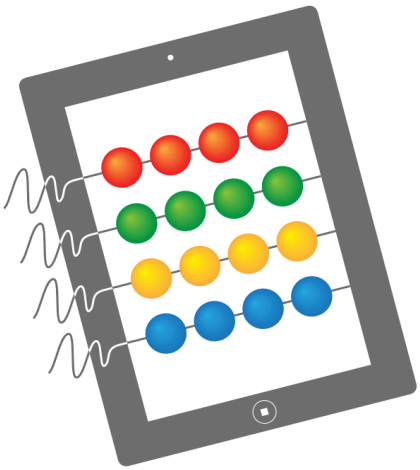
FP7 ICT STREP Project



Learn PAd

Deliverable D9.3

Learn PAd Dissemination and Standardization Activities Report – First Iteration

http://www.learnpad.eu

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Project Title	:	Learn PAd Model Based Social Learning for Public Administrations

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Abstract

This document presents a status report of the dissemination activities, planning how Learn PAd project achievements will be disseminated towards target audiences and how Learn PAd partners intend to exploit the project outcomes to obtain an effective impact. This is a first iteration version, revising what has been done in the first half of the project duration period and refining plans for the remaining months.

The dissemination strategy identifies target audiences, channels, and dissemination content. It also provides and revises Key Performance Indicators (KPIs) and their target values for M15 (now passed) and M30 that will be used to track and assess progresses. Moreover all involved partners present their own individual dissemination plan and how it will contribute to achieve the planned KPIs values.

The initial exploitation strategy briefly presents some common principles and the expected exploitation items, which will be refined during the project. Also the initial individual exploitation plans presented by each partner will be refined and better detailed during the course of the project.

Keyword list

Dissemination strategy, target audience, dissemination channel, key performance indicator (KPI), dissemination plan, exploitation strategy, exploitation item, exploitation plan,

collaborative exploitation approach, individual exploitation plans, technology readiness levels (TRL).

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Glossary, acronyms & abbreviations

Item	Description
BOC	BOC Asset Management GmbH
BPM	Business Process Management
CNR	Consiglio Nazionale delle Ricerche
EC	European Commission
EI	Exploitation Item
FHNW	University of Applied Sciences and Arts Northwestern Switzerland
KPI	Key Performance Indicator
LIN	LINAGORA GSO
MAR	Regione Marche
NME	No Magic Europe
OMG	Object Management Group
OSS	Open Source Software
PA	Public Administration
PTC	Project Technical Committee
R&D	Research and Development
UDA	University of L'Aquila
UNICAM	University of Camerino
WP	Work package
XWIKI	XWiki SAS
TRL	Technology readiness levels

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1. Introduction

1.1. Purpose of This Deliverable

This document provides an intermediate assessment of the Learn PAd project dissemination achievements towards the target audiences. It also presents the initial exploitation strategy and the plans according to how Learn PAd partners, both jointly and individually, intend to exploit the project outcomes in order to reach the estimated impacts. Final dissemination achievements will be assessed and reported in Deliverable D9.6 (due at M30), while the final revised exploitation plan will be presented in Deliverable D9.7 (due at M30).

Deliverable D9.3 was originally planned for M15. However, after the project annual review there has been an explicit request from the reviewers to add a chapter addressing exploitation strategy and goals, and the deliverable was rescheduled for M18.

1.2. Structure of This Deliverable

The deliverable is organized as follows. Dissemination strategy, dissemination performance assessment, targets refinement and plans for future dissemination activities are provided in Chapter 2. Chapter 3 provides information about standardisation activities. Learn PAd exploitation strategy, vision and individual exploitation plans are provided in Chapter 4. The deliverable is concluded in Chapter 5.

2. Dissemination Activities Report

2.1. Dissemination Strategy

The dissemination strategy defines how Learn PAd communicates the project results towards the target audiences via various channels, using dissemination content expressly prepared for that specific channel(s) and audience(s). The initial dissemination strategy was defined in Deliverable D9.2: *Learn PAd Dissemination, and Initial Exploitation Plans*, and the actual strategy follows the same track. According to that strategy, Learn PAd will be disseminated through identified channels to the following target audiences, which may benefit from Learn PAd results:

- **Public Administrations** (PAs) – adopt a better learning and training-on-the-job solution leading towards service effectiveness, efficiency, clarity and agility;
- **Large business organizations** – adopt a better learning and training-on-the-job solution leading towards service effectiveness, efficiency, clarity and agility (similarly to PAs);
- **e-Learning product vendors** – adopt model-based approaches in their product development and deployment;
- **Modelling product vendors** – exploit the use of models for e-learning purposes;
- **Consultants (BPM and e-Learning)** – adopt ideas and tools in service offerings;
- **Universities** – adopt Learn PAd ideas and tools for education purposes, especially in their interdisciplinary courses.

Concerning the research results in terms of advances to state of knowledge, these will be distributed through the typical academic dissemination channels (conferences, journals, talks) to the most adequate community. We mainly foresee interesting results in software modelling and model-driven development, in BPM methodologies including ontology, simulation and monitoring, as well as in tools and techniques for technology-enhanced learning and learners' assessment.

Deliverable D9.2 also provided dissemination performance plans with specific KPIs for every considered dissemination channel (see *Table 1*). This report will assess and show the progress of dissemination activities according to that initial dissemination performance plan. The report allows us to identify dissemination activities that need more attention in terms of performance or even advises some potential changes in targets to be achieved. By following an active improvement[1] approach to measuring and reporting, the final targets could be increased or decreased if the assessment report shows big disalignments from the intermediate targets. This document also provides information about future dissemination plans of all the consortium partners.

Final Learn PAd dissemination performance will be assessed and reviewed in the periodic Project Management Board meetings (every 6 months) and reported officially in the final deliverable at the end of the project (D9.6 due at M30).

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[1] Massy, Jane, and Jeremy Harrison. "Innovations in measuring the impact of human capital investments and projects." *"It Takes Two To Tango": Our Experiences On The Value Of University-Industry Collaborative Research Partnerships In The United Arab Emirates And The MENA Region 19*: 119.

Dissemination channel	Key Performance Indicator (KPI)	Target at M15	Target at M30
Project website	Unique visitors	2000	5000
Media	Number of international press releases	2	4
Twitter	Tweets Followers	500 50	1000 100
LinkedIn	Group Members Interactive Discussions	60 30	100 50
SlideShare	Shared Presentations Views (accumulated)	5 1000	10 3000
Academic conferences	Papers Keynotes Co-organized workshops Attendees in co-organized workshops	8 1 0 0	16 2 2 50
Practitioner conferences	Presentations	3	8
Research journals	Scientific Papers	1	4
Standardization bodies (OMG)	Presentations	1	2

Table 1. Dissemination Performance Plans

2.2. Dissemination Performance Assessment and Targets Refinement

The dissemination performance plans are provided in *Table 1*. For dissemination progress planning and tracking, a Learn PAd dissemination dashboard has been created. All consortium partners use this dashboard for regular reporting of dissemination status and for planning future dissemination activities. The dissemination dashboard allows achieving a high degree of transparency about performance status and an effective collaborative planning of dissemination activities in the consortium. Progress and corrective actions related to dissemination activities are discussed according to this dashboard in partners' quarterly meetings. This dashboard is also used for dissemination performance assessment.

The present deliverable assesses dissemination performance from the beginning of the project until M18. Initial targets were created for M15. As deliverable release was postponed following project review recommendations, the dissemination performance is now assessed for M18. *Table 2* shows what results were achieved in each dissemination channel. Many dissemination performance targets have been reached, some targets have been exceeded,

but there are still some dissemination channels where dissemination progress needs to be improved. In *Table 2*, the dissemination achievements that fall below intermediate targets at M18 in *Table 2* are coloured in red and the ones that are in line with or exceeding intermediate target are coloured in green.

Playing an active monitoring of dissemination activities since the beginning, we found that some dissemination channels are performing well and dissemination performance is better than planned for M15:

- **Unique visitors** (Project website) - the target for M15 was 2000. At present we have more than 3500 website visitors. It means that dissemination performance for this channel has been met and exceeds M15 targets (see *Table 2*). More detailed analysis and graphs about web visitors counting and changing are provided in Chapter *2.3.1 Project Website Dissemination Channel*.
- **Presentations** (Standardization bodies (OMG)) – consortium planned to prepare two presentations at OMG technical meetings. It was planned to make one presentation to M15 and second to M30. This target was already achieved at M18: we have made two presentations at an OMG technical meeting. More about these presentations can be found in Chapter *3 Standardization Activities Report*.

On the other hand, there are some dissemination channels for which additional effort is needed in order to have visible progress in achieving dissemination performance targets. However, based on our observations and discussions, we think that these channels are not very effective and we believe it is more useful to spend more time and effort on higher performance and higher impact dissemination. By assessing the dissemination performance and by monitoring the effort spent for these activities, the consortium intends to identify which dissemination targets need to be decreased.

At the time of writing the number of international press releases and the number of interactive discussions on the LinkedIn social network seem to be the two KPIs whose targets should be lowered based on the following reasoning.

- **Number of international press releases** (Media channel) - we supposed that press releases would be a powerful tool for generating leads to be used for exploitation. If we want to get good leads we need to have useful and consolidated exploitation content that could be presented with press release. However this content will be prepared not earlier that at M24. It means that it is better to make press release after M24 till the end of project at M30. So we suggest decreasing target number of international press releases from 4 to 2 (see *Table 2*). International press release is a rather expensive investment and we do not see any good reasons to make it until we do not have mature exploitation items.
- **Interactive Discussions** (LinkedIn) - the effort spent on increasing LinkedIn discussions and achieved results show that dissemination performance of this channel is not so effective as we have expected. Our initial estimation was based on our belief that LinkedIn will be quite popular space for discussions about knowledge sharing and e-learning in PA's sector. We were expecting to have new topics and new discussions every second week. Active monitoring shows like this initial estimation of 50 discussions in LinkedIn was too optimistic: reality shows that initiation of new discussions has some inertia associated with Learn PAd content. We have made some conclusions and have expectations that creation of more mature content, suitable for initial exploitation, will boost initiation of discussions in LinkedIn space. Mature exploitation content will be available at M24. So, we have decided to decrease the target of interactive discussions from 50 to a more realistic number of 20 (see *Table 2*).

Dissemination channel	Key Performance Indicator (KPI)	Target at M15	Fact at M18	Original Target M30	New Target M30
Project website	Unique visitors	2000	**3500**	5000	5000
Media	Number of international press releases	2	**0**	4	**2**
Twitter	Tweets Followers	500 50	**660** **78**	1000 100	1000 100
LinkedIn	Group Members Interactive Discussions	60 30	**78** **7**	100 50	100 **20**
SlideShare	Shared Presentations Views (accumulated)	5 1000	**6** **730**	10 3000	10 3000
Academic conferences	Papers Keynotes Co-organized workshops Attendees in co-organized workshops	8 1 0 0	**8** **1** **0** **0**	16 2 2 50	16 2 2 50
Practitioner conferences	Presentations	3	**4**	8	8
Research journals	Scientific Papers	1	**1**	4	4
Standardization bodies (OMG)	Presentations	1	**2**	2	2

Table 2. Dissemination Performance Dashboard

The channels of SlideShare is also underperforming but we think that Learn PAd consortium needs to increase effort on this channel and generate more views. Thus we do not change the target KPI value for M30 – at least 3000 views on shared Learn PAd slides is still the target for M30.

The chapter below will provide detailed information about dissemination achievements in all the dissemination channels.

2.3. Detailed Dissemination Channel Performance Analysis

Each sub chapter for each medium and dissemination channel is organized in the following way (if applicable):

- **Significant achievements in dissemination** - provides information about significant dissemination activities results achieved by Learn PAd consortium;
- **Publications during the reporting period** - provides information about papers, keynotes, presentations and workshops that have been prepared and delivered by Learn PAd consortium partners until M18;
- **Overview of events where publications have been made** - provides an overview of conferences where papers, keynotes, presentations, and workshops were presented;
- **Ongoing dissemination activities** - provides information about ongoing dissemination activities where Learn PAd consortium members are working at present.

2.3.1. Project Website Dissemination Channel

Significant achievements in dissemination:

- Created and launched Learn PAd Website: http://www.learnpad.eu;
- Learn PAd visited by 3500 unique visitors:
  - About 120 unique visitors visited http://www.learnpad.eu from page http://www.xwiki.com
- Reached more than 9300 page views;
- Prepared brochures and business cards presenting Learn PAd:
  - http://www.learnpad.eu/media/flyerLearnPAd.pdf
  - http://www.learnpad.eu/media/bcLearnPAd.pdf

Google analytics statistics shows that number of Learn PAd web page visitors are growing all the time see Figure 1.1.

