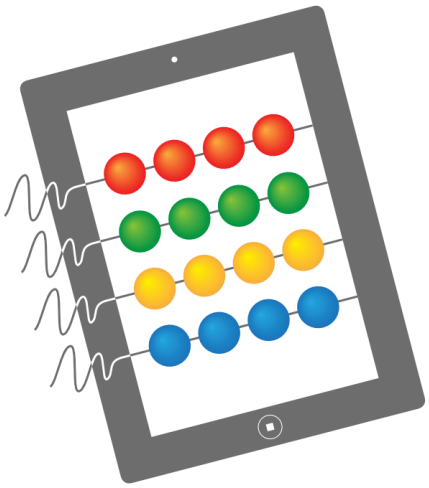
FP7 ICT STREP Project



LEARN PAD

Deliverable D8.4

Demonstrators assessment

http://www.learnpad.eu

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Abstract

Work Package 8, titled Demonstrators, aimed at providing support to the technical and research work-packages for better focusing on their activities, and at assessing the applicability, acceptance and effectiveness of the proposed solutions. An early validation was carried out considering the first running instance of the Learn PAd platform available (since 06 November 2015). A group of users, sampled from both project demonstrators (EPBR and SUAP), tested the Learn PAd platform and provided us with feedback and comments to improve it. From a methodological perspective, in the early validation we run a questionnaire and collected technical and detailed opinions from a focus group with influential people, skilled in computer science or in education.

In this deliverable we present the aims, setting and results of the final validation run on the latest running instance of the Learn PAd platform available, which includes all the Learn PAd definitive components. From a methodological perspective, in the final validation we submitted a questionnaire ex-ante to assess learners' competences and experiences, and a questionnaire ex-post to assess their possible improvements in knowledge, skills and competence, acquired at the conclusion of a training session lasting two working weeks (since 14 September 2016). The ex-post questionnaire also aimed at surveying the degree of user satisfaction and engagement and at asking their opinion regarding usability, efficacy and completeness of the Learn PAd Platform. The final validation involved 61 users (31 learners were involved in using the Learn Pad platform and 30 learners, referred to as the matching control group, worked within another regional e-learning platform called MARLENE).

Keyword list

Business Process, European Project Budget Report, Modelling Environment, Learning Platform, Public Administration, Sportello Unico Attività Produttive, One Stop Shop, Validation, Accessibility, User Experience, Gamification, Titolo Unico, Segnalazione Certificata di Inizio Attività, Urban Variant, Conference of Services, European Qualifications Framework, Learning Material, Simulation, Recommender, Key Performance Indicators, Learning approach

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Document Review

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ToC	October 3, 2016	0.1	Antonia Bertolino, Barbara Re	Suggestion to add the learning approach description
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Internal release	October 24, 2016	2.x	Antonia Bertolino	
Candidate final	October 27, 2016	3.0		

Glossary, acronyms & abbreviations

Item	Description
Accessibility	In computer science is the characteristic of a computing system to be easily usable by any user, regardless of his sensory, motor or psychic individual capacities, of any temporary or permanent disability, of even cultural aspects or aspects relating to familiarity with the use of ICT interfaces.
Bloom's taxonomy	is a set of three hierarchical models (covering the learning objectives in cognitive, affective and sensory domains) used to classify educational learning objectives into levels of complexity and specificity.
BP	Business Process
CoS	Conference of Services
EPBR	European Project Budget Report
EQF	European Qualifications Framework
Gamification	The use of elements borrowed from the games and other fun techniques, adapted to external contexts (eg. scores, levels, rewards, badges, gifts and other loyalty methods or practices to arouse interest or contribute to the user satisfaction)
Item	Description
KPI	Key Performance Indicators set to measure strategic, organizational and learning goals
Learning Approach	The overall architecture adopted by the Learn PAd project, mapping the Methodology (inspired by targets, context and existing learning paradigms for PAs), the choices made (referred to the centrality of the work processes, the transmission of knowledge and useful competences, the interactive didactic methodologies and the mix of e-learning models: self learning, assisted learning, collaborative learning, organizational learning), the subjects to be involved (mandants, modelers, learners, experts) and the evaluation system (based on a KPI Dashboard)
Learning Material	All entities not representing models but relevant for learning as books, tutorials, learning audio and video file but also browsing and simulation
MARLENE	Marche Learning Network e-learning platform
OSS	One Stop Shop for Productive Activities (synonym of SUAP)
PA	Public Administration

