It is planned to continue to keep the web site alive and updated also after project termination as part of future exploitation strategy.

2.5 Project Meetings

In order to reduce travel expenses, many technical meetings between partners were conducted via conference call; therefore, we report in the following tables the main meetings held during the current reporting period.

PMB and Scientific & Technical meetings

Meeting	Date / Organizer	Main objective
Scientific && Technical	Rome, 17 Feb 2016	▪ Review of status of activity, plans for next periods, and definition of scenarios to be demostrated at Y2 review
Review rehearsal meeting	Luxembourg, 5 April 2016	▪ Final rehearsal of review demonstrations and presentations
Scientific && Technical+PMB	Camerino, 10 May 2016	▪ PMB on review feedbacks and actions, tech. meetings to revise platform status
Scientific && Technical	Marsala, 11 July 2016	▪ Progress on preparation of validation, discussion of exploitation strategy, meeting with Marsala municipality

Review rehearsal meeting	Luxembourg, 9 November 2016	▪ Preparing final review

Other Scientific and Technical meetings

Date	Main objective
	▪ Several remote meetings, including monthly WP leaders meetings
Milano, March 2016	▪ Tech meeting between WP5 and PA representatives

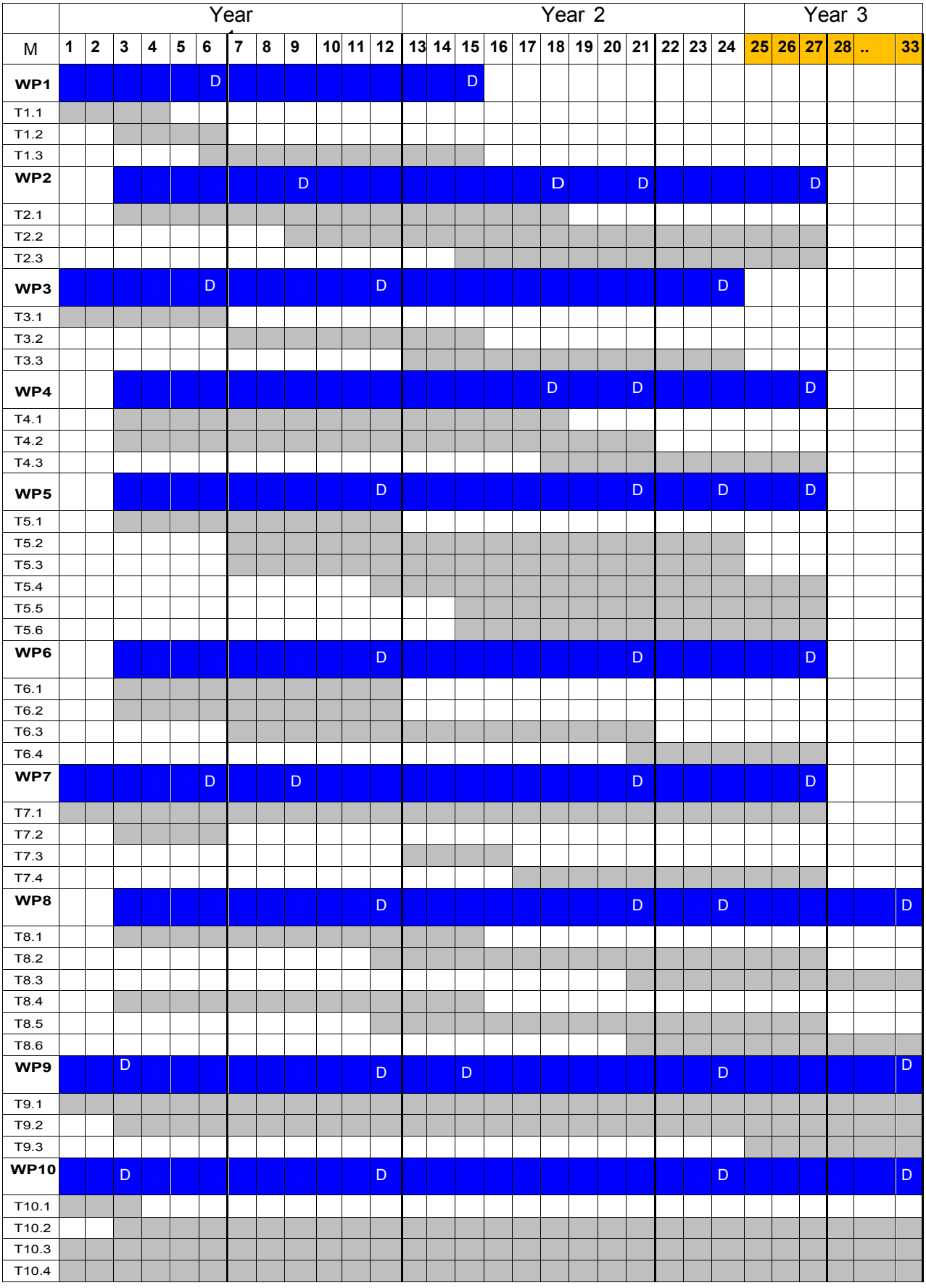
2.6 Project planning and status

The project timeline updated after the previously mentioned amendment is reported below.

While we write, the project is very close to completion, so planning can only be done in terms of future exploitation activities.

As a self-assessment we are all very proud of having released such a complex and innovative platform, and look forward to continuing collaboration among the partners, as the approach and the platform are certainly promising and worth of continuing development and extensions. As reported in D9.7, several potential avenues are pursued for individual and joint exploitation.

The results from validation with real users from PA (D8.4) provided several interesting feedback, but also feedback for improvements. Further experimentation is of course needed.


Year
Year 2
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 .. 33
WP1
T1.1
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T8.6
WP9
T9.1
T9.2
T9.3
WP10
T10.1
T10.2
T10.3
T10.4

3 Explanation of the use of the resources

This section provides an explanation of personnel costs, subcontracting and any major direct costs incurred by each beneficiary in accordance with the EC template for periodic reports.

Please notice that current cost reporting may be subject to change concerning the last month for which the data have been collected as advance estimates, to be able to provide the deliverable in advance of the review date.
Final adjustments will be done immediately following the review, where needed.

3.1 CNR

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	7395	1,14 PM of YR and 0,88 PM of Technician
WP4	Personnel costs	7928	0,38 PM of SR and 1,13 PM of YR
WP5	Personnel costs	1809	0,23 PM of YR and 0,27 PM of YR
WP6	Personnel costs	1301	0,06 PM of SR and 0,09 PM of YR and 0,10 PM of Technician
WP8	Personnel costs	4621	0,16 PM of SR and 0,41 PM of YR and 0,42 PM of YR
WP9	Personnel costs	4475	0,04 PM of SR and 0,37 PM of YR and 0,79 PM of YR
WP10	Personnel costs	51161	4,53 PM of SR and 1,48 PM of YR
	Subcontracting	2649	CFS cost and Catering PMB Rome February 2016
WP1-WP2-WP4-WP5-WP6	Travels(*)	5233	Roma Meeting Feb 2016(Calabrò Marchetti, Lonetti), Review Y2 Apr 2016 (De Angelis) , Marsala Meeting Jul 2016(Calabrò Marchetti, Lonetti), QUATIC Sept 2016 (Spagnolo)
WP9-WP10	Travels(*)	1608	Roma Meeting Feb 2016 (Bertolino), Review Y2 Apr 2016 (Bertolino), Camerino Meeting May 2016 (Bertolino), Marsala Meeting Jul 2016 (Bertolino)
	TOTAL DIRECT COSTS*	88180	

(*) Travel Costs do not include Review Meeting costs

3.2 BOC

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	619	2 persons involved (Efendioglu, Woitsch) for a total of 0,14 PM
WP5	Personnel costs	12.307	4 persons involved (Efendioglu, Falcioni, Albayrak, Woitsch)for a total of 2,45 PM
WP7	Personnel costs	801	2 persons involved (Efendioglu, Woitsch) for a total of 0,18 PM
WP9	Personnel costs*	13.189	6 persons involved (Efendioglu, Falcioni, Woitsch, Strobl, Martos, Rifatbegovic) for a total of 3,18 PM.
	Travels*	3.906	Falcioni: Rome LMCO (1.154), Efendioglu: Rome Meeting (487,80); Luxemburg Review (630,74); Rome Meeting (584,48); Marsala (1.048,81)
	Remaining direct costs	554	Depreciation-
TOTAL DIRECT COSTS*		31.376	

*) Minor adaptations caused by final review preparation and participation expected.