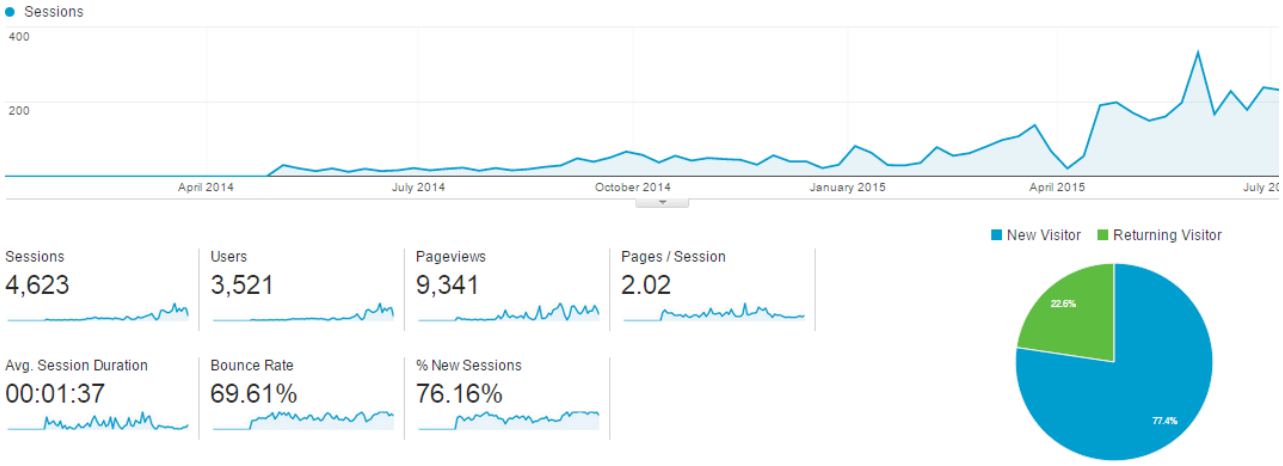

Figure 1.1 Overall Web Pages Statistics

Significant growth is seen from February 2015 and till now visitors amount is still growing. We identified as a good sign that the number of new visitors is three times larger in comparison with returning ones. It means that interest in Learn PAd is quite good and a dissemination activity performs well. The initial target of web page visitors was 2000 for M15. We have reached this target and the graphical representation shows that there could be a lot of potential of user's growth in future, as a trend. These facts reassure us that Learn PAd dissemination is going quite well.

Google analytics also provide more statistical views about Learn PAd web pages consulting. In *Figure 2.1* you can find a distribution of web visitors according to the countries from which Learn PAd pages were accessed.

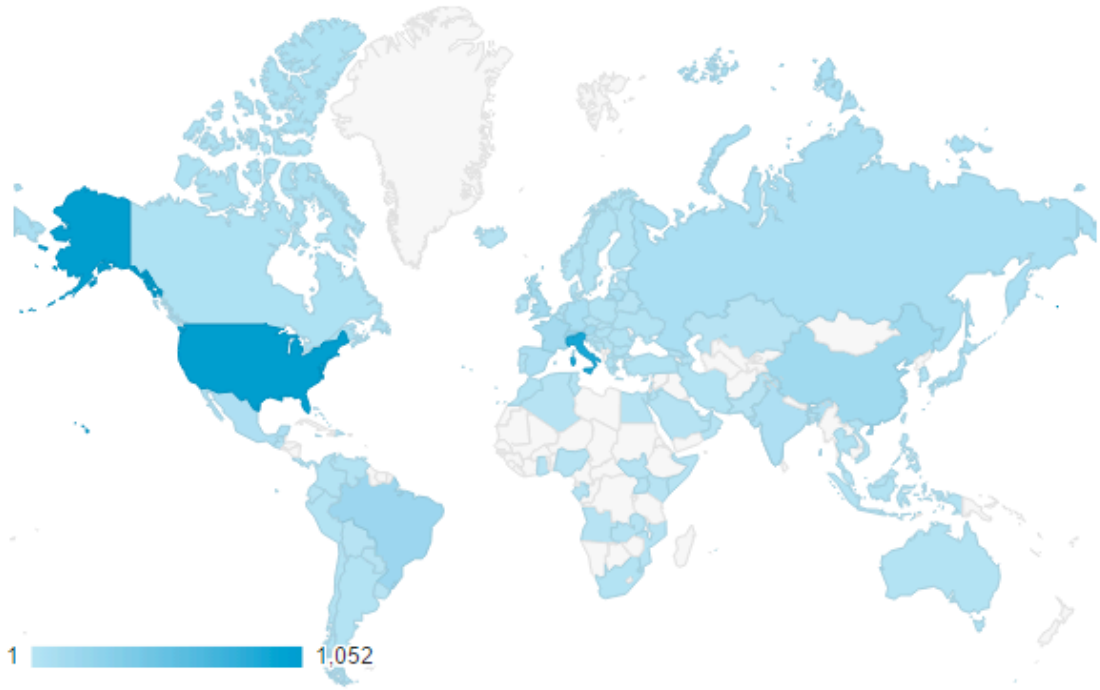

Figure 2.1 Web Pages Accessed from Countries (Geographic Representation)

Information in *Figure 2.1* is quite interesting and it shows that the biggest number of Learn PAd page visitors is from United States of America. There are also other non-European countries hosting users interested in Learn PAd project. Detailed statistics of top 10 countries are shown in *Figure 3.1*. In *Figure 3.1* third line has description (not set). Google analytics didn't resolved country from what visitors opened Learn PAd page. We have only statistics but don't know country.

	Country	Sessions	% Sessions
1.	United States	1,116	24.14%
2.	Italy	986	21.33%
3.	(not set)	494	10.69%
4.	Switzerland	203	4.39%
5.	Brazil	182	3.94%
6.	China	172	3.72%
7.	France	139	3.01%
8.	Austria	131	2.83%
9.	United Kingdom	121	2.62%
10.	Lithuania	87	1.88%

Figure 3.1 Web sessions from Countries (tabular representation)

Statistics about sessions of web page visitor's show that Learn PAd project could be quite interesting also in other non-European countries and it means a possible opportunity for future exploitation outside scenarios.

2.3.2. Media Dissemination Channel

At present we have not yet made any press release for Learn PAd. The main reason is the current lack of mature enough exploitation content suitable for follow up activities with leads generated from such a dissemination channel, which is very expensive to use. We identified that we are performing very well with dissemination in such channels as web site, conferences and so on, and these channels can already be useful to spread the news of upcoming releases of Learn PAd results, while we preparing content ready for exploitation and for an impact on media channels.

For such reasons, as previously illustrated, we have decided to decrease the number of press releases from 4 to 2. These will be made in future: one press release could be done at M24 and another at M30.

2.3.3. Social Networks Dissemination Channel

Significant achievements in dissemination:

- All partners are quite active in Twitter. We have been making many tweets about Learn PAd, e-learning, training on the job, collaborative platforms, business process modelling, and so on. Moreover we succeeded in re-tweeting a lot of interesting information about related themes from other sources.
- A group of discussions in LinkedIn has been created, named “Public Administration as a service”. See Group: https://www.linkedin.com/grp/home?gid=6661961
- Learn PAd content disseminated through Slide Share are available at http://www.slideshare.net/ProjectLearnPAd
- XWiki launched xwiki-labs, a research project where XWiki SAS itself and many other stakeholders, developers and partners are jointly participating in many open source and collaborative projects. Learn PAd is now part of it (https://labs.xwiki.com/). Moreover XWiki uses its blog for Learn PAd dissemination http://www.xwiki.com/en/Blog/
- Marche Region has used their local accounts on Twitter and LinkedIn (as well as their mailing lists) to share the possibility and opportunity for civil servants and public employees to contribute to a survey about users learning needs and issues and to stay informed and join innovative training methods.
- BOC used its own ADOxx.org LinkedIn group (https://www.linkedin.com/grp/home?gid=5092201) for Learn PAd dissemination. In this group they have started some announcements regarding the development of the modelling environment in Learn PAd.
- Some active discussions have been started on the LinkedIn project group, with focus on the BOC core competences; BOC has also used its ADOxx.org LinkedIn group to start the same announcements regarding the development of the modelling environment in Learn PAd.
- BOC used ADOxx.org twitter account to tweet about the completion of their prototypes.
- Learn PAd results have been published by BOC’s so-called “developer space” at the ADOxx.org community portal, a portal with more than 500 developers and more than 1.800 interested users. Learn PAd results are continuously uploaded and used for ADOxx trainings (http://www.adoxx.org/live/web/learnpad-developer-space/space). At the same time a banner at the welcome page points to the Learn PAd results.

2.3.4. Academic Conferences Dissemination Channel

Significant achievements in dissemination:

- A keynote presentation about scientific innovative approaches to monitoring has been given at *Jornadas Sistedes* on Sept. 18th, 2014, focusing on BPMN based monitoring and presenting how it has been developed within Learn PAd.
- A presentation concerning the Learn PAd project has been given at Lero, Irish Software Research Center, Limerick (http://www.lero.ie) on Dec. 1st, 2014.
- Two papers have been published at two workshops of the 22nd IEEE International Conference on Requirements Engineering (RE'14, August 25-29, 2014, Karlskrona, Sweden).
- A project poster has been presented at LET'S 2014 in Bologna on Sept. 2014.
- UDA presented the project during the lectures on Model Driven Engineering.
- One paper has been published at AMT@Models2014 (Valencia, SPAIN, 28 September-3 October 2014)

Publications during the reporting period:

- Polini A. "Learn PAd: Modeling for Learning in Public Administrations" - eChallenge 2014 "Workshop 6a: Applications, Tools and Technology for Conceptual Modelling and Semantics"

- Cognini R., Corradini F., Polini A., Re B. : Modelling Process Intensive Scenarios for the Smart City. In: e-Gov - International Conference on e-Government (Dublin, Ireland, 2-4 September 2014). Proceedings, vol. 8653 pp. 147 - 158. (Lecture Notes in Computer Science). Springer, 2014.
    - **Description of the paper:** In this paper we present an approach to support flexibility of Business Processes regulating the behaviour of ICT systems deployed within a smart city.

- Cognini, R., Corradini, F., Polini, A., and Re, B. (2014). Using data-object flow relations to derive control flow variants in configurable business processes. In DAB2014, BPM2014 workshop.
    - **Description of the paper**: In this paper we propose business process Feature Model (bpFM) to deal with data objects in flexible BPs. In bpFM features are activities that can differentiate a BP from another in term of BP structure and execution paths. In bpFM data objects can be modelled as input/output of activities, then the life cycle of data objects can be deduced from a bpFM model.

- Cognini, R., Corradini, F., Polini, A., and Re, B. Extending Feature Models to Express Variability in Business Process Models. CAiSE 2015 Workshop on Enterprise Modeling, 245-256.
    - **Description of the paper**: in this paper we present a novel notation to describe variability of Business Processes and an approach to successively derive process variants. The notation takes inspiration from feature modelling

approaches and has been implemented in a real tool using the ADOxx platform.

- Bertolino A. : Software testing and/or software monitoring: differences and commonalities. In: Jornadas Sistedes - Jornadas de la Asociación de Ingeniería del Software y Tecnologías de Desarrollo de Software (Sistedes) (Cadiz, Spain, 16 - 19 September 2014). Plenary Keynote.
    - **Description of the talk**: the keynote covered current goals and approaches to validation through testing and monitoring, and included a part describing BPMN monitoring as being developed within Learn PAd project.

- Ferrari, A., Lipari, G., Gnesi, S., & Spagnolo, G. O Pragmatic Ambiguity Detection in Natural Language Requirements. In Artificial Intelligence for Requirements Engineering (AIRE), 2014 IEEE 1st International Workshop on (pp. 1-8). IEEE.
    - **Description of the paper**: the paper presents an artificial intelligence-based approach for detecting ambiguities in natural language sentences.

- Spoletini, P., Ferrari, A., & Gnesi, S.: Context Transformations for Goal Models. In Model-Driven Requirements Engineering Workshop (MoDRE), 2014 IEEE 4th International (pp. 17-26). IEEE.
    - **Description of the paper**: the paper presents a formal approach for adapting existing goal models to different contexts.

- Bertolino A., De Angelis G., Polini A., Silingas D. : Learn PAd: Model-based Social Learning for Public Administrations. In: LET'S 2014 - Leading Enabling Technologies for Societal Challenges (Bologna, 29 September - 1 October 2014).
    - **Description of the poster**: this is a poster presenting an overview of Learn PAd project goals and approach.

- Basciani F., Di Rocco J., Di Ruscio D., Di Salle A., Iovino L., Pierantonio A. : MDEForge: an Extensible Web-Based Modeling Platform. In: CloudMDE2014 - 2nd International Workshop on Model-Driven Engineering on and for the Cloud co-located with the 17th International Conference on Model Driven Engineering Languages and Systems (MoDELS 2014) (Valencia, Spain, 30 September 2014). Proceedings, pp. 66 - 75. CEUR Workshop Proceedings, 2014.

- Eramo R., Marinelli R., Pierantonio A., and Rosa G., Towards Analysing Non-Determinism in Bidirectional Transformations, AMT@Models2014

- Hinkelmann K., Pierfranceschi A. : Combining Process Modelling and Case Modeling. In: MeTTeG 14 - 8th International Conference on Methodologies, Technologies and Tools enabling e-Government (Udine, 25-26 September 2014). Proceedings, pp. 1 - 11. FHNW University of Applied Sciences and Arts Northwestern Switzerland, 2014.

- The paper Metamodeling Architectures for Business Processes in Organizations has been discussed and presented in Project Showcase@Staf2015 (L'Aquila, ITALY, 20-24 July, 2015) conference: Alfonso Pierantonio, Gianni Rosa, Darius Silingas, Barbara Thonssen and Robert Woitsch, Metamodeling Architectures for Business Processess in Organizations.