Item	Description
Recommender	Learning mode that provide semantically contextualized learning content (according to the user profile or the functionalities he/she is playing) through a side bar of the Learn PAd platform
SCIA	'Segnalazione Certificata di Inizio Attività' means in English certified report for starting a business activity; here used to name another kind of SUAP business process
Simulation	Learning mode that simulates the executing of (part of) a process in a training environment with training data
SUAP	Sportello Unico Attività Produttive
Titolo Unico	'Titolo unico' means in English standard request for starting a business activity; here used to name the business process considered
Urban Variant	Is another kind of SUAP business process, according to which the entrepreneur's request makes necessary to involve the city council in formally changing the urbanistic destination of a zone from its original plan
UX	User Experience. The subjective feelings that an user experienced using an ICT system, with reference to the empiric and affective aspects, to the value and meaning attribution he/she related to the availability and the interaction with the solution, as well as to the overall perceptions and personal thoughts he/she had about its effectiveness, the ease of use of the interface, the system's efficiency, etc.

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1 Introduction

1.1 Purpose

In the context of the Learn Pad project, demonstrators (i) help the technical and research work-packages to better focus their activities; and (ii) they permit to assess the applicability, acceptance and effectiveness of the proposed solution within real working contexts. According to WP8 objectives we had to validate project results considering the platform effectiveness in supporting civil servants training and collaborative activities, by directly involving the end users. During the third year of execution of the project, the objectives of the demonstrators evolved according to the state of development of the project, taking in deep consideration the effort of the whole consortium and of the partners in each single WP and deliverable that represented, for the platform, a new release, an empowerment or a content adapting request.

In the Y2 report the reviewers set some specific requirements for such validation related to the size and the quality of the experiment, which had to provide statistically meaningful conclusions. They also asked to test the effectiveness of the conceptual learning framework in order to assess some real tangible learning goals achieved by the civil servants using the Learn PAd platform in the workplace.

We focused on the case of OSS (SUAP) to be able to involve the largest number of available users around a community of practice clearly identified. To pursue the required results, the final validation has been planned to last a minimum of two weeks, while the experimenters, involved in the SUAP management processes, had continued working as usual in their daily duties and routines.
The validation, better described in Section 3.2, was carried out dividing the 72 recruited people in two groups, equally populated and as homogeneous as possible: the users of a running instance of the Learn PAd platform (available at the address http://Learn_PAd.regione.marche.it:8080/xwiki/) and the control group, using MARLENE, a more traditional e-learning Moodle platform, already available in the Marche Region (http://marlenescuola.regione.marche.it/moodle/).
A previous questionnaire was provided to all the experimenters, to define ex ante their own master data and the status of their experience, EQF competences and expertise in the matter of the course.
Subsequently, after the two weeks trial, a more detailed ex post questionnaire - always the same for both groups - had been submitted to retrieve useful data in order to understand if and how those platforms had helped them to learn, and the judgment they gave to this experience, in terms of usability and effectiveness. At the end of the experimentation we received back 61 compiled questionnaires.
These data, both measurable and based on comments to be interpreted and represented in verbal form, were anonymized, aggregated and processed to provide a clearer picture of the evaluation results, as explained later.

1.2 Related deliverables

The following documents have been taken as reference points:

- D1.2. Requirements Assessment Report. This deliverable was considered as it reports on assessment of realization status of those requirements that have been collected, analysed, and reported in D1.1.