3.3 Linagora

Personnel, subcontracting and other major Direct cost items for the period 1			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	10 675	This charge includes senior architect and research engineer
WP6	Personnel costs	25 925	This charge includes senior architect, research engineer, product developers and Web designer
WP7	Personnel costs	2 745	This charge includes research engineer and developer
WP8	Personnel costs	6 100	This charge includes research engineer and developer
WP9	Personnel costs	9 559	This charge includes research engineer and developer

	Travels	7 806	- PMB Rome (02/16, Zribi andJorquera - Review Luxembourg (04/16, Jorquera) - PMB Camerino (05/16, Zribi and Jorquera) - PMB Marsala (07/16 Zribi and Jorquera).
	Other direct costs related to Dissemination	1 145	Fees conferences : LMCO, Rome (02/16, Zribi) and I-ESA, Guimaraes (March/April 2016, Lorré)
	TOTAL DIRECT COSTS	63 955	

3.4 NOMAGIC

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	14,775	3 persons (Januskevicius, Degutis, Silingas) involved for a total 4.86 PM
WP9	Personnel costs	17,980	3 persons (Januskevicius, Silingas, Skersys) involved for a total 4.80 PM
	Other direct costs:	10,474	Costs related to Dissemination activities (Organizing conference and workshops in Vilnius)
	Other direct costs: Travels	4,429	Travel costs related to Project meetings
	Other direct costs: Travels	1,767	Travel costs related to Dissemination activities (attending conferences in Rome and London)
	Remaining other direct costs	1,600	Final review meeting in Luxembourg travel costs
	TOTAL COSTS	51,025	

3.5 MARCHE

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP8	Personnel costs	27.867	0,4 PM of 1 Executive manager (Carota) + 2,0 PM of 2 Senior official (D3) (Carfagna, Sergiacomi) + 2,8 PM of 2 Senior Official (D1) (Amici, Giorgio) + 2,6 PM of 3 Official (D1) (Balducci, Casali, Togni)

WP9	Personnel costs	6.189	0,2 PM of 1 Executive manager (Carota) + 0,5 PM of 2 Senior official (D3) (Carfagna, Sergiacomi) + 0,3 PM of 1 Senior Official (D1) (Giorgio) + 0,5 PM of 2 Official (D1) (Balducci, Casali)
	Travels	5.385	Rehersal and technical Meeting (Roma) 17-18/02/2016 (Sergiacomi) Eur 233; Internal Meeting MAR – FHNW (Milano) 07/03/2016 (Balducci, Giorgio, Sergiacomi) Eur 359; Y2 Review Meeting (Luxembourg) 04-06/04/2016 (Sergiacomi) Eur 898; 8^ Meeting (Camerino) 10-11/05/2016 (Balducci, Sergiacomi) Eur 50; 9^ Meeting (Marsala) 10-14/07/2016 (Balducci, Giorgio, Sergiacomi) Eur 1.760; Y3 Review Meeting (Luxembourg) 08-11/11/2016 (Balducci, Sergiacomi) Eur 2.085;
TOTAL DIRECT COSTS*		39.441	

3.6 FHNW

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP4	Personnel costs	5175	0.02 PM of senior researcher + 0.38 PM of early researcher
WP5	Personnel costs	68,580	0.28 PM of senior researcher + 5.02 PM of early researcher
WP8	Personnel costs	3882	0.02 PM of senior researcher + 0.28 PM of early researcher
WP9	Personnel costs	6470	0.03 PM of senior researcher + 0.47 PM of early researcher
	Other direct costs (Travels)	4829	- Consortium meeting Rome, February 17-18 (Thönssen, Emmenegger, Laurenzi) and MODELSWARD conference Rome, February 19-21 (Laurenzi): EUR 2244 - Meeting with application partners Milano, March 7 (Thönssen): EUR 223 - Review meeting Luxembourg, April 4-5 (Thönssen): EUR 758 - Consortium meeting Camerino, May 10-11 (Witschel) EUR 599 - Consortium meeting Marsala, July 11-13 (Laurenzi) EUR 1006
TOTAL DIRECT COSTS*		88,936	*from travels and remaining direct costs 8% VAT was subtracted

3.7 UNICAM

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP8	Personnel costs	36.455	2,3 PM of Full Professor
WP9	Personnel costs	17.792	4,6 PM Temporary Assistant Professors
	Travels	6.530	Project Meeting Luxembourg, 4 - 6 April 2016 (Polini, Re) Project Meeting Marsala, 10-14 July 2016 (Polini, Re, Corradini) Review Preparation - Roma Re 17 - 18 - February 2016 (Re) Review Preparation + Modelsward, Roma - 16 - 19 Febbruary 2016 (Polini) Meeting Olten - 27- 29 May 2016 (Polini) Internal Meeting - Aquila 27 June 2016 (Polini) Meeting Camerino - 10-11-12 May 2016
TOTAL DIRECT COSTS*		60.777	

3.8 UNIVAQ

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	12.183	PMs related to 1 associate professor and 1 full professor for a total of 1,6PM
WP5	Personnel costs	8.140	PMs related to 1 associate professor and 1 full professor for a total of 1PM
WP8	Personnel costs	5.788	PMs related to demonstration activities - 2 associate professors for a total of 1.1PM
WP9	Personnel costs	4.831	PMs related to dissemination activities – 1 associate professor for a total of 0,8PM
WP2 WP5 WP8 WP9	Travels	3.604	Total ODC less than 15% of the personnel costs
TOTAL DIRECT COSTS		34.546	

3.9 XWIKI

Personnel, subcontracting and other major Direct cost items for the period 3			
Work Package	**Item description**	**Amount**	**Explanations**
WP2	Personnel costs	24848	2 Architects (0,4 PM) and 5 engineers (4,19 PM)
WP5	Personnel costs	11910	2 Architects (0,15 PM) 5 Engineers (2,05 PM)
WP6	Personnel costs	541	1 Architect (0,01 PM) 2 Engineers (0,09 PM)
WP7	Personnel costs	14075	2 Architects (0,49 PM) 5 Engineers (2,11 PM)
WP8	Personnel costs	7038	1 Architect (0,05 PM) 2 Engineers (1,25 PM)
WP9	Personnel costs	1678	1 Architect (0,1 PM) 2 Engineers (0,21 PM)
	Travels	2717	Meeting Roma (15/02/2016, Jean Simard): 521,34 Euros, Luxembourg Year 2 Review (07/04/2016, Jean Simard): 256,75 Euros, Meeting Camerino (17/05/2016, Jean Simard & Caleb James DeLisle): 1070,00 Euros, Meeting Marsala (14/07/2016, Caleb James DeLisle): 868,99 Euros
TOTAL DIRECT COSTS*		62807	

4 Appendix - Per Partner Progress Reporting

This section provides an overview of work performed by each partner together with related resource consumption, dissemination actions, attendance to meetings, and possible deviations.