    - **Description of the paper:** this paper presents the working version of Learn PAd metamodel that captures the concepts that are used to model process-centric business architecture useful for on-the-job learning

Overview of events where publications were presented:

- **Conference Jornadas Sistedes**: This is the flagship national event in Spain organized by the Association of Software Engineering and Software Development Technologies (SISTEDES). It has plenary international keynotes.
- **Workshop AIRE'14**: the AIRE (http://re.cs.depaul.edu/ai4re/) workshop explores synergies between artificial intelligence and requirements engineering.
- **Workshop MoDRE'14**: the MoDRE workshop (http://www.modre2014.ece.mcgill.ca) explores the challenges of model-driven development for requirements engineering.
- **Conference LET's 2014**: LET'S (Leading Enabling Technologies for Societal Challenges see at http://www.lets2014.eu/) is an international Conference bringing together more than 1000 delegates from all over the world to discuss how Europe can support the growth and the creation of new jobs and face Societal Challenges through new products, processes and services, creating opportunities for European actors.
- **PS@Staf2015**: Project Showcases are dedicated to national and international projects of dissemination and cooperation and represent a specific opportunities for share experience, ideas, on-going work, and knowledge that can lead to fruitful collaborations and cross-sectoral concentrations among projects.
- **Conference MoDELS 2014**: MoDELS is the premier conference series for model-based software and systems engineering that since 1998 has been covering all aspects of modelling, from languages and methods to tools and applications. MoDELS 2014 challenges the modelling community to promote the *magic of modelling* by solidifying and extending the foundations and successful applications of modelling in areas such as business information and embedded systems, but also by exploring the use of modelling for new and emerging systems, paradigms, and challenges including cyber-physical systems, cloud computing, services, social media, security, and open source.

Ongoing dissemination activities:

- Bertolino A., De Angelis G., Polini A., Silingas D.: Learn PAd: Collaborative and Model-based Learning in Public Administrations. Projects Showcase at STAF'15 (http://www.disim.univaq.it/staf2015) (L'Aquila, 20-24 July, 2015).

    - **Description of the paper**: the paper presents an overview of Learn PAd goals and approach, and provides an outline of current status.
    - **Description of the event**: Software Technologies Applications and Foundations (STAF) is a federation of leading conferences on software technologies. It is a workshop on tools supporting product line engineering.

Projects Showcase 2015 is a first event specifically dedicated to projects dissemination and cooperation.

- Ferrari, A., Spagnolo, G.O., Gnesi, S., Dell'Orletta, F. CMT and FDE: Tools to Bridge the Gap between Natural Language Documents and Feature Models. SPLAT workshop (https://sites.google.com/site/splat2015w/) of the 19th International Software Product Line Conference (SPLC'15, July 20-24, Nashville, TN USA, http://www.splc2015.net).
    - **Description of the paper**: the paper presents a tool-chain to extract feature models from natural language documents.
    - **Description of the workshop SPLAT'15**: SPLAT is a workshop on tools supporting product line engineering.
- Ferrari, A., Spoletini, P., Gnesi, S. Ambiguity as a Resource to Disclose Tacit Knowledge. 23rd IEEE International Conference on Requirements Engineering (RE'15, August 24-28, 2014, Ottawa, Canada - http://re15.org).
    - **Description of the paper**: the paper studies the phenomenon of ambiguity occurring in dialogues.
    - **Description of the conference RE'15**: RE is the main conference on requirements engineering.
- Calabro' A., Lonetti F., Marchetti E.: Monitoring of Business Process Execution based on Performance Indicators. MOCS Track at the 41st Euromicro Conf. on Software Engineering and Advanced Applications (SEAA 2015 http://paginas.fe.up.pt/~dsd-seaa-2015/seaa2015/) in Funchal, Madeira, Portugal Aug. 26-28, 2015.
    - **Description of the paper**: the paper presents the monitoring framework under development in Learn PAd and describes its contribution to advance the state of art in BPMN monitoring.
    - **Description of the event**: (SEAA) is a long-standing international event in the field of Software Engineering and Applications, the event is organized in topical tracks. MOCS track focuses on model-based approaches.
- Cognini R., Hinkelmann K., and Martin A. : A Case Modelling Language for Process Variant Management in Case-based Reasoning. BPM-WS15.
    - **Description of the paper**: The paper presents an approach to solve the problem of the case representation in a CBR system using the BPFM notation. Using the notation it is possible to encapsulate many similar cases in a single model. The possibility given by BPFM to model just BP fragments leaving some part of the activities flow unspecified gives to performers the needed flexibility during the execution of a case.
    - **Description of the event**: The workshop is aimed to promote new, non-traditional ways of modelling and controlling business processes, the ones that promote and facilitate collaboration and creativity in the frame of business processes.
- Cognini R., Corradini F., Polini A., and Re B. : Process Variability Modeling for Complex Organizations. ES Conference.
    - **Description of the paper**: This paper presents a novel notation and approach to support variability modelling for those scenarios in which it is difficult to fully foresee in advance how variability can affect the various process perspectives.

- **Description of the event**: The conference focuses on both the technical and application aspects of enterprise systems and the complex and cross-disciplinary problems of enterprise integration.

2.3.5. Practitioner Conferences Dissemination Channel

Significant achievements in dissemination:

- In September 2014 BOC held the strategic partner meeting with about 300 guests, where the Learn PAd results have been presented at the exhibition in the research booth. Distribution took place of special BOC flyers indicating the EU – projects.
- On June 7-10, 2015, No Magic (a parent organization of NME) organized No Magic World Symposium 2015, which attracted about 200 participants. In the Business Architecture and Integration track, Darius Silingas delivered a presentation “Enabling Organizational Learning by Collaborative Business Process Modeling”, which introduced Learn PAd project, approach, proof of concept prototypes and discussed practical challenges that are being addressed in the project currently.
- A Technology Enhanced Training and Learning flyer with prominent results from Learn PAd has been drafted, and is selectively distributed.

Publications during the reporting period:

- Woitsch R.: Business-oriented Learn PAd white paper D9.4 The Learn PAd Solution to Process Oriented Learning.

- Presentation about new approaches in the e-Government domain e" oder „i" - mobiles BPM in der Wolke - der Versuch einer Auslegeordnung
    - **Description of the presentation**: The presentation was given at a networking event organized by the Initiative BPM4eGov. The initiative aims to help exploiting synergies and potentials of Business Process Management (BPM) and eGovernment. The initiative serves as a platform for networking on the topics BPM and eGovernment (URL: http://www.bpm4egov.ch/bpm4egov/).

- Silingas D., Thoenssen B., Pierantonio A., Efendioglu N., Woitsch R. : Business Architecture for Process-Oriented Learning in Public Administration . Business and Dynamic Change: the Arrival of Business Architecture, L. Fischer (ed.). Future Strategies, 2015, pp. 171-184.

- Paper submissions to the ES2015. The third International Conference on Enterprise Systems (ES 2015) will take place in Basel, Switzerland from Wednesday 14 to Thursday 15 October (URL: http://www.es2015.org/home). The conference focuses on both the technical and application aspects of enterprise systems technology, and the complex and cross-disciplinary problems of enterprise integration.
    - **Description of the presentation:** This paper presents a modelling approach for learning goals and their relation to business goals. The requirements for the modelling were derived from a case study. The learning goals are represented as means in the business motivation model. They support the achievement of business goals and strategies. To define the learning goals adequately, they can be classified according to the revised Bloom taxonomy of educational objectives. The modelling method allows to link learning goals of individual

employees to the organisational learning goals. Furthermore, the learning goals can be arranged in a Learning Scorecard for monitoring purposes. The metamodel has been implemented in the ADOxx modelling toolkit.

Overview of events where publications are made:

- **AMT@Models2014**: The central objective of the AMT workshop is to provide innovative ideas for the analysis of model transformations, broadly construed. Analyses might support a variety of model transformation activities including the development, quality assurance, maintenance and evolution.
- **ES2015 conference** focuses on both the technical and application aspects of enterprise systems technology, and the complex and cross-disciplinary problems of enterprise integration
- **The "eCH-BPM Prozessplattform für E-Government Schweiz"** contributes to the implementation of eGovernment Switzerland. It benefits from the knowledge exchange and networking with partners of all federal levels, with representatives of the private sector and with scientists. The platform contains a process repository, basic information on process modelling, process related information like records management and risk controlling, and a market place. URL: http://www.ech-bpm.ch (not publicly accessible yet).
- **MeTTeG 14**: Public administrations made great effort to provide more sophisticated E-Government services, for example offering one-stop services and supporting personalization. While strategies, methodologies and realization of E-Government services vary significantly between the various actors and stakeholders, the alignment of IT with the processes and objectives of the service providers plays an increasing role in service management.

  The MeTTeG conference intends to bring together researchers and practitioners active in the area of electronic government with a focus on the role played by the information and communication technologies. It provides a forum for participants from different perspectives and disciplines to present innovative methodologies, technologies and tools, share experiences and lessons learned from case studies and discuss challenges.

Ongoing dissemination activities:

- Paper submissions to the ES2015. The third International Conference on Enterprise Systems (ES 2015) will take place in Basel, Switzerland from Wednesday 14 to Thursday 15 October (URL: http://www.es2015.org/home).

2.3.6. Research Journals Dissemination Channel

Significant achievements in dissemination:

- UniCam contributes to formally check correctness for BP models. Indeed, in defining the notation, OMG did not provide a rigorous semantics for the various graphical elements; instead the meaning is given using natural language descriptions, permitting a wider adoption of the notation in different contexts. The use of formal tools to define the semantics of the various elements, and then of a process model, is particularly interesting in order to enable automatic analysis activities that allow the designers to check if the process satisfies desired properties or not. We consider a mapping from BPMN to Petri Net and describe properties that can be checked such as reachability, liveness, soundness, etc. We also consider unfolding techniques as a

valuable approach to explore the state space of concurrent systems without considering all possible events interleaving. This makes the verification possible avoiding the typical verification problem such as state explosion.

- A journal publication results from this research activity. It was submitted and accepted by Business Process Management Journal.

Publications during the reporting period:

- Cognini R., Corradini F., Polini A., Re B. : Inter-organizational Business Process Verification in Public Administration. In: Business Process Management Journal., vol. 21 article n. 5. Emerald, September 2015.

2.3.7. Other Dissemination Channels

Significant achievements in dissemination:

- The meetings held among all the institutions and actors involved in the Marche Region, regarding the standardization of procedures and the sharing of regional actions in terms of OSS, are listed in the web page http://www.impresa.marche.it/SportelloUnicoAttivitaProduttiveSUAP/DocumentazioneTavoliSUAP.aspx
- Regional initiatives by the MAR councillor of "industry and handcrafts" and the office for "simplification and liberalization of the business" (including the Learn PAd project) were presented during an event ("Innovattori", at Civitanova Marche MC, 5-6-7 June 2014, http://www.impresa.marche.it/Ricercaeinnovazione/Innovattori.aspx)
- On the web site www.ecommunity.marche.it the Learn PAd project is described among the regional activities of the Digital Agenda for Marche – particularly among those dedicated to the "smart education" community.

Ongoing dissemination activities on which Learn PAd consortium members working at present:

- Marche Region, UNICAM, CNR, FHNW, together with all the partners of the Consortium, have worked to implement a questionnaire that has been given (among the other European Public Administrations) to the local potential users of the platform (SUAP/OSS from Marche - involving at least the 51 local offices, that, according to a previous 2014 questionnaire, had required specific training actions from the regional level - and other public bodies users interested in innovative and collaborative learning methods). The questionnaire aims to highlight learning needs, end-users familiarity with ICT-based e-learning systems, web/app technology and collaborative digital tools, and also to communicate and assess the proposed Learn PAd training environment (in terms of collected business processes and related contents, competence model, professional skill model, didactic and engaging solutions) according to the user expectations.

2.4. Future Dissemination Plans

Dissemination performance assessments are useful to show the real status of dissemination activities and also aim to identify the new planned actions for further dissemination activities. This report has illustrated those goals showing the gaps between predefined initial dissemination targets and actual results that have been achieved by M18. Future dissemination plan should be focused mainly on the biggest detected gaps. With this report

we also refined some dissemination targets on which we are going to work in the next period.

We will try to focus more on Learn PAd dissemination through practical conferences/expos, as already more than a half of the project time has passed. We've expected to firstly generate a certain amount of quality leads, through these conferences, in order to use them later in the exploitation activities. Moreover we need to pay more attention to SlideShare dissemination channel and to promote Learn PAd more actively through this social network - as it could be a more profitable channel than others - creating and adding new effective presentations also to represent a joint and common vision of the entire consortium, with regards to exploitation.

In the next future we need to better focus our dissemination activities in such a way that Learn PAd could start to be considered notorious in major national and international e-learning communities, reaching a good base for generating qualified leads for exploitation. In summary, the planned activities for boosting Learn PAd dissemination are:

1. Publish high-quality industrial papers and academic papers;
2. Start presenting Learn PAd prototypes in practitioner events and receive feedback;
3. Adopt and add selected review presentations to SlideShare;
4. Boost content and interactions in the main effective social networks. Accomplish and prepare interviews with WP leaders, Marche Region and other interested Public Administrations representatives, publishing them in the Learn PAd website;
5. Publish international press releases;
6. Initiate more active and interactive discussions in LinkedIn group and use personal networks to invite and attract more members.

2.4.1. Planed Future Activities

In this chapter we present our plans for future dissemination activities. Plans are provided due to dissemination channels.