- D2.4 Core Platform Implementation – Second Version. The deliverable consists of a second and final version of the Learn PAd core platform, and is of software nature.
- D5.4 - KPI Ontology and Learners Assessment Mechanism. This deliverable describes the design of a comprehensive solution to enable PA employees meeting their business goals on a strategic and operational level, deriving operational goals, learning goals and competencies needed to achieve a correct execution of relevant business processes. It outlines the typical goals and KPIs required to plan and track learning in a real workplace environment taking as example the "Titolo Unico" SUAP process.
- D8.1. Demonstrators BP and Knowledge models. The document identifies the demonstrators related to the Learn PAd project within the two following scenarios: European Project Budget Reporting and "Sportello Unico Attività Produttive".
- D8.1. (Addendum) User Perspective and Project Evaluation Strategies. This additional deliverable was triggered by the exigency of a deeper understanding of user needs is required. It is referred as it provided early insights and guidelines on how the evaluation of the implementation should be carried out.
- D8.2. Platform Prototype Early Validation Results. It reports the results of the previous validation which have been compared with the results showed in the present deliverable.
- D8.3. Demonstrators Populated Learning Platform. It consists of the final version of the Learn PAd content for the two demonstrators developed in the project: European Project Budget Report (EPBR), and Sportello Unico Attività Produttive (SUAP). The deliverable is of software and report nature and it provides the official released version of content, also including information on how such contents can be accessed. In particular, we refer to both the Learn PAd Modeling Environment and the Learn PAd Learning Platform.

Moreover, the validation used as a background the following deliverables whose nature is Report, Software or both:

- D3.3 - Final Learn PAd Metamodels and Implementation of Model Transformations for Managing Business Processes Models in Public Administrations
- D4.3 - Quality Assessment Mechanisms Implementation
- D5.1 - Models for Setting the Wiki
- D5.5 - Semantics for the Wiki – Final Iteration
- D6.3 - Learn PAd Simulation Environment: Final release
- D7.2 Integration Tools and Systems
- D9.5 Technology-oriented Learn Pad white paper
- D9.7 Learn PAd Exploitation Plan – Final Iteration

1.3 Structure of the deliverable

Besides this brief introduction, this deliverable is structured in three parts, respectively focusing on:

A. Learning approach (Chapter 2)

   In this chapter we highlight the learning framework defined by the consortium, describing it in terms of adopted methodology (inspired by targets, context and existing learning models for PAs), choices made, involved subjects and evaluation system. As required in the Y2 review report, the conceptual framework for learning in the workplace has been used as a reference for both to the evaluation approach and the learning goals mapped in the deployed KPI Dashboard.

B. Final validation of the platform (Chapter 3)

   This section describes the validation of the final version of the Learn PAd platform. In particular, at first we provide the results from the previous early validation, as a possible yardstick to interpret the actual findings. Then we explain how we conducted the validation describing: the functionalities of the platforms that have been tested, the chosen scenario, the validation methodology, and the developed questionnaires. Finally, the results obtained from the answers to the questionnaires are represented, and a summary of the collected feedback is reported.

C. Results and conclusions (Chapter 4)

   This section provides evidence and reports some conclusions, summarizing and finalizing the work done for the final validation.

2 Learning approach

This Chapter will illustrate the learning approach utilised for the Learn PAd project and its impact on the didactic and technological choices.

2.1 Explanation of the methodology

The architecture of the learning model proposed derives from a cross-analysis of three system variables:

a. Target characteristics
b. Characteristics of the context influencing the models and the learning objectives
c. Existing learning models for PA

a. Target characteristics

The Learn PAd project is aimed at the civil servant, therefore an adult in a working environment, who is generally used to doing highly prescriptive (typically normed by strict rules) professional activities.

The working context is still characterised by particularly fragmented working processes among the employees, a condition that does not facilitate the understanding of the logic at the basis of the professional activity of each individual.

Being an adult, the civil servant is particularly oriented at:

- **Learning from experience**: this highlights the need to focus on experiential techniques when constructing the learning setting. Such techniques make use of the learner's experience. Among them, the most efficient and common are: simulations, problem solving, and case studies.
- **Selective learning**: the adult only learns what he/she needs to know and to do in order to efficiently face real situations in life and at work.
- Being engaged by **supporting learning processes** when these are shown to assist him in tasks and problems faced in daily life. In fact the adult gains new knowledge, understanding, abilities, values and attitudes more effectively when these are presented and applied in the context of real situations.