4.1 CNR

Detailed per WP effort					
Workpackage/ Deliverable	Planned Effort	Planned MONTHS		Employed Effort	Cumulative Effort
	Whole Project	Start	End	This period (Y3)	Since start
WP1	2	1	15		**2,72**
D1.1	1				1,73
D1.2	1				0,99
WP2	2	3	27	**2,02**	**5,01**
D2.1	1				1,21
D2.2	0,5				1,38
D2.3	0,5				0,4
D2.4	0			2,02	2,02
WP3	0	1	24		
D3.1	0				
D3.2	0				
D3.3	0				
WP4	18	3	27	**1,51**	**18,01**
D4.1	4				4
D4.2	10				10
D4.3	4			1,51	4,01
WP5	10	3	27	**0,5**	**8**
D5.1	0				
D5.2	3				
D5.3	0				
D5.4	5			0,5	6
D5.5	2				2
WP6	10	3	27	**0,25**	**11,4**
D6.1	5				5
D6.2	3				4,4
D6.3	2			0,25	2
WP7	0	1	27		**0**
D7.1	0				

D7.2	0				
D7.3	0				
D7.4	0				
WP8	2	3	30	**1**	**2,8**
D8.1	1				0,83
D8.2	0				
D8.3	0				
D8.4	1			1	1,97
WP9	4	1	30	**1,20**	**4,41**
D9.1	2				2,01
D9.2	0				
D9.3	0,5				0,5
D9.4	0				
D9.5	0,5				0,7
D9.6	0,5			0,7	0,7
D9.7	0,5			0,5	0,5
WP10	15	1	30	**6,01**	**16,03**
D10.1	2				2
D10.2	4				4
D10.3	4				4,02
D10.4	4			5,01	5,01
D10.5	1			1	1

Main contributions during this period	
Workpackage/Task	**Action**
WP2/T2.2: Learn PAd : Implementation of the Core	Although CNR was not originally included in this task, in its quality of Learn PAd Technical leader, CNR has contributed actively to the evolution and refinement of design and implementation of the core platform, as well as in coordinating the architectural implementation.
WP2/T2.3: Architecture Assessment	Although CNR was not originally included in this task, in its quality of Learn PAd Technical leader, CNR has also contributed to Architecture Assessment wrt to functional and usability requirements.
WP4/T4.3: Feedback-based Quality Evaluation	We have completed the implementation of the quality assessment strategy. We have coordinated and contributed to Deliverable D4.3 that describes the implementation of the Model Verification component (MV), and of the Content Analysis component (CA).
WP5/T5.4: Measuring Learning Performance Using KPI Ontology	We contributed to D5.4 to the general process of identification and refinement of KPIs, with special focus on monitoring rules for assessment of learning via simulation (joint activity between WP5 and WP6).
WP5/T5.6: Strategies and Frameworks for the Evaluation of the	We contributed to D5.4 with a procedure for automated derivation of Questionnaires based on tool Mothia

Learners	
WP6/T6.4: Consolidation of the Infrastructure Simulation Based Learning	We contributed to D6.4 with final release of event-based monitoring infrastructure.
WP8/T8.3: Learning Platform Assessment	We contributed to pianification of the experimental validation of the platform, to study design and to evaluation of results.
WP9/T9.1: Dissemination	CNR group contributed actively to dissemination of project through various publications (XXX peer reviewed papers accepted). With Unicam coordinated the inclusion of a special session titled LMCO at Modelsward focused on Learn PAd topics. CNR is also responsible for maintenance of web site and its document repository PUMA.
WP10/Tasks 2,3,4	Performed regular tasks of assessment, resources and quality management. Supervised delivery and report productions..

Dissemination actions (articles, workshops, conferences etc…)

Journal articles:

Ferrari, A., Spoletini, P., Gnesi, S. “Ambiguity and tacit knowledge in requirements elicitation interviews” Requirements Engineering Journal. Vol. 21 N.3, pp333-355, ISSN: 0947-3602, Springer, 2016.

R. Cognini, F. Corradini, S. Gnesi, A. Polini, B. Re. Business Process Flexibility - A Systematic Literature Review with a Software Systems Perspective. Information systems frontiers. In press.

Proceedings:

- Calabrò, F. Lonetti, E.Marchetti and G. O. Spagnolo. "Enhancing Business Process Performance Analysis through Coverage-based" 10th International Conference on the Quality of Information and Communications Technology (QUATIC), IEEE 2016.
- Sarah Zribi, Antonello Calabrò, Francesca Lonetti, Eda Marchetti, Tom Jorquera, Jean-Pierre Lorré: Design of a Simulation Framework for Model-based Learning. MODELSWARD 2016: 631-639
- Antonello Calabrò, Francesca Lonetti, Eda Marchetti, Sarah Zribi, Tom Jorquera: Model-based Learning Assessment Management. MODELSWARD 2016: 743-752
- De Angelis, G., Ferrari, A., Gnesi, S., Polini, A. “Collaborative requirements elicitation in a european research project”. In Proceedings of the 31st Annual ACM Symposium on Applied Computing (pp. 1282-1289). ACM 2016.
- Ferrari A., Spoletini P., Gnesi S. “Ambiguity as a resource to disclose tacit knowledge” In: RE 2015 - IEEE 23rd International Requirements Engineering Conference (Ottawa, Canada, 24-28 August 2015). Proceedings, pp. 26 - 35. IEEE, 2015
- Ferrari A., Spagnolo G. O., Gnesi S., Dell'Orletta F.: CMT and FDE: tools to bridge the gap between natural language documents and feature diagrams. In: SPLC - SPLC '15 Proceedings of the 19th International Conference on Software Product Line (Nashville, TN, USA, 20-24 July 2015). Proceedings, pp. 402 - 410. ACM, 2015.
- Ferrari A., Bano M., Zowghi D., Gervasi V., Gnesi S. : Automated Service Selection Using Natural Language Processing. In: APRES 2015 - Requirements Engineering in the Big Data Era, Second Asia Pacific Symposium. (Wuhan, China, 12-20 October 2015). Proceedings, vol. 558 pp. 3 - 17. (Communications in Computer and Information Science, vol. 558). Springer Berlin Heidelberg, 2015.
- Venkatapathy Subramanian, Antonia Bertolino: Learning Path Specification for Workplace Learning based on Business Process Management. CSEDU (1) 2016: 172-180
- Venkatapathy Subramanian, Antonia Bertolino: Monitoring of Learning Path for Business Process Models. AMARETTO@MODELSWARD 2016: 62-72

Technical reports:

Corradini F., Ferrari A., Fornari F., Stefania G., Polini A., Re B., Spagnolo G. O. : Quality assessment strategy: applying business process understandability guidelines for learning. Technical report, 2015. Organized and Chaired Special Session on "Learning Modeling in Complex Organizations" LMCO 2016, 19 February, 2016 - Rome, Italy, within the 4th International Conference on Model-Driven Engineering and Software Development - MODELSWARD 2016 Workshop with Municipality of Marsala on July 13, 2016, to present Learn PAd project.
Main meetings attended
Meeting Roma 17-18 February (Bertolino, Gnesi, Ferrari, Spagnolo, De Angelis, Calabrò, Marchetti, Lonetti) Review Y2 April 2016, (De Angelis, Ferrari, Gnesi, Bertolino) Meeting Camerino, May 2016 (De Angelis, Bertolino, Ferrari, Spagnolo) Meeting Marsala , July 2016 (Bertolino, De Angelis, Calabrò, Lonetti, Marchetti) Review Y3, November 2016 (Bertolino, De Angelis, Calabrò)
Deviations from the planned work schedule/reasons/corrective actions/special attention required
The project was meant to terminate in July, and extension of three months has been requested and granted, which has requested further time especially for WP8 validation. However, the activity of WP2 has also continued for supporting continuous refinement and maintenance of the platform instantiation used for the experimental studies.
Planned actions beyond the period
After project conclusion, we will continue research in process-oriented learning along the directions of the project and will push exploitation with other consortium partners.