Planning to attend in academic conferences:

- UDA and CNR are going to attend the STAF2015 conference http://www.disim.univaq.it/staf2015/. This will be done before final release of Deliverable D9.3.
- BOC submitted papers at the I-Know (http://i-know.tugraz.at/), yet without any evaluation results (no papers have been published at the moment, but evaluation of submissions is ongoing).
- FHNW plans to attend the following conferences:
    - MeTTeG15. 9th International Conference on Methodologies, Technologies and Tools enabling e-Government, Sept. 9-11, 2015, Banja Luka, Republic Srpska, Bosnia and Herzegovina, at Apeiron University. (http://conferences.cs.unicam.it/metteg15/).
    - BIS 2016. 19th International Conference on Business Information Systems.
- UNICAM plans to attend the following conferences:
    - EGOV 2015 and ePart 2015 conference. It is the 14th IFIP Electronic Government and 7th Electronic Participation Conference 2015. It will take

place in 30th August - 2nd September 2015 in University of Macedonia, Thessaloniki, Greece.

  - ES2015. It is 3rd International Conference on Enterprise Systems. It will take place in Basel, Switzerland from Wednesday 14 to Thursday 15 October.
  - BPM 2016. It is the 13th conference in a series that provides the most prestigious forum for researchers and practitioners in the field of Business Process Management (BPM). Innsbruck, Austria August 31 - September 3, 2015.
  - CAISE 2016. The 28th International Conference on Advanced Information Systems Engineering (CAiSE'16) will be held between 13-17 June 2016 in Ljubljana, Slovenia.

- Hosting the ES2015 Conference http://www.es2015.org/
  - FHNW, University of Applied Sciences and Arts Northwestern Switzerland, hosts the ES2015 conference, which will be co-hosted by the IEEE Sections of Switzerland and South Africa (https://www.ieee.org/about/index.html). Indeed, the Enterprise Systems conference series is jointly supported by the IEEE Technical Committees Enterprise Architecture and Engineering and Enterprise Information Systems. Previous Enterprise Systems conferences were held in Cape Town, South Africa (ES 2013) and in Shanghai, China (ES 2014).

    The ES2015 conference will provide a wide platform to discuss the Learn PAd approach, the already achieved results and the current work with the involved community.

Planned workshops in academic conferences:

- BOC is aiming to hold a workshop at the IEEE – eChallenges (http://www.echallenges.org/e2015/) conference in November 2015 and it has already submitted a paper for this conference.
- FHNW is planning to organize a workshop on the ES2015 about Learn PAd related topic - Advanced modelling and ontologies in enterprises.
- Models are abstract representations of reality and are often used to depict, analyse and communicate features of complex phenomena. The modern enterprise is a complex system and advanced modelling techniques, including ontologies, are often used within enterprise systems, as well as enterprise architecture and engineering. This track is concerned with all aspects concerning the use and application of advanced modelling techniques and ontologies in enterprises.
- FHNW is planning to organize a workshop on the ES2015 about Learn PAd related topic - Learning of Process Knowledge.
  - Learning in organisations is and has always been very important to keep enterprises competitive. Public Administrations are required to gear their services towards demand, in compliance with the law. Process related single-loop learning focuses on supporting employees to learn readily and apply new processes and to improve business processes. A particular challenge represents the implementation of double-loop and Deutero learning in the organisational context. How can mental models be externalized? How can the gap be closed between espoused theory and theory in use? How to trigger double-loop learning and how to evaluate and retrofit its results? The track on learning of process knowledge addresses these questions to both individual and organisational learning within organisations.

- UniCam is planning to organize a national conference AICA 2015 about Learn PAd related topic - also dealing with ICT tools for training and educational purposes and e-learning platforms. In particular, the conference intends to bring together researchers, companies and Public Administration active in the area of digital ecosystem with a focus on the role played by the information and communication technologies. It provides a forum for participants from different perspectives and disciplines to present innovative methodologies, technologies and tools, share experiences and lessons learned from case studies and discuss challenges.

Planned publications:

- CNR plans to focus on the publication of current Learn PAd outcomes in a Requirements Engineering venue.
- CNR plans to present the results from WP6 in main events both of SE and of the BP communities.
- UniCam and CNR plan to present the results from WP4 in main events of both e-Government and business process management communities.
- UniCam plans to present the results from WP8 in main events for e-Government communities.

Planning to attend in practitioner conferences:

- NME plans to arrange BPM in Practice conference with a special theme of Process Management in Public Administration on April/May 2016. This will be a transformation of a generic BPM in Practice conference, which annually took place in Vilnius in 2010-2014 and attracted 200-250 participants. NME is already discussing regarding potential collaboration on organizing such an event with Ministry of Economy, other public administration organizations, and consultants focusing on public administration sector in Lithuania.
- NME plans to attend the international conference/expo BPM Europe with a tutorial/talk and a booth. This event is considered as the most important BPM practitioners' event in Europe. It is an annual event, which takes place in London on the month of June and typically attracts 250-300 attendees from various countries and sectors, including public administration representatives. June 2016 is M29 of Learn PAd and it will be a perfect time to present Learn PAd approach using software demonstrator and collect quality leads for exploitation.

Social communities:

- Boost content and interactions in social networks;
- Adopt and add selected review presentations to SlideShare;
- Make LinkedIn discussions more interactive, use personal networks to invite/attract more members;
- Prepare interviews with WP leaders, Marche region representatives, other PA testimonials and publish them in the Learn PAd website;

Other plans for disseminating Learn PAd contents:

- MAR is planning to move gradually the focus of the actions towards the concrete experimentation and validation of the training platform with local users and in the dissemination of the obtained results, not only across institutional events and actions but even by word of mouth. These activities will involve local public administrations other from Marche Region, and in particular people from the municipalities and the

SUAP local entities and offices. One of the important goals to measure will be also if the platform is going to follow the UE perspective of enhancing the Bolkestein Services Directive (2006/123/CE) and training a second generation of Single Points of Contact (OSS) able to be multilingual, exhaustive and user-friendly.

- UDA intends to exploit the results of Learn PAd within the model-driven engineering community in terms of modelling development processes, especially, in domains that are difficult to formalize due to knowledge-intensive nature
- CNR intends to disseminate theoretical contributions to state of art in quality verification and simulation monitoring as well as to distribute developed tools as broadly as possible
- UDA is planning to do a presentation about Metamodeling Architectures for Business Processes in Organizations.

3. Standardization Activities Report

Learn PAd projects aims at influencing modelling standards. The initial dissemination plan defined an objective to deliver 2 presentations at Object Management Group (OMG) technical meeting(s). This objective was achieved by making the following 2 presentations at Business Modeling and Integration (BMI) domain task force meeting in Berlin on June 18, 2015:

- Dr. Darius Silingas. Business Process Organizational Learning. OMG Technical Meeting (15.-19.6.2015, Berlin, Germany): http://www.slideshare.net/ProjectLearnPAd/learn-p-adbusinessprocessorganizationallearningdsilingas;
- Prof. Knut Hinkelmann. Integration of BPMN and CMMN. OMG Technical Meeting (15.-19.6.2015, Berlin, Germany):

  http://www.slideshare.net/ProjectLearnPAd/2015-0612-omgbmiintegration-of-bpmn-and-cmmn.

The first presentation introduced the main ideas and scientific concepts in the project and explained the approach, used by Learn PAd, to integrate multiple OMG modeling standards (BMM, BPMN, CMMN, etc.) and custom metamodels into a single Learn PAd metamodel, which enables modelling a business process-based and learning-oriented business architecture of public administration organizations. It explained how Learn PAd subsets BPMN to make it practical for an application in Public Administration and how weaving models are used to integrate model kinds. The second presentation has been elaborated on a need for defining a common modelling language set that combines the features of BPMN and CMMN for modelling business processes that are in between strictly defined procedures and loosely defined cases. Both presentations initiated a lot of discussions between the task force members who are experts and contributors in the development of major business modelling standards - such as Business Process Model and Notation (BPMN) and Case Management Model and Notation (CMMN), that are heavily used inside the Learn PAd metamodel.

Although formal standardization objectives defined in Learn PAd description of work are reached, there is a mutual interest to continue tight interactions between Learn PAd partners (in particular the representatives by NME and FHNW) and the Business Modeling and Integration (BMI) domain task force. In addition to this, Darius Silingas has been in contact with the leadership of Business Architecture Guild (http://www.businessarchitectureguild.org) - and we would like also to underline a strong potential for collaboration with this emerging professional practice body, which works in a close relationship with OMG. Last but not least, NME intends to build a proof of concept for using Learn PAd approach to manage knowledge and learning into and about OMG standardization processes. This is planned to be done in collaboration with Dr. Andrew Watson, who is a Technical Director of OMG and a member of Learn PAd Project Advisory Board. These activities will enable to maximize the long-term impact of Learn PAd findings on both existing and emerging business modelling standards.

4. Exploitation Strategy and Process

Learn PAd aims to develop a novel approach to learning based on business processes and to implement a software platform for enabling it. While this goal has a huge potential, preparing a solid exploitation strategy and executing it are the key to maximize the impact of the project. The main challenges for the exploitation are that 1) in most cases, adopting the Learn PAd approach will require rather significant organizational changes, which will take time due to a need to involve political, strategical and operative decision making levels; 2) an integrated release of Learn PAd software components is planned only at M24, which determines a small amount of time for transferring the focus from dissemination into proactive leads generation and exploitation mode, before the end of the project.

Sustaining Learn PAd approach and software beyond project end requires a collaborative exploitation approach, through which Learn PAd partners can continue to handle leads for Learn PAd exploitation opportunities and to involve more public administration organizations. To such purpose we will continue working as a *Virtual Enterprise.* A virtual enterprise is a temporary alliance of businesses that come together to share skills or core competencies and resources in order to better respond to business opportunities, and whose cooperation is supported by computer networks[2]. Virtual enterprise has been selected because it provides an environment where flexible collaboration and corresponding service delivery can be cooperatively and efficiently carried out by the involved partners on utilizing their core competences[3] [4].

This chapter defines the major elements of Learn PAd exploitation strategy:

- **Target Market Assessment** - a definition of a typical Learn PAd customer and a preliminary market size estimation;
- **Collaborative Exploitation Approach** - 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;
- **Individual Contributions to Exploitation** - expected individual partner contributions to the collaborative exploitation process, their performed roles, supervised exploitation items and additional individual exploitation intentions.

Note that this deliverable defines the initial exploitation strategy and goals that will be revised and elaborated in deliverable D9.7, which is due at the end of the project (M30).

4.1. Target Market Assessment

A Profile of a Typical Learn PAd Customer

A typical customer of Learn PAd approach and platform is a Public Administration body, which has over 100 employees and is involved into multiple inter-organizational end-to-end processes that provide valuable service for the citizens or businesses. Such Public

[2] https://en.wikipedia.org/wiki/Virtual_enterprise
[3] N Efendioglu, V Hrgovcic, R Quirchmayr, R Woitsch, Cooperative Decision Making in Virtual Enterprises, in Advanced Information Systems Engineering Workshops, 256-267, http://link.springer.com/chapter/10.1007%2F978-3-319-07869-4_24
[4] BIVEE Consortium, Project Business Innovation in Virtual Enterprise Environments. http://bivee.eu/the-project/

Administration bodies include national government bodies such as ministries, municipalities of larger cities or regions, and specialized functional organizations such as data registries, tax administration, labor inspection, court, police, etc. While Learn PAd is primarily addressing Public Administration, it can also be applied in any large organization, where business processes can be treated as a central element for knowledge management and learning. In the scope of Learn PAd project, only Public Administration market will be addressed directly, but the project partners may come up with individual exploitation plans that address other industry sectors with Learn PAd-based or Learn PAd-inspired approach and software offerings.

Market Size Estimation

Learn PAd will target primarily the countries of EU (28 members) plus Switzerland and Norway that are well developed Western Europe countries, which makes 30 countries all together. The potential for adopting Learn PAd approach in other European countries also exists but it is much lower due to the fact that in less developed countries there is no culture of transparency and information sharing. In those countries, the knowledge is treated as power and is protected rather than shared. Changing this perception is a long-term political challenge, which is out of scope for Learn PAd research project.
While one can dig out more precise information about Public Administration bodies from various sources such as national governments or specialized Public Administration institutes or associations, e.g. http://www.pa-knowledge.org/, based on initial assessment of countries represented by project partners we came up with an approximate estimation of about 100 Public Administration organizations available in each country that correspond to a profile of a typical Learn PAd customer.
Thus the market size for initial exploitation is 30 x 100 = 3.000 Public Administration bodies. We expect to identify and contact all of them and estimate ~1% of them to get interested, which results in ~30 leads. Then we expect 10% lead conversion ratio, i.e. that 3 Public Administration organizations will commit to exploit Learn PAd approach and deploy it in smaller or larger scale. The success of deployment depends a lot on various factors such as company's culture, political situation, and the level of support from top management. Interviews with potential customers (Marche Region, Lithuanian Ministry of Economy, Lithuanian Customs Department) revealed that the organizational change for deploying Learn PAd may take 2 years and longer. However, at least one successful case could open the door for further expansions.
A more detailed analysis of potential Learn PAd customer organizations will be done in D9.7.
It is important to note that the business partners of Learn PAd (NME, BOC, LIN, XWIKI) will utilize their customer base to directly promote Learn PAd approach. NME and BOC modeling platforms are used by a number of different Public Administration organizations on European (e.g. European Parliament), national (ministries, customs and tax administrations, data registries, police, national audit, etc.) and regional (city and region municipalities) levels. Open source software provided by LIN and XWIKI are widely used by French public administrations. The concrete customer organizations cannot be disclosed but the total Learn PAd partners' customer base includes ~100 Public Administration organizations that correspond to the profile of a typical Learn PAd customer. These organizations definitely

have a higher potential to get interested in Learn PAd approach and technology as they are already using technology or services provided by Learn PAd partners and adopting Learn PAd approach would be seen as an incremental improvement rather then a major innovation.