From a technological skills perspective, the civil servant is generally accustomed to the technologies that support his/her professional activities, as well as learning systems. Furthermore there are widespread and ample technological facilities in the workplace.

b. Characteristics of the context influencing the models and the learning objectives

European and national directives regarding simplification, anti-corruption and efficiency in the PA push for reorganisation of the PA based on lean work processes, in order to ensure procedure deadlines and transparency of the decision making processes.

This change in pace has an enormous impact on the learning systems that must support said change and therefore must reorganise knowledge in terms of competence and work processes.

c. Existing learning models for PA

After an analysis of the target and the environment in which it operates, the choice of methodologies was based on the learning experiences closest to the PA context and the most common e-learning models.

Regarding the learning experience, the didactic model of the Training School of the Region of Marche, which as an internal structure exclusively trains civil servants, was adopted.

Regarding e-learning models, reference was made to the directive of the MINISTRY FOR INNOVATION AND TECHNOLOGY and the MINISTRY FOR PA concerning e-learning models for PA

This directive identifies:

- The **Self learning** model, in which the technology predominantly provides access to learning materials offering repositories of material structured and organised around self learning. Static learning courses and tools for self-assessment are proposed. In this case the user interacts almost exclusively with the content management system.
- The **assisted learning** model, in which assistants, tutors and technological staff play a role, interacting with learners, and helping them use the materials. In this model the access to materials remains important but less than in the previous model. In fact human communication mediated through the computer is present facilitating and enriching the learning process which is no longer purely based on studying materials.
- The **collaborative learning** model, in which interpersonal relations are ever more important, not only with the facilitators but also between learners. This model comprises systems based on collaboration and community practice. Activities involving cooperation between the participants are of great importance, as well as technology aimed at favouring interaction.

Regarding the model utilised by the training school of the Region of Marche for PA, the traditional learning model based on the transfer of knowledge has been superseded in favour of a model centred on the development of competences through the use of active didactic methodologies.

The basis of this methodology derived from the most common knowledge theories is the following: 'the adult in a working context learns (gains new competences and develops new attitudes) if the following conditions are met:

- Training contract: this is determined when the training offered is recognised as advantageous and useful for professional improvement, both for the learner and for the organisation. In order for this condition to exist the proposal must be made on the basis of a preliminary analysis of the work that allows the designer to identify the areas of responsibility for each participant and thereafter design a course that is coherent with their working processes.
- Active participation: the learner needs to play an active role in personally verifying the efficiency of the information provided, even if simulated, within his/her professional role. To guarantee this condition the school adopts an interactive didactic methodology oriented to solving real professional tasks.
- Mandant Involvement: from the analysis stage, the training must be strictly related to the operative goals of the organisational structure and consequently the responsibility for the learning/change does not depend solely on the school and the individual learner, but also on the entire organisational system and in particular the management.

- Assessment of the results: a further condition for effectiveness is related to the assessment of the learning outcomes. To this end, the school adopts a system monitoring all the variables that influence the overall result: assessment of the training quality, teacher assessment, competence assessment and assessment of the output quality.

2.2 The choices

On the basis of the aforementioned criteria, principled choices on the matter were made, which determined the orientation of the Learn PAd approach. These choices focus on five main principal features:

1. The centrality of the work processes as a factor orienting the organisation of the information and the content.
2. The transmission of knowledge and competences seen as useful for the learner in that they are directly connected to concrete professional experience.
3. Functional development sustaining interactive didactic methodologies oriented to solving real professional tasks, which foster active learner participation.
4. The adoption of a mix of e-learning models from which the most functional and target oriented features were selected.
5. The adoption of a collaborative learning perspective that can support changes in the organizational processes.

The table below presents the solutions selected at a training system level based on the choices in the matter.