4.2 BOC

Detailed per WP effort					
Workpackage/ Deliverable	**Planned Effort**	**Planned Date**		**Employed Effort**	**Cumulative Effort**
	Whole Project	**Start**	**End**	**This period (Y3)**	**Since start**
WP1	6	1	15		**4,26**
D1.1	3				2,54
D1.2	3				1,72
WP2	5	3	27	***0,14***	***7,67****
D2.1	1				1,86
D2.2	1,5				4.52
D2.3	1				0,05
D2.4	1,5			0,14	1,25
WP3	8	1	24	***0***	***14,92***
D3.1	2				0,16

D3.2	2				9,79
D3.3	4				4,97
WP4	0	3	27	0	0
D4.1	0				0
D4.2	0				0
D4.3	0				0
WP5	8	3	27	***2,45***	***7,30****
D5.1	1			0	0,72
D5.2	2			0	1,69
D5.3	1			0	2,45
D5.4	1			-	
D5.5	3			2,45	2,45
WP6	5,5	3	27	***0***	***5,09***
D6.1	2				0,94
D6.2	1,5				2,29
D6.3	2				1,86
WP7	2	1	27	***0,18***	***1,15***
D7.1	1				0,33
D7.2	0,5				0
D7.3	0,5				0,64
D7.4	0			0,18	0,18
WP8	2	3	30	***0***	***0,88***
D8.1	1			-	0,83
D8.2	0			-	-
D8.3	1			-	-
D8.4	0			-	0,04
WP9	2	1	30	**3,18**	**5,28**
D9.1	0			-	
D9.2	0,5				0,04
D9.3	0				
D9.4	1				0,39
D9.5	0				1,67
D9.6	0,5			0,79	0,79
D9.7	0			2,39	2,39
WP10	0	1	30	0	0
D10.1	0				0
D10.2	0				0
D10.3	0				0

D10.4	0				0
D10.5	0				0

Main contributions during this period	
Workpackage/Task	**Action**
WP2	
T2.2.	• Technical Meeting Rome • Validation and Feedback of Demo Scenario • Bug Fixes • Contribution to Storyboard and Demo
WP5	
T5.5	• D5.5. contribution, workshops, feedback • Development Dashboard Building Block • Publishing Dashboard on ADOxx.org • Prototype Development and Demo Preparation • Installation Package for Design Prototype • Partner Meeting Rome • Review Meeting Luxemborg • Management issues booked on this open task
WP7	
T7.4	• Integration Issues with Design Prototype
WP9	
T9.1	• D9.5 contribution • FALCON paper contribution • ModTools Paper • PoEM Paper • Modelsward Journal
T9.3	• ADOxx.org Social Media and LearnPAd Community Work • Demo Support booked on this open task • Partner Meeting Marsala booked on this open task • Financial Figures and Project Planning booked on this open task • Validation and Exploitation Meeting

Dissemination actions (articles, workshops, conferences etc…)

- LMCO, Conference Paper, Rome, 19-21.02.2016
- Modelsward Springer, Journal Publication, 09.2016
- Domain Specific Conceptual Modelling, Book Chapter, Springer, 2016
- ModTools Workshop at EDOC Conference, Vienna, 05-09.09.2016
- PoEM Conference, Skövde, 08-10.11.2016

Main meetings attended

- Falcioni, Conference, LMCO 2016, Rome, 19-21.02.2016
- Efendioglu, Partner Meeting, Rome, 17-18.02.2016
- Efendioglu, Review, Luxemburg,04-06.04.2016
- Efendioglu, Partner Meeting, Rome, 09-12.05.2016
- Efendioglu, Partner Meeting, Marsala, 10-17.07.2016

Deviations from the planned work schedule/reasons/corrective actions/special attention required

• Small underspending in WP7 and WP8 based on no open tasks in those WPs, hence work was booked on other tasks although they belong to WP7 and WP8. The underspending in actual figures are minor. • Overspending in WP9 as the only open WP, hence project related work was booked on WP9, although other WPs have been
Planned actions beyond the period
n.a.

*) Totals are calculated with decimal figures and displayed with two digits only, rounding mistakes may happen in case when the sum of two digital rounded figures are different than the sum of the figures, rounded on two decimal. In that case the more precise latter is used.

**) Minor adaptations caused by final review preparation and participation expected.

4.3 LINAGORA

Detailed per WP effort					
Workpackage/ Deliverable	**Planned Effort**	**Planned Date**		**Employed Effort**	**Cumulative Effort**
	Whole Project	**Start**	**End**	**This period**	**Since start**
WP1	**2**	**1**	**15**	**0**	**2**
D1.1	1			0	1
D1.2	1			0	1
WP2	**9**	**3**	**27**	**1,75**	**9**
D2.1	2			0	2
D2.2	3			0	3
D2.3	1			0	1
D2.4	3			1,75	3
WP3	0	1	24		

D3.1	0				
D3.2	0				
D3.3	0				
WP4	0	3	27		
D4.1	0				
D4.2	0				
D4.3	0				
WP5	0	3	27		
D5.1	0				
D5.2	0				
D5.3	0				
D5.4	0				
D5.5	0				
WP6	**23**	**3**	**27**	**4,25**	**25**
D6.1	7				7
D6.2	9				9
D6.3	7			4,25	9
WP7	**8**	**1**	**27**	**0,45**	**7,1**
D7.1	0				
D7.2	1				1
D7.3	4				4

D7.4	3			0,45	2,1
WP8	**2**	**3**	**30**	**1**	**2**
D8.1	0				
D8.2	0				
D8.3	0				
D8.4	2			1	2
WP9	**2**	**1**	**30**	**1,567**	**2**
D9.1	0				
D9.2	0,5				
D9.3	1				0,333
D9.4	0				
D9.5	0,5				0,1
D9.6	0			1	1
D9.7	0			0,567	0,567
WP10	0	1	30		
D10.1	0				
D10.2	0				
D10.3	0				
D10.4	0				
D10.5	0				
Main contributions during this period					

Workpackage/Task	Action
WP2/T2.2: Learn PAd : Implementation of the Core	We have finalized the implementation of the several Simulation Bridge APIs. We have participated in the integration of several components of the platform.
WP2/T2.3: Architecture Assessment	We finalized the assessment of the collaborative workspace and the simulation component based on the scenario implementation.
WP6/T6.4: Consolidation of the Infrastructure Based Learning	- We ensure the role of WP6 leader. We prepared and animated several meetings and conference calls around T6.4 activities. - We finalized the implementation of the collaborative simulation session and the mixed simulation session. - We finalized the implementation of the Gamification Mechanisms and all the APIs that go with them. - We finalized the implementation of the Robot framework for the simulation of civil servant behavior based on historical cases. - We provided the release of the Learn Pad Simulation and Monitoring infrastructure. This release : - includes single, mixed and collaborative simulation - integrates the final implementation of the Gamification mechanisms and the Robot framework. - We finalized the integration of the simulation within the core platform. - We leaded and have contributed to the redaction of the WP6 third deliverable D6.3.
WP7/T7.1: Facilitate a Process of Continuous Release.	- We participated to several WP7's actions. - We have worked on the ensuring of the technical requirements for the integration of the monitoring component within the continuous release environment. - We finalized the technical integration of the Simulator and Monitoring as a single component within the Learn Pad Core Platform.
W7/T7.4: Enable Integration Testing Procedures.	We provided a summary on how to work with the test cases models files in order to quick start the platform for testing.
WP8/T8.3: EPBR: Learning Platform Assessment	- We provided technical support for the simulation part of EPBR use case. - We have participated on the refinement of the EPBR use case.
WP8/T8.6: SUAP: Learning Platform Assessment	- We provided technical support for the simulation part of SUAP use case. - We have participated on the refinement of the SUAP use case.