4.2. Collaborative Exploitation Approach

This chapter presents a collaborative exploitation approach, which is based on high-level business process[5] defining Learn PAd promotion and exploitation activities that generate leads and use the leads to exploit Learn PAd approach and technology.

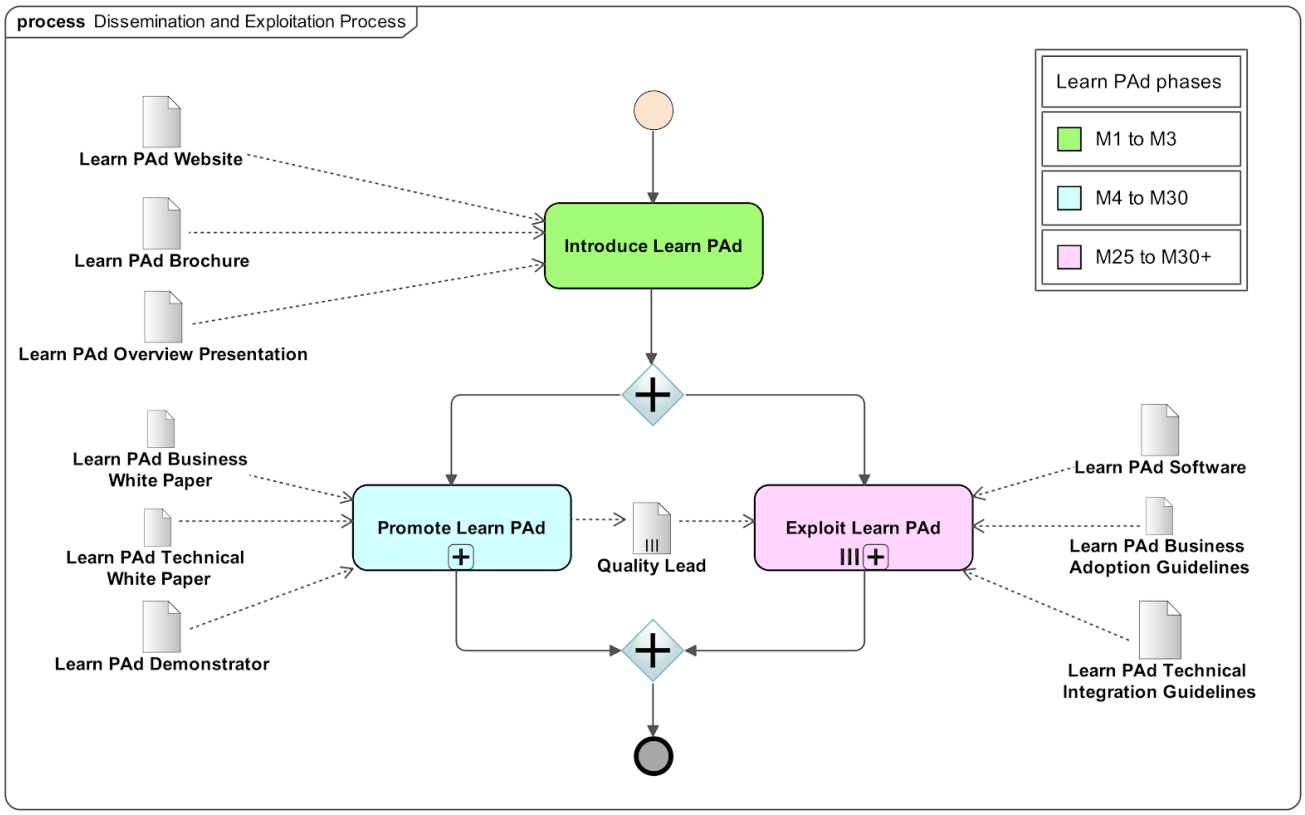

Figure 4.1 A High-Level Learn PAd Promotion and Exploitation Process

The high-level process of Learn PAd promotion and exploitation defines three major activities:

- **Introduce Learn PAd**, which aims to provide basic understanding of Learn PAd approach and technology and generate initial interest to follow Learn PAd dissemination. This activity was the main focus during the first 3 months of the projects. For this activity the following exploitation items were used: *Learn PAd Website*, *Learn PAd Brochure*, and *Learn PAd Overview Presentation*. These exploitation items continue to be updated and used in later phases of the project.
- **Promote Learn PAd**, which aims to generate leads, i.e. contacts of European Public Administration bodies, that are interested to explore a possibility to adopt Learn PAd approach and technology and deploy it in their organization(s). For promotion

[5] The process is done at description level and is not precise, but it provides a good overview of focus activities that lead to Learn PAd exploitation.

activities, Learn PAd needs the following exploitation items: *Learn PAd Business Whitepaper*, *Learn PAd Technical Whitepaper*, and *Learn PAd Demonstrator*. This activity is the main focus from month 4 (M4) till the end of the project (M30).

- **Exploit Learn PAd**, which is marked as a multi-instance sub process since it will be repeated for each quality lead (a preliminary estimate is to generate ~30 such leads). This process takes lead as an input and it will also require *Learn PAd Software* (a composite exploitation item, which is decomposed into compulsory and optional components), *Learn PAd Business Adoption Guidelines*, and *Learn PAd Technical Integration Guidelines*. This activity will be the main focus starting at M25, after the first stable version of Learn PAd platform is available. This process will continue long after the end of project - the initial estimate is that the process can take 2 and more years to be successfully completed. This process is described in more details as it requires cooperation of Learn PAd partners beyond the project end and is absolutely critical to the success of Learn PAd project.

Introduce Learn PAd

The sub process ***Introduce Learn PAd*** is the main focus of the project from its beginning till M3. It is activity of dissemination nature, which aims to introduce the project to the target customers. Early introduction of the project helps to attract the attention of potential customer organizations, keep them in line with Learn PAd progress and form a basis for generating the first leads. This sub process has the following exploitation items as its inputs:

- *Learn PAd Website;*
- *Learn PAd Brochure;*
- *Learn PAd Overview Presentation*.

We will not provide further description of this process as it is mostly completed at this time - the required exploitation items are ready, the dissemination channels are established and used. However, all these exploitation items will be regularly updated, as well as there are frequent updates in all dissemination channels (quantitative achievements are described in previous chapters).

Promote Learn PAd

Sub process ***Promote Learn PAd*** begins at M4 and ends at M30. The main objective of this task is to disseminate Learn PAd outcomes and collect leads that will be used in exploitation activities.

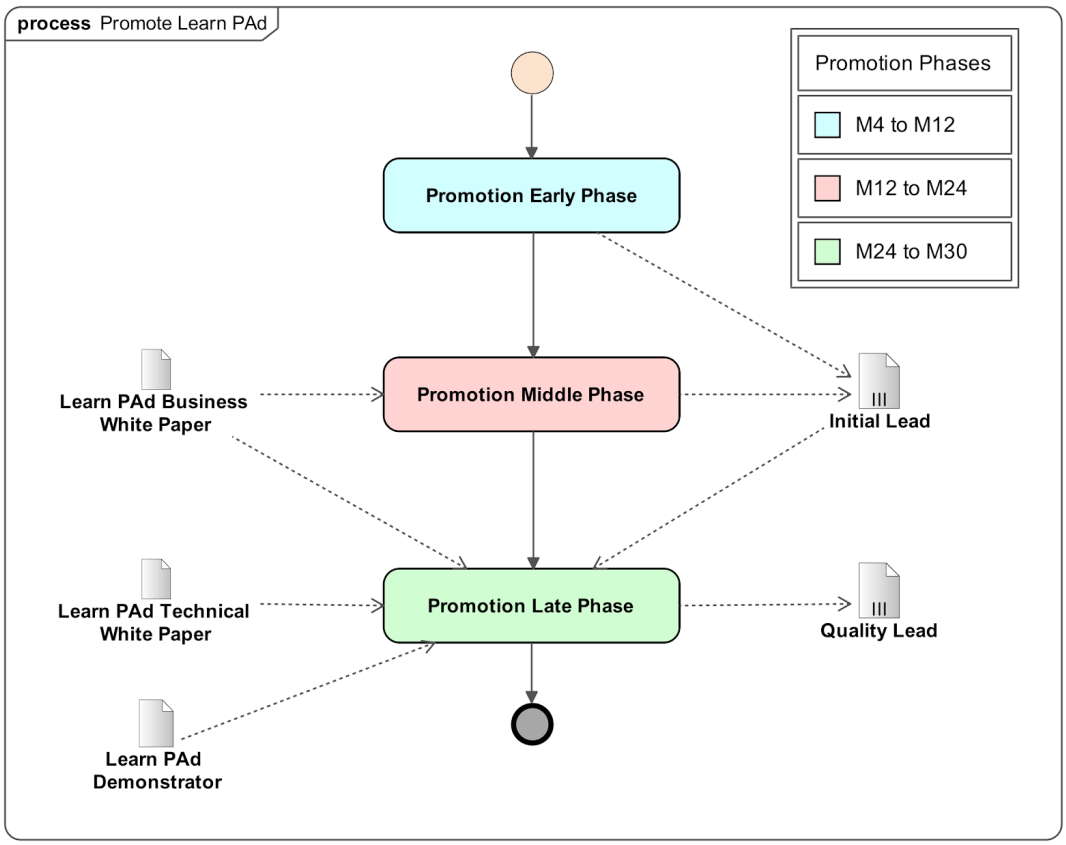

Figure 5.1 Promote Learn PAd

Promote Learn PAd Outcomes is a sub process, which consists of various activities that use multiple dissemination channels. However, we can define three major promotion phases:

- ***Promotion Early Phase*** (M4-M12), which relies on Learn PAd introductory materials to generate leads showing initial interest;
- ***Promotion Middle Phase*** (M13-M24), which uses *Learn PAd Business Whitepaper* to generate leads with business interest without jumping into technical implementation concerns;
- ***Promotion Late Phase*** (M25-M30), which uses *Learn PAd Business Whitepaper*, *Learn PAd Technical Whitepaper*, and *Learn PAd Demonstrator* to generate quality leads that will be used in the next exploitation sub process. In this phase Learn PAd consortium will focus on contacting potential customers based on available initial leads and present Learn PAd in industrial conferences and expos such as *BPM Europe* and *BPM in Practice* in order to generate quality leads that can be leveraged in exploitation process.

Exploit Learn PAd

The sub process **Exploit Learn PAd** begins at M25 and continues at M30 (see Figure 4.1). The main objective of this task is to convert quality leads into deployment of Learn PAd in actual Public Administration organizations. A detailed process is depicted in the figure below. Note that the process works with a single quality lead and it will be repeated for each quality lead.