WP9/T9.1: Dissemination	- 3 research papers in International Conferences are published and presented - 1 book chapter is accepted and will be published.
WP9/T9.3: Community Building, Industrialization and Exploitation	- We started Learn Pad outcomes exploitation through industrial adoptions of Learn Pad results with some of our final clients such as *Berger Levrault* that works extensively with administrations. - We started the integration of Learn Pad results within *Open PaaS* which is a reliable social platform in the cloud built ton encourage collaboration and teamwork inside an easy and great user experience.

Dissemination actions (articles, workshops, conferences etc…)

- LMCO, Conference Paper, Rome, 19-21/02/2016
- MODELSWARD, Conference Paper, Rome 19-21/02/2016
- I-ESA, Conference Paper, Guimaraes 29/03 – 01/04/2016
- LMCO Springer, Book chapter, 2016

Main meetings attended

- Conference LMCO, Rome, February 2016
- Consortium meeting, Rome, February 2016
- Review, Luxembourg, April /2016
- Conference I-ESA, Guimaraes, March/April 2016
- Consortium meeting, Camerino May, 2016
- Consortium meeting, Marsala July, 2016

Deviations from the planned work schedule/reasons/corrective actions/special attention required

A small overspend of the planned efforts on Task 6.4 of WP6 as the project was extended and we contributed more than planned to provide the release of the Simulation and Monitoring infrastructure that is a central component. This also explains the small underspend in WP7/Task 7.4 because on the one hand at M27 (D7.4) the implementation of the different components of the platform did not vary significantly so no major revision was required for the Tests procedure, and then we concentrated efforts on T6.4 to achieve the planned objectives.

Planned actions beyond the period

4.4 NO MAGIC

Detailed per WP effort					
Workpackage/ Deliverable	Planned Effort	Planned Date		Employed Effort	Cumulative Effort
	Whole Project	Start	End	This period (Y3)	Since start
WP1	4	1	15		**1.6**
D1.1	1,5				0.8
D1.2	2,5				0.8
WP2	10	3	27	**4.86**	**8.76**
D2.1	1				1.7
D2.2	3				0.7
D2.3	1				1.5
D2.4	5			4.86	4.86
WP3	10	1	24		**7.4**
D3.1	2				1.74
D3.2	3				1.56
D3.3	5				4.1
WP4	0	3	27		
D4.1	0				
D4.2	0				
D4.3	0				
WP5	0	3	27		
D5.1	0				
D5.2	0				
D5.3	0				
D5.4	0				
D5.5	0				
WP6	0	3	27		
D6.1	0				
D6.2	0				
D6.3	0				
WP7	3	1	27		**0,3**
D7.1	1				0.2
D7.2	1				0.1
D7.3	1				
D7.4	0				
WP8	2	3	30		**1,99**

D8.1	1				1,2
D8.2	0				0.4
D8.3	1				0.39
D8.4	0				
WP9	8	1	30	**4.80**	**16.86**
D9.1	0				1.62
D9.2	1				1.2
D9.3	2				6.74
D9.4	0,5				1.0
D9.5	0				1.5
D9.6	2,5			2.50	2.50
D9.7	2			2.30	2.30
WP10	0	1	30		
D10.1	0				
D10.2	0				
D10.3	0				
D10.4	0				
D10.5	0				

Main contributions during this period	
Workpackage/Task	**Action**
WP2	T2.2: • Technical Meeting Rome • Validation and Feedback of Demo Scenario • Contribution to Storyboard and Demo • Assessment of architecture • Integration of MagicDraw and LearnPAd platform
WP5	T5.4: • Plugin development with Magic Draw • Feedback and contribution during partner Meeting Rome • Review Meeting Luxemborg
WP7	T7.4: • Contribution and feedback for D7.4
WP8	T8.4, T8.5: • Contribution to setup of the prototype used for the demo of second year and in the evaluation scenario • Review of process models and modelling the same models with MagicDraw plugin
WP9	T9.1: • Planned and performed dissemination activities. • Coordinated the final dissemination report and acted as main editor for D9.6 deliverable presenting Learn PAd Dissemination and Standardization Activities Report. • Took part in partner meetings presenting WP9 status

	and initiating necessary actions.
	• Organized event Forum BPM in Public Sector;
	• Took part in conference and work shop in BPM Conference in London;
	T9.3:
	• As WP leader coordinated the preparation of exploitation plan (D9.7);
	• Started preparation for exploitation activities by collecting information about organizations that could be potential adopters of Learn PAd solution;
	• Gathered requirements and organized open talks about e-learning needs in large organizations;
	• Renewed and refined Learn PAd exploitation strategy:
	  • Target Market Assessment – worked on identifying typical Learn PAd customer and make more detailed estimation of market size;
	  • Collaborative Exploitation Approach – created and take care for signing with all partners the Memorandum of Understanding (MOU). This MOU sets the terms and understanding among Learn PAd partners CNR, BOC, LIN, NME, MAR, FHNW, UNICAM, UDA, and XWIKI to jointly sustain and exploit the results of this project after it's finished;
	  • Assessed exploitation items – exploitation items and responsible partner where defined during second year. During the third year we assessed TRL of these items;
	Individual Contributions to Exploitation – renewed individual partner contributions to the collaborative exploitation process.

Dissemination actions (articles, workshops, conferences etc…)	
• Forum BPM in Public Sector, Vilnius, April 27-28, 2016 • Enabling Public Administration as a Service through Social BPM. BPM Conference, London, June 13-16, 2016	
Main meetings attended	
• Jovaldas Januskevicius, Conference LMCO 2016, Rome, 19.02.2016 • Jovaldas Januskevicius, Consortium Meeting, Rome, 17-18.02.2016 • Darius Silingas, Review, Luxemburg, 04-06.04.2016 • Jovaldas Januskevicius, Consortium Meeting, Camerino, 09-12.05.2016 • Darius Silingas, Tomas Skersys, Consortium Meeting, Marsala, 10-17.07.2016	
Deviations from the planned work schedule/reasons/corrective actions/special attention required	
Planned actions beyond the period	
Exploitation will take place according to the exploitation plan.	

4.5 MARCHE

Detailed per WP effort					
Workpackage/ Deliverable	Planned Effort	Planned Date		Employed Effort	Cumulative Effort
	Whole Project	Start	End	This period (Y3)	Since start
WP1	4	1	15		**4,0**
D1.1	1,5				3,8
D1.2	2,5				0,2
WP2	0	3	27		
D2.1	0				
D2.2	0				
D2.3	0				
D2.4	0				
WP3	0	1	24		
D3.1	0				
D3.2	0				
D3.3	0				
WP4	0	3	27		
D4.1	0				
D4.2	0				
D4.3	0				
WP5	0	3	27		
D5.1	0				
D5.2	0				
D5.3	0				
D5.4	0				
D5.5	0				
WP6	0	3	27		
D6.1	0				
D6.2	0				
D6.3	0				
WP7	0	1	27		
D7.1	0				
D7.2	0				
D7.3	0				
D7.4	0				
WP8	28	3	30	**7,8**	**29,0**

D8.1	8				10,6
D8.2	2				2
D8.3	11				8,6
D8.4	7			7,8	7,8
WP9	2	1	30	**1,5**	**2,2**
D9.1	0				0
D9.2	0,5				0,3
D9.3	0				0,2
D9.4	0				0
D9.5	0				0,2
D9.6	0,5			0,3	0,3
D9.7	1			1,2	1,2
WP10	0	1	30		
D10.1	0				
D10.2	0				
D10.3	0				
D10.4	0				
D10.5	0				

Main contributions during this period	
Workpackage/Task	**Action**
WP8	We went on refining and populating the platform with useful contents (law documentation, BP workflows and tasks information, real use-cases for simulation and recommendation, organizational and learning KPIs), both in italian and english language, related to the SUAP demonstrator, to be used in the final experimentation, assessment and review activities. We implemented the ex-ante and ex-post questionnaires that has been given to the 60 users involved in the final validation (based on two platforms: LEARN PAD and MARLENE, the e-learning regional system used by the control group). Then the survey results had been analyzed and summarized. We worked to configure and deploy into our cloud datacenter the ultimate systems on which the consortium implemented the final version of the platform. We finalized the D8.4 deliverable.
WP9	We helped disseminating the results of the project mainly: • communicating through our new institutional web site's thematic channel dedicated to the local Digital Agenda (http://www.regione.marche.it/Regione-Utile/Agenda-Digitale), and using the expected social media (posts and RTs on Twitter and Linkedin); • involving SUAP, municipalities and local bodies, particularly in the Marche region (as below described). Moreover we actively contribute in finalizing the D9.7 final

	exploitation plan (providing statistical data for PAs and civil servants in Italy and peculiar information to identify our individual exploitation actions and to fill the Consortium's memorandum of understanding MOU to jointly sustain and exploit the results of the project after it's finished).

Dissemination actions (articles, workshops, conferences etc…)

February

Internal meeting among the consortium: presentation of the current state of progress of the Learn Pad platform (on the occasion of the rehersal meetings in Rome).

March

Meetings with the SUAP Stakeholders and technicians from the Province of Ancona, Macerata, Pesaro about the simplification of User Interfaces for OSS services to enterprises

April

Demonstration of the platform content and UI to the officers of Monti Azzurri SUAP, to assess and populate with new material its sections, functionalities and pages (recommender, simulation, process browsing)

May

Presentation to people from Senigallia Municipality and Monti Azzurri Mountain Union of the revised BP structure about conference of services and inner interactions between SUAPs and Local/PA Third Parties, to be deployed in the new multi-users simulation

June

Explanation, arrangement and invitation of local PA and SUAP officers to join and organize the final evaluation to be held in september

July

Presentation of the Learn Pad project to the officers of the Municipality of Marsala (on the occasion of the 9th meeting)

September

Introductory seminars to platform features for the Learn PAd platform experimenters and end-users involved in the final validation

Main meetings attended

Y2 Review Meeting (Luxembourg) 05-06/04/2016 (Sergiacomi)

8^ Meeting (Camerino) 10-11/05/2016 (Balducci, Sergiacomi)

9^ Meeting (Marsala) 11-13/07/2016 (Balducci, Giorgio, Sergiacomi)

To be done: Y3 Review Meeting (Luxembourg) 09-10/11/2016 (Balducci, Sergiacomi)

Deviations from the planned work schedule/reasons/corrective actions/special attention required

None significant (except for the fact that the 3 months project extention required an extra unplanned effort of 1PM on WP8 and of 0,2PM on WP9)

Planned actions beyond the period

The Y3 review has been planned for the next 10th of november.

Then all the individual and collective actions defined in the exploitation plan will take place.

4.6 FHNW

Detailed per WP effort					
Workpackage/ Deliverable	Planned Effort	Planned Date		Employed Effort	Cumulative Effort
	Whole Project	Start	End	This period (Y3)	Since start
WP1	2	1	15	**0**	**1.6**
D1.1	1			0	0.375
D1.2	1			0	1.225
WP2	2	3	27	**0**	**2.475**
D2.1	1			0	1
D2.2	0,5			0	0.5
D2.3	0,5			0	0.5
D2.4	0			0	0.475
WP3	6	1	24	**0**	**4.2675**
D3.1	1,5			0	1.5
D3.2	2			0	2
D3.3	2,5			0	0,7675
WP4	4	3	27	**0.4**	**3.6**
D4.1	0			0	0
D4.2	2			0	0.3
D4.3	2			0.4	3.3
WP5	20	3	27	**5.3**	**16.52**
D5.1	2,5			0	2.5
D5.2	7			0	5.1
D5.3	5			0	3.12
D5.4	3,5			2.8	3,2
D5.5	2			2.5	2.6
WP6	0	3	27	**0**	**0.5**
D6.1	0			0	0
D6.2	0			0	0
D6.3	0			0	0.5
WP7	0	1	27	**0**	**0**
D7.1	0			0	0
D7.2	0			0	0
D7.3	0			0	0
D7.4	0			0	0
WP8	2	3	30	**0.3**	**1.575**

D8.1	0,5			0	0.5
D8.2	0			0	0
D8.3	0,5			0	0.5
D8.4	1			0.3	0.575
WP9	2	1	30	**0.5**	**1.1875**
D9.1	0			0	0
D9.2	0,5			0	0.3375
D9.3	0			0	0
D9.4	0,5			0	0.25
D9.5	0,5			0	0.1
D9.6	0,5			0.25	0.25
D9.7	0			0.25	0.25
WP10	0	1	30	**0**	**0**
D10.1	0			0	0
D10.2	0			0	0
D10.3	0			0	0
D10.4	0			0	0
D10.5	0			0	0

Main contributions during this period	
Workpackage/Task	**Action**
WP4	Contribution to further enhancements and evaluation of NLP algorithms for quality assessment, which were necessary for dissemination of results (Task 4.2)
WP5	Finalization of design and implementation of the learning scorecard and dashboard (Task 5.4 / 5.6); finalization of prototype and implementation of integration interfaces for ontology-enhanced browsing and personalisation in the Wiki (Task 5.5).
WP8	Contribution to setup of the prototype used in the evaluation scenario (Task 8.6)
WP9	Dissemination of scientific results via conference and journal papers (Task 9.1), planning of FHNW exploitation strategy (Task 9.3)

Dissemination actions (articles, workshops, conferences etc…)

Sanne, U., Witschel, H.F., Ferrari, A.& Gnesi, S. (2016). Ensuring action: identifying unclear actor specifications in textual business process descriptions. In *Proceedings of the 8th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (KMIS)*, accepted for publication.

Emmenegger, S., Hinkelmann, K., Laurenzi, E., Thönssen, B., Witschel, H. F., & Zhang, C. (2016). Workplace Learning - Providing Recommendations of Experts and Learning Resources in a Context-sensitive and Personalized Manner. In *Proceedings of the 4th International Conference on Model-Driven Engineering and Software Development*

(MODELSWARD) (pp. 753–763). Rome, Italy.