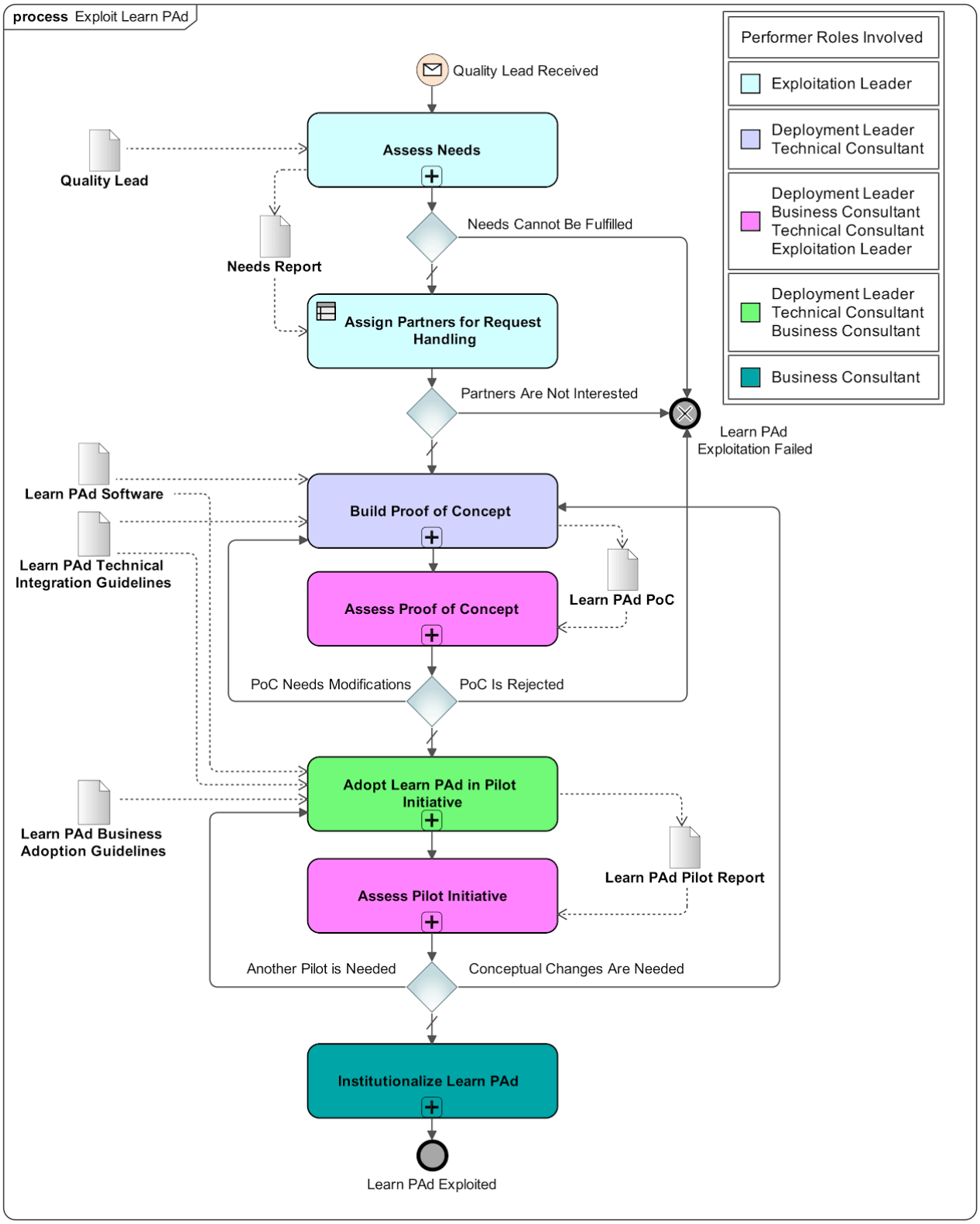

Figure 6.1 Exploit Learn PAd

The process starts with using the lead to contact the organization and **Assess Needs** of it, which should result in *Needs Report* (based on a template prepared in advance) and a decision whether to continue exploitation process or cancel it because the needs cannot be fulfilled. ***Exploitation Leader*** is the process role that is responsible for this task. In case the decision is to continue exploitation process, the ***Exploitation Leader*** needs to assign responsible partners based on *Needs Report*, a background of the customer and interactions with partners. Unless there is no interest in exploitation due to specific factors, e.g. a high-risk of the potential customer or lack of resources at key partners, the further task is to **Build Proof of Concept** (PoC), which is performed by partner(s) assigned to roles of ***Deployment Leader***, responsible for the overall system, and ***Technical Consultant***, responsible for specific software component. For example, it may be the case that XWIKI plays the role of ***Deployment Leader*** while BOC and LIN are acting as ***Technical Consultants*** taking special care of configuring and integrating *Modeling Environment* and *Simulation Environment*. Then there is a task to **Assess Proof of Concept**, which involves all the roles, including also **Business Consultant** who is a key advisor for implementing Learn PAd in the actual working environment and dealing with organizational change challenges. Unless the proof of concept is rejected, the process continues with a task of **Adopt Learn PAd in Pilot Initiative**, which performs a project that deploys Learn PAd software and approach in a small fragment of organization. Similar to PoC, the next activity is to **Assess Pilot Initiative** and decide whether it is time to **Institutionalize Learn PAd** as a standard approach in that organization. It is likely that there should be a number of iterations of pilot initiatives to polish the solution or there can also be major concerns that can lead to go back to **Build Proof of Concept** activity. In case Learn PAd is institutionalized as a standard approach, we consider that Learn PAd is successfully exploited. All other scenarios lead to failure of Learn PAd exploitation with the particular customer (identified by quality lead).
As mentioned before, the exploitation process can easily take 2 years or more and it requires collaboration of Learn PAd partners beyond the end of the project. This will be accomplished by adopting a virtual enterprise model, where partners will continue to interact based on their individual business and scientific interests.

4.2.1. Shared Exploitation Items

In this chapter we will describe the shared exploitation items, i.e. those that are used in the collaborative exploitation approach and its process activities. The individual partners may consider other Learn PAd outcomes, e.g. Learn PAd metamodel, as individual exploitation items that are used in their individual exploitation activities.

The table below lists the top level Learn PAd exploitation items, provides a short description for each of them and indicates Learn PAd partner(s) responsible for each exploitation item.

Exploitation Item	**Owner**	**Description**
Learn PAd Business Adoption Guidelines	UNICAM	Guidelines provide business processes defined by Learn PAd and recommendations on how to use them
Learn PAd Technical Integration	XWIKI	Guidelines provides the technical specifications of Learn PAd platform and instructions on how to create integration with Learn PAd platform.

Guidelines		
Leads List	NME	List of leads that will be used for exploitation. Leads provides needs of potential users that will be implemented during exploitation activities.
Learn PAd Demonstrator	UNICAM	In the context of Learn PAd demonstrators helps the technical and research work-packages to better focus their activities; and permits to assess the applicability, acceptance and effectiveness of the proposed solution within real working contexts. Demonstrator helps to validate project results both with respect to the expectations of the users of the platform (learners and content producers), and with respect to the platform effectiveness in supporting civil servants training and collaborative activities. Learn PAd demonstrators focus on two different workplace contexts within increasingly complex case studies. The first demonstrator engages different partners in the definition of models and documentation for a Business Process (BP), which does not cross the border of a Public Administration (PA). The second demonstrator refers to a more complex inter-organizational scenario involving many PAs.
Learn PAd Technical White Paper	XWIKI	Provides a technology oriented overview of Learn PAd that is targeted to readers from research and software vendor communities with a goal to build interest in adopting Learn PAd concepts in further research and integrating technological components in external e-learning, modelling and middleware software applications.
Learn PAd Business White Paper	BOC	Business white paper describes how to improve the performance and efficiency of business processes, by streamlining activities in daily work and interpreting the business process not only as a sequence of actions to achieve the organizational goal but also as a knowledge platform of the organization. White paper provides five scenarios to support business process oriented learning in public administrations. 1) Individual training is intended to support novices; 2) Organizational evolution supports organizational change, such as the introduction of a new business process; 3) Support and reflection enable clear insights into the real world execution of business processes, 4) Process optimization and improvement addresses continuous improvements via a bottom-up reflection and hence enables organizational learning, whereas 5) Citizens transparency enables consumers of services to learn about the required information for necessary decisions of the public administration.
Learn PAd Website	CNR	Learn PAd Website provides common information about Learn PAd project. Web site provides short overview of

		project, objectives, introduces with project members, provide project resources with deliverables, publications and software. Web site acknowledges Learn PAd project and makes it accessible to wide audience.
Learn PAd Brochure	NME	Brochure is material for Learn PAd promotion and dissemination. Brochure provides common explanation of what is Learn PAd, what will be achieved by project and introduction how Learn PAd will be used in life. Brochure also presents partners of Learn PAd and contacts.
Learn PAd Overview Presentation	NME	Presentation that provides overview of Learn PAd.
Learn PAd Software	XWIKI	Term Learn PAd Software is a generic description of Learn PAd software components. This term used in process *Exploit Learn PAd* (see Figure 6.1). Learn PAd software may consists of several software components. Its decomposition shown in figure 7.1. Theses components also identified as exploitation items of Learn PAd and described in Table 4.

Table 3. Learn PAd Exploitation Items

The last Learn PAd exploitation item - Learn PAd Software consists of several software components. Its decomposition is depicted in the figure below, which is followed by a table of software exploitation items with their descriptions, owners, identification if it is compulsory and expected technology readiness level.

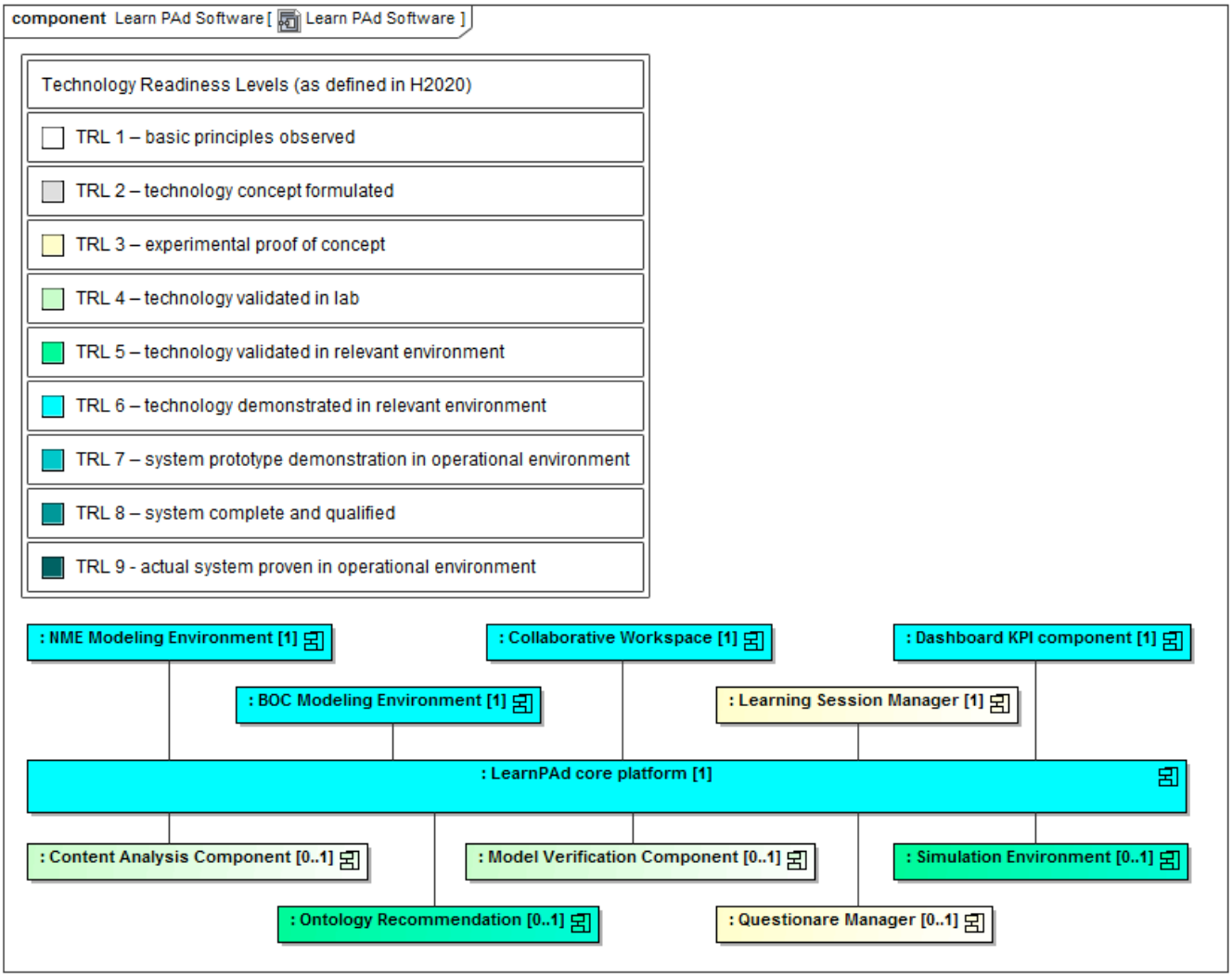

Figure 7.1 Learn PAd Software Components (Software Exploitation Items)

Depending on a particular deployment of Learn PAd and a use case for which it will be used, some components may be omitted. However some components are compulsory as they are core of Learn PAd approach. The compulsory parts of Learn PAd software are annotated with a multiplicity [1] and they are placed in the upper part of the diagram. The optional parts are annotated with a multiplicity [0..1] and they are placed in the lower part of the diagram. Also, it is estimated that the components will be in different technology readiness levels (TRL) by the end of the project. Some components such as modeling environments provided by NME and BOC and collaborative environment provided by XWIKI are already mature software systems that are widely used in actual environments and will have the highest TRL 9 level. The other components will have different technology levels raging from TRL 3 to TRL 7 depending on their role in the Learn PAd demonstrators and willingness to adopt their provided capabilities in the early Learn PAd exploitation trials.

Software Exploitation Item	Must Have	TRL [6]	Owner	Description
Learn PAd Core Platform	Yes	TRL 6	XWIKI	The Learn PAd Core Platform is the main component that provides the backbone for integrating the other tools that provide actual functionalities. It also captures the relevant interactions between them in order to make it easier to integrate new tools as needed. Learn PAd Core Platform aims to encapsulate as much as possible of the business logic of the Learn PAd system inside its core, so that it will be easier to integrate new components with the rest of the platform.
NME Modeling Environment	Yes	TRL 6	NME	The modeling environment is a subsystem where the modeler creates and modifies models that will be used by Learn PAd for configuring the functionality / workspace provided to the civil servants. Typically these modeling environments are stand-alone application running on an independent server / host accessible mainly to modelers.
BOC Modeling Environment	Yes	TRL 6	BOC	The modeling environment is a subsystem where the modeler creates and modifies models that will be used by Learn PAd for configuring the functionality / workspace provided to the civil servants. Typically these modeling environments are stand-alone application running on an independent server / host accessible mainly to modelers.
Collaborative Workspace	Yes	TRL 6	XWIKI	The collaborative workspace is the environment that provides the entry point to the functional capabilities of the LearnPAd platform. It enables users to browse the available documentation associated to the models defined by LearnPAd (e.g., Business Processes, organization structure, etc.) It also provides functionalities for collaboratively enriching this documentation, or to provide comments, feed-backs on the existing material.