Emmenegger, S., Hinkelmann, K., Laurenzi, E., Martin, A., Thönssen, B., Witschel, H. F., & Zhang, C. (2016). An Ontology-based and Case-based Reasoning supported Workplace Learning Approach. *Communications in Computer and Information Science*. Springer.

De Angelis, G., Pierantonio, A., Polini, A., Re, B., Thönssen, B., & Woitsch, R. (2016). Modelling for Learning in Public Administrations – The Learn PAd approach. In *Domain-Specific Conceptual Modelling: Concepts, Methods and Tools*. Springer.

Main meetings attended

- Consortium meeting Rome, February 17-18
- Meeting with application partners Milano, March 7
- Review rehearsal and meeting Luxembourg, April 4-5
- Consortium meeting Camerino, May 10-11
- Consortium meeting Marsala, July 11-13

Deviations from the planned work schedule/reasons/corrective actions/special attention required

Deviations from the planned work are explained by long absence of employees due to prolonged illness. Work was again taken over by senior researchers to comply with agreements but with the side effect that the hourly costs were higher than planned. On the other hand side senior researchers were more efficient and thus able to achieve the planned objectives within the budget.

Planned actions beyond the period

Results from developments reported in D5.4 and D5.5 and the results of the LearnPAd evaluation concerning components contributed by FHNW will be disseminated in the scientific community.

In addition, exploitation will take place according to the exploitation plan

4.7 UNICAM

Detailed per WP effort					
Work Package/ Deliverable	**Planned Effort**	**Planned Date**		**Employed Effort**	**Cumulative Effort**
	Whole Project	**Start**	**End**	**This period (Y3)**	**Since start**
WP1	4	1	15		**4**
D1.1	1,5				1,5
D1.2	2,5				2,5
WP2	0	3	27		
D2.1	0				
D2.2	0				
D2.3	0				
D2.4	0				
WP3	0	1	24		
D3.1	0				

D3.2	0				
D3.3	0				
WP4	16	3	27		**16**
D4.1	12				15,5
D4.2	2				0,5
D4.3	2				
WP5	0	3	27	0	
D5.1	0				
D5.2	0				
D5.3	0				
D5.4	0			0	
D5.5	0			0	
WP6	0	3	27		
D6.1	0			0	
D6.2	0			0	
D6.3	0			0	
WP7	0	1	27		
D7.1	0			0	
D7.2	0			0	
D7.3	0			0	
D7.4	0			0	
WP8	19	3	30	**2,3**	**20,3**
D8.1	4,5				5
D8.2	2				6,5
D8.3	8				6
D8.4	4,5			2,3	2,8
WP9	2	1	30	**4,6**	**5,6**
D9.1	0				
D9.2	0,5				0,5
D9.3	0				0,5
D9.4	0				0
D9.5	0				0
D9.6	0,5			1,6	1,6
D9.7	1			3	3
WP10	0	1	30		
D10.1	0				0
D10.2	0				0
D10.3	0				0

D10.4	0				
D10.5	0				

Main contributions during this period	
Workpackage/Task	**Action**
WP8 – T8.3	- UNICAM contributed to the validation of the SUAP scenario. In particular, UNICAM employees have been considered to play the role of novice in the SUAP scenario.
WP8 – T8.6	- UNICAM run the final validation of the platform. It was also planned and organized from a methodological point of view. Data were elaborated and we infer from them final validation results
WP8 – T9.1	- UNICAM contributed to the dissemination activity with a particular focus on the research community.
WP8 – T9.3	- UNICAM contributed to the exploitation activity and definition of exploitation plan.

Dissemination actions (articles, workshops, conferences etc…)

- R. Cognini, F. Corradini, S. Gnesi, A. Polini, B. Re. Business Process Flexibility - A Systematic Literature Review with a Software Systems Perspective. Information systems frontiers, first on-line, Springer, pp. 1 - 29, July 2016.
- Guglielmo De Angelis, Alfonso Pierantonio, Andrea Polini, Barbara Re, Barbara Thönssen, and Robert Woitsch. Modelling for Learning in Public Administrations – The Learn PAd Approach. Domain-Specific Conceptual Modelling: Concepts, Methods and Tools. Dimitris Karagiannis, Heinrich C. Mayr, John Mylopoulos (Ed.)
- Presentation i-CiTies 2016 - Learn PAd: Collaborative and Model-Based Learning in Public Administrations - Panel presentation by Andrea Polini. "Riccardo Cognini, Flavio Corradini, Andrea Polini, Barbara Re:
- Business Process Feature Model: An Approach to Deal with Variability of Business Processes. Domain-Specific Conceptual Modelling: Concepts, Methods and Tools. D. Karagiannis, H. C. Mayr, J. Mylopoulos (Editors), 171 - 194, Springer, 2016.
- Antonia Bertolino, Guglielmo De Angelis, Andrea Polini, Darius Silingas: Learn PAd : Collaborative and Model-based Learning in Public Administrations. STAF Projects Showcase 2015: 9-17
- Guglielmo de Angelis, Alessio Ferrari, Stefania Gnesi, Andrea Polini. Collaborative Requirements Elicitation in a European Research Project. SAC2016

Main meetings attended

- Project Meeting Luxembourg, 4 - 6 April 2016 (Polini, Re)
- Project Meeting Marsala, 10-14 July 2016 (Polini, Re, Corradini)
- Review Preparation - Roma Re 17 - 18 - February 2016 (Re)
- Review Preparation - Modelsward, Roma - 16 - 19 February 2016 (Polini)
- Meeting Olten - 27- 29 May 2016 (Polini)
- Internal Meeting - Aquila 27 June 2016 (Polini)
- Meeting Camerino - 10-11-12 May 2016

Deviations from the planned work schedule/reasons/corrective actions/special attention required

Deviation related to Task 8.3 has been done. It is motivated by the need to reach significative numbers in the final validation. The number of employee would not been significativelly for inferring the real effectiveness of the learning approach.

Planned actions beyond the period

The main actions that will be undertaken by UNICAM refer to the project results exploitation.

4.8 UNIVAQ

Detailed per WP effort					
Workpackage/ Deliverable	Planned Effort	Planned Date		Employed Effort	Cumulative Effort
	Whole Project	Start	End	This period (Y3)	Since start
WP1	2	1	15	**0**	**2**
D1.1	1			0	1
D1.2	1			0	1
WP2	5	3	27	**1.6**	**5.6**
D2.1	1				1
D2.2	2				2
D2.3	1			0	1
D2.4	1			1.6	1.6
WP3	22	1	24	**0**	**22**
D3.1	2			0	2
D3.2	7,5			0	7.5
D3.3	12,5			0	12.5
WP4	0	3	27	0	0
D4.1	0			0	0
D4.2	0			0	0
D4.3	0			0	0
WP5	5	3	27	**1**	**5.1**
D5.1	2,5				2.5
D5.2	0				0.5
D5.3	0				0.5
D5.4	2,5			1	1.6
D5.5	0			0	0
WP6	2	3	27	**0**	**2**
D6.1	0			0	0
D6.2	1,5			0	1.5
D6.3	0,5			0	0.5
WP7	0	1	27	**0**	**0**
D7.1	0			0	0
D7.2	0			0	0
D7.3	0			0	0
D7.4	0			0	0
WP8	2	3	30	**1.1**	**2.1**

D8.1	0,5				0.5
D8.2	0				0.3
D8.3	0,5			0	0.3
D8.4	1			1.1	1
WP9	3	1	30	**0.8**	**3.2**
D9.1	0				0,5
D9.2	0,5				0,5
D9.3	0,5				0,9
D9.4	0				0
D9.5	0				0.5
D9.6	1			0.5	0.5
D9.7	1			0.3	0.3
WP10	0	1	30	0	0
D10.1	0			0	0
D10.2	0			0	0
D10.3	0			0	0
D10.4	0			0	0
D10.5	0			0	0