[6] The technology readiness levels are estimated using Horizon 2020 recommended schema: http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf

Learning Session Manager	No	TRL 3	CNR	The Learning Session Manager abstracts a generic component that creates and to invites learners to a specific kind of learning session. More specifically, here a concrete component is referred that provides features to share questionnaires among learners, to support their compilation, and to export some kind of statistics about the filled questionnaires.
Dashboard KPI Component	Yes	TRL 6	FHNW	The Dashboard KPI calculates KPI about different aspects of the learning experience, and manage dashboards of KPI that can be displayed to the different types of user for having a cockpit of the current situation of a particular aspect of the learning process. Functionality provided by this component available at the following 3 different abstraction levels: 1. organizational 2. individual Business Process 3. individual learner The component refers to a Dashboard as a collection of KPIs. Eventually, each KPI is associated with a reference threshold representing the expected outcome for that indicator. In this sense a Dashboard uses KPI in order to define and to monitor a set of learning goals.
Content Analysis Component	No	TRL 4	CNR	The content analysis component provides functionalities for analyzing the textual content for the documentation associated to Business Processes created within Learn PAd. It defines and implements automated procedures to verify that the textual content that describes the tasks of a Business Process (e.g., documents created in the Collaborative Workspace) provides information that can be clearly and unequivocally understood. The component automatically identifies ambiguous sentences and vague terms in natural language content, and estimates quantitative indexes.
Questionnaire Manager	No	TRL 3	CNR	The questionnaire manager supports the generation of questionnaires from Business Process models; also it provides the functionalities for the Learn PAd platform to

				retrieve and publish a questionnaire. Notably the creation of a questionnaire could be either automatic or interactive. Each questionnaire is conceived as a template composed by a set of questions that should be submitted to a learner, where each question has (optionally) associated its expected answer.
Simulation Environment	No	TRL 5	LIN	The simulation environment provides the subsystem where users can simulate Business Processes interactively. Simulator is used by one or multiple civil servant(s) in order to learn processes. Consequently the simulator assumes that models are valid, it provides facilities to enrich the model in order to make it runnable. During the simulation, the environment tool provides facilities to monitor the execution of a business process and check if non-functional properties (such KPI or latency for example) are fulfilled by the user that is executing the simulation process.
Ontology Recommendation	No	TRL 5	FHNW	Ontology provides the semantic meta models for expressing a shared understanding of meaning and for automatic reasoning. Ontology builds the basis for creating, executing and monitoring business processes and information to be used for automatically providing services and information, guiding the learner in both online and offline learning, and measuring the success of learning via KPIs.
Model Verification Component	No	TRL 4	UNICAM	The model verification component provides functionalities for analysing the Business Processes and eventually related model created within the modelling environment before importing in the Learn Pad platform. It defines and implements automated procedures to formal verify that models actually include all desired instances and respect predefined properties (i.e. deadlock and livelock). At the same time it is possible to include and extend the components in order to introduce further model verification approaches.

Table 4. Learn PAd Software Exploitation items

4.3. Individual Contributions to Exploitation

Individual exploitation plans for each partner were provided in D9.2 deliverable. In this deliverable individual exploitation plans are refined

4.3.1. NME Individual Exploitation Plans

NME is a leader of WP9 Dissemination and Exploitation, thus it will play a proactive role in leading collaborative exploitation activities as described in previous chapters. Darius Silingas is assigned as Exploitation Leader for Learn PAd project and he will play the Exploitation Leader role, which is responsible for assessing the needs and assigning responsible partners as Deployment Leader and Technical Consultant(s), in cases where leads are resulting from shared project dissemination activities (as opposed to leads that are generated by individual partners activities). NME will also leverage its international partner network to involve Business Consultants who can establish a longer term collaboration with public administration organizations on adopting Learn PAd approach in selected initiatives and institutionalizing Learn PAd approach in the organization.

NME will also play a role of Deployment Leader and Technical Consultant in adopting Learn PAd modeling environment component in cases when a public administration chooses MagicDraw / Cameo Business Modeler as its modeling environment.

In addition, NME also plans to perform the following individual exploitation activities:

- Implement and offer to its customer a free Learn PAd plug-in for Cameo Business Modeler, which provides a partial implementation of Learn PAd metamodel and adapter for Learn PAd platform (the first stable version to be released at M24);
- Directly contact all NME customers from European public administration sector, find out their interest in Learn PAd, assess their needs, and build a proof of concept in collaboration with Learn PAd partners if necessary (start at M24);
- Build Learn PAd proof of concept (PoC) demonstrator within Object Management Group (OMG) for managing knowledge about its standardisation processes and enabling learning about them (start at M24 when a stable Learn PAd platform is available);
- Evaluate a possibility to use Learn PAd platform for managing NME professional services processes and associated knowledge resources (by the end of Learn PAd project);
- Consider using fragments of Learn PAd approach (mainly integration of modeling environment and collaborative knowledge management workspace) with NME technology stack (Cameo Business Modeler + Cameo Collaborator) as opposed to open source software components produced by Learn PAd.

NME aims to generate at least 10 quality leads interested in Learn PAd approach, and establish at least 1 project for building and demonstrating PoC for a specific public administration body.

4.3.2. BOC Individual Exploitation Plans

BOCs individual exploitation plan is based on the generic two phase approach, where in the

- first phase; results from EU projects are transferred onto the Innovation shop and
- then picked up by the software and service development department in the second phase.

The transfer from project results into the product and service development has typically three major challenges:

1. The time where the result is provided is typically not matching the time window where such results are requested, so there is the need to safely store and evolve the results over a certain time period in order to provide the results when they are needed.
2. The maturity and the level of detail are typically in research projects different than in software and service development. Hence, typical research results need to evolve in terms of details – especially on non-research relevant topics such as user interface styles, supported standards etc.- as well as in terms of maturity, which is often not recognised from the user – as there has to be a shift from "proof-of-concept" implementation towards a "maintainable and migrate able" implementation that is manageable by the software and service development team.
3. The third aspect is the strategic or cultural aspect, which can be drilled down to the decision between a short term investments for immediate customer benefits compared to a long term investment for new customer demands. Selecting the right balance is typically influenced by many factors that do not belong to the project.

BOC selected the Innovation Shop for the Learn PAd results, which is realised as the "www.adoxx.org" portal as shown in Figure 1. Hence, in the following the results from Learn PAd are in the first phase provided on the innovation shop "www.adoxx.org" and hence freely provided to the academic and research community. Relevant parts are in the second phase incorporated into the software and service development.

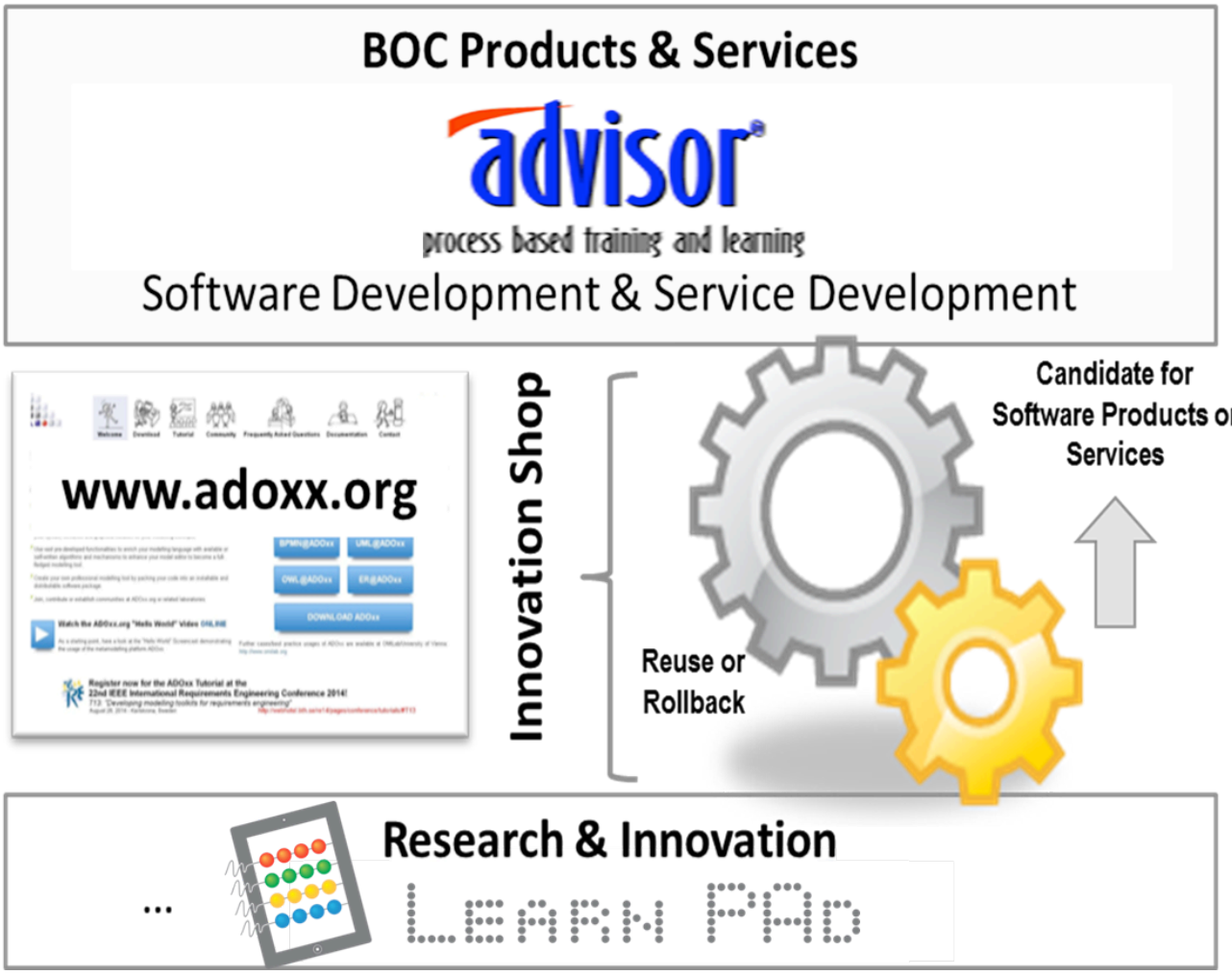

Figure 8.1 Innovation Shop as Bridge from EU Project to Product

As already mentioned the research and innovation results from Learn PAd will be transferred in the first step onto the Innovation Shop, which mainly requires a separation of concerns to create generic and re-useable functional parts, and provide additional descriptions and demonstration samples, to enable the re-use of the results by developers that do not have an Learn PAd context.

BOC plans to perform in following areas the following individual exploitation activities;

- Public
  - The Learn PAd Modelling Environment, which is implemented on ADOxx academic version, will be make open use to adoxx.org community
  - The solution developed with the Learn PAd project will be provided in form of standalone solution packages, so method engineers can use, integrate or modify specific solutions
  - As well as documentation about Modelling Environment and solution packages will be provided on adoxx.org
- Within BOC
  - The implemented solution regarding Learn PAd Modelling Environment and collaboration with XWiki, will be evaluated as possible extension of BOC Product (Advisior® , also may be ADONIS®)
  - The Learn PAd Public Administration Processes will be use as sample scenario to demonstrate abilities of Learn PAd Modelling Environment to the BOC Product Managers, eventually to possible candidates (data within the models will be anonymized)
- Education
  - Since BOC is in tight collaboration with University of Vienna, the findings of Learn PAd will be provided as input to the relevant classes.
  - On the other hand, the findings of Learn PAd will be used as input and as an application scenario within ADOxx.org Tutorials and ADOxx.org Trainings

4.3.3. MAR Individual Exploitation Plans

Implementation of a Process-Oriented and Knowledge Management based approach to collaborative learning: a possible innovation/exploitation scenario in the Marche region.

Following a successful completion of the validation of the platform and its positive evaluation, appreciation and testing by local authorities and civil servants, Marche Region could consider to reuse and exploit an upgrade of the Learn PAd platform, specifically for the SUAP/OSS purposes, due to its peculiar areas of application which could be:

- managing organizational improvements, derived from:
  - evolutions from law reformations
  - internal or coordinated optimizations of work processes
  - standardization of contents, such as proceedings, forms, documents, front-end information, etc.
  - changes suggested by public performance monitoring activities
- providing training and simulation environments :
  - to individual civil servants (distance education, learning by doing, training on the job, provision of help desk online)
  - to share a specific knowledge among communities of users (teamworking and collaborative learning, social environments to connect people and collect contributes, semantic search engines)
- communicating and providing transparency to citizens and businesses, even from abroad.

Although having operational back-offices and training the OSS personnel are important aspects, the current historical moment and the political will of the new Regional Council require to invest mainly on issues related to the simplification and rationalization of the front-offices to the end users of the PA services, through concrete efforts for reorganization and clarification of the interfaces to present smarter and easily updated information contents, e-services, forms, work-flows and processes towards productive activities and their intermediaries.

In this case the target audience to involve could be represented by:

- INTERNAL ACTORS OF MARCHE REGION
  - Standing regional board for business activities ruled by public administrations (and its technical working groups: agriculture, commerce, construction building and city planning, health, ICT, environment and territory, industry and crafts, legal affairs, mining, tourism, transport), coordinated by PF Liberalization and simplification of production activities.
  - Regional School for Public Administration.
  - PF Information systems and telematics.
- REGIONAL USERS
  - OSS/SUAP (237 Municipalities).
  - Other local Public Administrations involved (45 institutions).
  - Enterprises: Associations and professional intermediaries.
- EXTERNAL USERS OR ENABLERS
  - The regions of Emilia-Romagna, Lazio, Marche, Tuscany, Umbria that signed the protocol "Italia mediana" to share the most relevant ICT actions of their digital agendas (DGR n. 203 20 March 2015), eg for the actions B (interregional communities of practice), IM09 (federated e-learning platforms), IM19 (repository of public business processes).
  - Other Italian Regions and autonomous Provinces (22 institutions) through the mediation of the CISIS (interregional center for information systems, geographical and statistical) or of the Committee on productive activities of the State-Regions Conference (chaired by the Marche) or on ICT and digital agendas (chaired by Trentino Alto Adige).
  - National Government, ANCI and UPI local authorities of Italy, Union of Chambers of Commerce, INPS, INAIL and other national players involved in the project “Impresa in un giorno” (company in a day).
  - AgID (Italian Digital Agency), Formez (Center for services, assistance, studies and training for the modernization of PA), MIUR (Ministry of Education, University and Research), etc.

The possible exploitation activities could also be extended towards new interesting scenarios other than SUAP. So, a possible road map of the overall innovation exploitation scenario could be:

1. STEP I – PROVIDE LEARNING TO SUAP STACKHOLDERS
   a. Organizing the participation of all regional PA users to the e-learning activities managed by the regional School.
   b. Involving enterprises, professionals and private users from Marche in suggesting and testing future learning or training on the job implementation scenarios.
2. STEP II – EVOLVING AND SCALING THE BP BASED ICT SYSTEMS
   a. Managing federated identities and roles of users.
   b. Platforms integration and applications cooperation among all regional involved existing IT systems (FedCohesion regional authentication system - to be made

as soon as possible interoperable with the SPID national layer; ProcediMarche - local PAs registry of business processes and related online services; regional document and dematerialization systems, such as PALEO, the protocol and sorting system and sorting and Marche DigiP, the pole of digital conservation; MARIUS - a project for the interoperabily of administrative and legal data among different local authorities; Mcloud Project Community - a multi-purpose and multi-community repository of contents and documents based on Alfresco and open source technologies; MarcheImpresa - the regional front-end portal for businesses and SMEs; the LearnPAD platform itself; …).

c. Re-using, even partially, digital contents, services and informative systems related to the SUAP/OSS theme from other Regions and countries.
d. Open data (Marche GoOD PA project), videoconferencing and e-learning platform (Videohub project, Marlene - Marche Learning Network project), digital knowledge interoperability and semantic systems (NeSSo project - a semantic social network, LOGIN project - the digital record of the citizen) that are or will be derived from the Marche Digital Agenda (DGR n. 1686 16 December 2013) and from the Marche ROP ERDF or ESF for the 2014-2020 programming period (Thematic Objective: 2 - eGovernment).
e. Re-engineering and migrating services towards an open source Cloud Environment (based on Open Stack and KVM technologies), harnessing above all the properties of elasticity and scalability; e.g. MCloud (funded and implemented by Marche Region), OCP Open City Platform (funded by MIUR. Marche Region is an experimenter), CIRCLE (formerly known as Cloud4SmarterRegions, proposed by AgID for a call Horizon to enable PCP practices. Marche Region is a supporter): they represent three cloud computing IaaS, PaaS, SaaS environments/projects for providing innovative eGovernment services at supra-regional, national and european levels. For instance the LearnPAd testbed will be hosted in the MCloud IaaS Datacenter managed by Marche Region.
f. Financing with the ERDF fund (Thematic Objectives: 1 - innovation and 3 - competitivity) local integrated projects by ICT companies, private actors or associations joining the Smart Cities and Communities regional Cluster, networks of SMEs, research institutes, centers and University, if they are interested in participating to the local tenders/calls for funding for the digital growth or the eCluster initiative (DGR n. 234 30 March 2015) of the 2014-2020 programming period and in developing and integrating their own software or projects (such as OSS management systems or systems for the design of workflow applications and so on) within the Learn PAd applicative infrastructure. These objectives could also be achieved by participating together in new EU community projects (eg. Horizon 2020) in order to strengthen or specialize the results.

3. STEP III – BROADEN THE BASE
   a. Extending the mapping of processes to the most relevant public use cases (eg public tenders).
   b. Involving external users at inter-regional and national level in BPML activities and training courses.

4.3.4. XWIKI Individual Exploitation Plans

As a collaboration and data driven enterprise software vendor, XWiki has an interest in Business Process Modelling but lacks the expertise to lead a sales mission, therefore XWiki plans to play a supporting role in marketing and/or sales activities sponsored by BOC and

NME in exploiting the opportunities of the LearnPAd platform for identified target markets, including but not limited to Public Administration.
In addition, XWIKI also plans to embark on the following individual activities:

- Evaluate business model for XWIKI in support activities for expert partners in modelling
- Speak with customers and potential customers about the possible benefits of the LearnPAd solution in their environment
- Evaluate Learn PAd components for possible reuse as independent XWiki extensions or as improvements to The XWiki Product
- Evaluate Learn PAd components for possible reuse as independent Open Source Projects within the XWiki Open Source Ecosystem

4.3.5. UNICAM Individual Exploitation Plans

In chapter
Exploitation within UNICAM is done twofold:

- Consulting activities within UNICAM, Public Administrations in the Marche Region and also Companies.
- Extension of the curriculum of courses in Enterprise Information Systems

UniCam plans the following individual exploitation activities:

- Since UniCam work close with several Public Administrations and SME it can act as a consultancy and service provider, the results of the Learn PAd project will have strong influence on forward looking consultancy projects and novel development project in the area of business process management.
- In the master degree of Computer Science we have a curriculum in Enterprise Information Systems aiming at integrating management concepts and information technology (IT).T his results in a combination of expertise which is a prerequisite to successfully develop IT solutions for business and to provide information products and services. Here, the results of Learn PAd will also influence the curricula with respect to modelling language improving business processes based on collaborative learning.revise

UniCam aims to generate at least 5 novel partners interested in Learn PAd approach, and establish at least 1 new project for building and demonstrating how Business Process ca be used in learning. Then UniCam aims to improve the number of students in the Master course (around 10%).

4.3.6. UDA Individual Exploitation Plans

UDA is the leader of WP3 “Approaches Enabling Model Based-Learning”, it has designed the Learn PAd metamodel used by other partner like NME and BOC in order to implement the modelling Environment platform used for representing the Business Processes in Public Administrations. The acquired knowledge permits UDA to exploit it in the following scenarios:

- Education: the research and innovation results obtained from Learn PAd will be used in the Model Driven Engineering course held at the last semester of the local degree program in Computer Science. The goal is to improve the experience of our students with respect to Business Processes Modeling and Knowledge representation and to let them deal with the industrial scale complexity of the adopted modelling notations. The modelling platform represents also an interesting workbench for letting the student experiment with new ideas and for their implementation in terms of advanced model management components.

- Within UDA: Dematerialisation is a social and technological process that involves converting any paper document into a suitable digital format, accessible by computer, aimed at the destruction of materiality, so as to benefit from the significant advantages offered by the technology. The Learn PAd Metamodel will be exploit to design a pilot project in the University of L'Aquila in order to implement the dematerialisation of the documents in order to improve processes, services and knowledge sharing among officers of the University. The intention is to develop a Learn PAd model consisting of all its components (e.g. process model, organization model, competency; model, etc.) and share it among other university in the same region by customizing the organization model and those components which are very much related to the process enactment environment.

4.3.7. FHNW Individual Exploitation Plans

Exploitation within FHNW is done fourfold

- In cooperation with the learning.lab results of the Learn PAd project can find its way into education
- consulting activities within FHNW's Institute for Information Systems (IWI)
- extension of the curriculum of courses in knowledge and information management
- contribution to recommendations of BPM working group.

FHNW plans the following individual exploitation activities:

- In FHNW's learning.lab new ways of learning are constantly investigated and explored. The new ways of collaborate learning based on meta models developed in Learn PAd can be transferred to other application domains and further improved. We will support the learnig.lab in identifying application scenarios best suitable for this kind of learning and in implementing the approach.
- Since FHNW's Institute for Information Systems (IWI) is a consultancy and service provider especially for SME and local authorities, the results of the Learn PAd project will have strong influence on forward looking consultancy projects in the area of business process management.
- In continuous education FHNW teaches managers of public administrations in topics of modern business process management methods. Here, the results of Learn PAd will also influence the curricula of knowledge and information management with respect to improving business processes based on collaborative learning.
- As FHNW is a member of the Swiss standardization initiative (eCH), the results of Learn PAd can directly influence the recommendations of the BPM working group, where FHNW is a member of.

FHNW will

- create a proposal for a new course in continuous education for model-based and process-orient individual learning and new ways of organisational learning
- submit a proposal to eCH BPM expert group on how model-based and process-orient learning in public administrations could be implemented.

4.3.8. CNR Individual Exploitation Plans

CNR is the Learn PAd ccordinator and contributes mainly to the R&D activities in WP4 and WP6. CNR is an academic body and as such it is mostly interested in exploiting the project achievements in advancing the state of art and in fostering the adoption of results obtained in follow-up research projects.

In particular, CNR intends to exploit the results of Learn PAd to enhance its position as a leading expert in both software engineering and BPM communities. Therefore, CNR aims at

improving its expertise in engineering both e-learning software systems, and business process-based scenarios.
With reference to the joint exploitation strategy as a virtual enterprise after the project termination, most notably CNR will lead the exploitation of the Content Analysis Component and the Questionnaire Manager, and is interested in continuing the R&D activity of both components. CNR will also be involved in the continual refinement and improvement of the simulation part, with specific reference to the monitoring of learners acitvities for assessment purposes. More in general, as an academic partner CNR will continue its contribution to foster adoption and exploitation of open source components.
With reference to the competences involved, CNR aims at improving its expertise in modelling and validation of technology-enhanced learning systems. In particular, the fields mostly involved include formal verification; linguistic quality evaluation; model-based testing approaches, and monitoring. CNR intends to exploit the reputation and expertise acquired in such fields thanks to Learn PAd activity towards two main directions:

- at European level, to enlarge its network of co-operations and to foster new related follow-up projects in Horizon 2020;
- at national level, to provide guidance and consultancy to PAs who will be convinced to explore Learn PAd applicability into their departments.

We plan to start at least one new Euroepan project and one National project on related topic. Moreover as a Government funded body, CNR is committed to collaborate with PAs and to provide technical and scientific support: therefore spreading and transferring Learn PAd results would perfectly fit with its mission.

Finally, CNR is itself governed as a Public Administration and it is formed by several premises distributed all over Italy and coordinated from the central administration in Rome. As such, the group involved in the project will promote the project to stir the adoption of the technology itself within the overall administration to facilitate governance.

4.3.9. LIN Individual Exploitation Plans

LIN ’s main exploitation opportunities deal with the possibility of enhancing its open–source software portfolio and increasing the awareness about its OpenPaaS (www.open-paas.org) Cloud enabled collaborative platform. Among the collaborative services provided by the OpenPaaS platform, a BPMN 2.0 designer and run-time is under development. The results of Learn PAd in particular the simulator will enrich the OpenPaaS platform with added value services.
Main customer’s base of LIN are administrations; half French ministries are using our OBM mailing solution and our plan is to provide them the OpenPaaS platform as a next generation collaborative solution. Moreover our plan is to push open-source Learn PAd results, especially simulator, toward customers we already have in these market in order to accelerate natural diffusion coming from the open–source channel. Consequently many OpenPaaS users will be civil servants that will have the possibility to take benefits of the Learn Pad simulation service as part of the provided BPM services.
LIN will exploit OpenPaaS platform and thus Learn Pad services according to:

- SaaS business model: Customers will pay subscription in order to use the platform. Prices model is based on a per user/per month basis and depends on the requested services. The BPM service portfolio will be then composed of a BPMN 2.0 modeler, an execution engine and a simulator.
- Open–source business model: Customers pay to obtain professional services such as training, consulting, support, adaptation on the community solution.

Note: OpenPaaS is jointly developed by Linagora and XWiki in the frame of a French funded research project leaded by Linagora. Consequently other joined exploitation opportunities

based on open-source business model will be studied before the end of the LearnPad project.

5. Summary and Conclusions

The deliverable provides a report about intermediate achievements of Learn PAd dissemination and standardization activities. Based on project reviewers' request, it also includes a preliminary version of the exploitation strategy and of a collaborative exploitation process with clearly identified activities, performer roles, exploitation items and expected individual partners' contribution to the collaborative exploitation process as well as their individual exploitation plans.

The following conclusions can be made:

- Dissemination performance is in a good overall shape:
  - Dissemination infrastructure is fully established;
  - The intermediate dissemination achievements are mostly in line with planned KPIs targets;
  - Some dissemination KPIs targets have been revised due to the current status of achievements and to the re-evaluation of channels real effectiveness;
  - Some social network channels need reinforcement actions since they remain to be very important but their performance lags behind the planned KPIs targets;
  - There are a number of concretely planned actions for the future dissemination, which provides a solid basis for reaching overall dissemination objectives and improving performance of channels where performance gaps were identified.
- The formal standardization objective (the KPI target of 2 presentations at OMG) has been achieved, but there is a strong commitment of the Consortium to continue standardization-related activities;
- The exploitation activities will be of major focus after M24, when a stable software release will be available, however a common exploitation strategy and a powerful collaborative process have been defined, coordinated and agreed between Learn PAd partners. Also, all the partners revised their individual exploitation plans.