Main contributions during this period	
Workpackage/Task	**Action**
Task 2.2	In this activity UDA together with other members of the WP, provided the implementation and additional layer for integrating the transformation chain (model2model and model2text) within LearnPAd architecture
Task 5.4	UDA together to FHNW provided the method and metamodel structure (Dashboard) for measuring Learning Performance using defined KPI Ontology
Task 8.2	The contribution has been done in the verification of the model conformance "European Project Budget Reporting" with respect to the LearnPAd metamodel
Task 8.3	UDA, in the context of the EPBR scenario has contribuited to assess the platform and the related contents with respect to provided functionality in order to improve the user experience and learning goal
Task 9.1	The contribution in this task has been related to i) the presentation and publication of scientific paper in journal and conferences; ii) partial maintenance of the Learn PAd web site

Dissemination actions (articles, workshops, conferences etc…)
Francesco Basciani, Juri Di Rocco, Davide Di Ruscio, Ludovico Iovino and Alfonso Pierantonio - A Customizable Approach for the Automated Quality Assessment of Modelling Artefacts
Preliminary contacts with public institutions and enterpreneurs in the Abruzzo Region to disseminate the main results achieved by the project

Main meetings attended
05/04/2016 Luxembourg 10/05/2016 Camerino 11/07/2016 Marsala 09/11/2016 Luxembourg
Deviations from the planned work schedule/reasons/corrective actions/special attention required
No major deviations from the workplan.
Planned actions beyond the period
The planned actions to be taken are the following: WP3: Optimization and testing of the transformation from NME2ADOXX WP5: an effort will be done to keep the ontological structures aligned with the metamodeling architecture in order to keep the informational content of the modeling notations consistent; WP9: further dissemination activities consist in submitting and presenting papers about LearnPad achievements and participating at workshops discussing related topics.

4.9 XWIKI

Detailed per WP effort					
Workpackage/ Deliverable	**Planned Effort**	**Planned Date**		**Employed Effort**	**Cumulative Effort**
	Whole Project	**Start**	**End**	**This period (Y3)**	**Since start**
WP1	1	1	15		**1,5**
D1.1	0,5				0,5
D1.2	0,5				1
WP2	18	3	27	**4,59**	**18,99**
D2.1	2				2
D2.2	8,5				8,5
D2.3	1				1
D2.4	6,5			4,59	7.49
WP3	3	1	24		**2,9**
D3.1	0,5				0,5
D3.2	1,5				1,5
D3.3	1				0,9
WP4	5	3	27		**3,7**
D4.1	0				0
D4.2	3				3
D4.3	2				0,7
WP5	6	3	27	**2,2**	**6,5**

D5.1	2				1,8
D5.2	1				1
D5.3	1				1
D5.4	2			2,2	2,2
D5.5	0				0,5
WP6	3	3	27	**0,1**	**2,6**
D6.1	1,5				1,2
D6.2	1				0,9
D6.3	0,5			0,1	0,5
WP7	10	1	27	**2,6**	**9,35**
D7.1	1				1
D7.2	1				1
D7.3	3,5				3,4
D7.4	4,5			2,6	3,95
WP8	3	3	30	**1,3**	**3,2**
D8.1	0				0,1
D8.2	0				0
D8.3	2				1,8
D8.4	1			1,3	1,3
WP9	1	1	30	**0,31**	**0,86**
D9.1	0				0
D9.2	0				0,3
D9.3	0				0
D9.4	0				0
D9.5	0,5				0,25
D9.6	0				0
D9.7	0,5			0,31	0,31
WP10	0	1	30		**0**
D10.1	0				0
D10.2	0				0
D10.3	0				0
D10.4	0				0
D10.5	0				0

Main contributions during this period	
Workpackage/Task	**Action**
T2,2	Finishing touches on the Core Platform and support of component evolutions
T2,3	Assessment of the Core Platform and integrations
T5,2	Integration of recommendation in platform - evolution
T5,4	Support of KPI development and integration in platform

T5,6	Evolution of APIs to recommendation/evaluation component for data collection
T6,3	Implementation and integration support for simulation component
T7,1	Follow-up of the action in WP7
T7,4	Assessment of platform D2.4 release and evolution
T8,2	Support for testing of new models of EPBR
T8,3	Deployment of models of EPBR
T8,5	Support for testing of new models and supporting content for SUAP
T8,6	Deployment of models and supporting content for SUAP
T9,1	Blog article and twitter activity
T9,3	Initiation of discussions with prospects and formation of Exploitation Plans
Dissemination actions (articles, workshops, conferences etc…)	
Blog Posts (1) Twitter (2)	
Main meetings attended	
Roma, meeting, 15/02/2016; Luxembourg, Y2 Review 07/04/2016; Camerino, Planning meeting, 17/05/2016; Marsala, meeting, 14/07/2016	
Deviations from the planned work schedule/reasons/corrective actions/special attention required	
The most significant deviation is approximately 1 extra person-month spent on WP2, this was owing to the unforeseen needs raised by the real world testing and project extension. As this deviation was related to making the platform more flexible and user-friendly, it was decided that no corrective action would be needed.	
Planned actions beyond the period	
As per the joint and individual exploitation plans in WP9, we intend to work with other partners in the consortium in order to provide commercial service and support around LearnPAd and LearnPAd based products.	

5 Table Overview Person-Month Status (cumulative)

Act = number of person months consumed from the beginning of the project to the end of this period (from 01/02/2014 to 31/01/2016)
Plan = total effort planned for the project in the latest version of the description of work - annex I to the grant agreement

FINAL	WP1		WP2		WP3		WP4		WP5		WP6		WP7		WP8		WP9		WP10		Total	
	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan	act	plan
CNR	2,72	2	5,01	2	0	0	18,01	18	8	10	11,4	10	0	0	2,8	2	4,41	4	16,03	15	68,38	63
BOC	4,26	6	7,67	5	14,92	8	0	0	7,3	8	5,09	5,5	1,15	2	0,88	2	5,28	2	0	0	46,55	38,5
LINAGORA	2	2	9	9	0	0	0	0	0	0	25	23	7,1	8	2	2	2	2	0	0	47,1	46
NO MAGIC	1,6	4	8,76	10	7,4	10	0	0	0	0	0	0	0,3	3	1,99	2	16,86	8	0	0	36,91	37
MARCHE	4	4	0	0	0	0	0	0	0	0	0	0	0	0	29	28	2,2	2	0	0	35,2	34
FHNW	1,6	2	2,475	2	4,2675	6	3,6	4	16,52	20	0,5	0	0	0	1,575	2	1,1875	2	0	0	31,725	38
UNICAM	4	4	0	0	0	0	16	16	0	0	0	0	0	0	20,3	19	5,6	2	0	0	45,9	41
UNIVAQ	2	2	5,6	5	22	22	0	0	5,1	5	2	2	0	0	2,1	2	3,2	3	0	0	42	41
XWIKI	1,5	1	18,99	18	2,9	3	3,7	5	6,5	6	2,6	3	9,35	10	3,2	3	0,86	1	0	0	49,6	50
TOTAL	***23,68***	***27***	***57,505***	***51***	***51,488***	***49***	***41,31***	***43***	***43,42***	***49***	***46,59***	***43,5***	***17,9***	***23***	***63,845***	***62***	***41,598***	***26***	***16,03***	***15***	***403,37***	***388,5***