	Models and standards at the basis of Learn PAd	Didactic/technological solutions adopted
Centrality of the work processes	• Business process model • Organisational model related to recommender • Document model • KPI model	Interactive graphic representation of the work processes
Transmission of knowledge and competences seen as useful	• Business process model • Competence model • Document model • KPI model	Interactive graphic representation of the work processes Simulation based on real case studies Availability of forms to support explanation of the professional activity
Interactive didactic methodologies oriented to solving real professional tasks	• Organisational model • Business process model • Case Management Model	Simulation Gamification Recommender Commenting and providing contributions

Mix of e-learning models	Use of WIKI technology	Self learning model • Browsing mode • Integrative didactic material for self learning and individual in-depth study Assisted learning model • Expert consultation • Recommender • Simulation Collaborative learning model • Feedback vs. modeller • Comment vs. platform • Collaborative simulation
Adoption of a collaborative learning perspective that can support changes in the organizational processes.	Use of WIKI technology	Feedbacks; Commenting and providing contributions.

Table 1 Central choices mapped in the models and didactic solutions adopted within the Learn PAd approach

2.3 Subjects involved

Learn PAd learning model involves in its processes a set of actors that support the different phase of the process modelling and implementation. They are:

The mandant

The mandant is always an internal staff member within the organisation promoting the training process, who corresponds to (some of) the descriptions below:

- He/she contributes to the description and mapping of the business processes and organisational model.
- He/she defines the strategic, organisational and operative goals in collaboration with the modeller.
- He/she is the decision maker with respect to learning policies within the unit or organisation.
- He/she receives the results of the learning processes and in this role he/she is also responsible for the learning impact.
- He/she is the final decision maker with respect to proposals for innovation presented by the modeller on the basis of feedback from the learners.

The modeller

The modeller manages the design, maintenance, and modifications of models and contents of the platform, also taking into account learner feedback. In this environment he/she is responsible for the assessment of feedback quality and of its impact on the models.

It is up to the modeller to valorise potential aspects for innovation coming from the learner feedback. He/she is therefore the principal guarantor for the process of model innovation.

The learner

The learner is always an internal staff member within the organisation promoting the training process.

He/she is responsible for individual learning.

The said learner is also co-producer of knowledge through the production of feedback, interaction with experts, production of learning objects, and interaction with other learners.

The expert

May be internal/ external to the organisation.

- He/she is responsible for the thematic in-depth learning.
- He/she responds to learner requests regarding specifics to the course.
- He/she assesses the importance and the quality of feedback relative to potential innovation or changes within the business process. He/she relates to the modeller and the mandant regarding decision impacting on the model.

2.4 Evaluation system

The evaluation approach adopted, in coherence with the methodological choices, has two primary objectives:

a. Evaluate the learning process by measuring competences before and after the training and evaluate the improvement in worker performance.
   The learning assessment is made by utilising the definitions of KPI sets which group data relative to the quality of worker performance, correlated to strategic, organisational and operative goals.
   In this manner the logic behind the work processes, a fundamental element in the learning process, is retained.
   Such validation should be done over a long period, and extended to the organization (not only individual) level.

b. Evaluate the efficiency of the platform using indicators that monitor the levels and quality of the learner/platform interaction. At the same time the efficiency of the didactic methodology adopted can be evaluated.
   The KPI dashboard collects and provides information relative to the intensity of platform usage (greater or lesser application of the tools present on the platform such as simulation, the use of materials and the recommender etc.) and therefore contributes to a better understanding, also indirectly, of the effectiveness of some methodologies in respect to others, and in relation to the type of user.

The evaluation system based on KPI model is described in detail in Deliverable 5.4.

3 Learn Pad Platform: final validation

According to Deliverable 8.1 addendum and considering the latest suggestions recommended by the reviewers, the Learn PAd consortium carefully considered different strategies for the assessment of project results and for getting indications that may help the analysis of impact for potential adopters. During the early validation we aimed to collect as much feedback as possible to properly address the prototyping activity of the final version of the Learn PAd platform. In the final validation we collected a more detailed amount of data and comments to be evaluated.

This chapter describes the final validation we carried out on the Learn PAd platform at the end of the project. The assessment of the Learn PAd platform has been done on the version deployed on a test-bed settled in the cloud datacenter of Marche Region in Ancona, and available at the address http://LearnPAd.regione.marche.it:8080/xwiki/ (release 14 September 2016). In parallel a control group tried and tested another regional e-learning platform "MARLENE (http://marlenescuola.regione.marche.it/moodle/) to be able to compare the achievements, in terms of measurable learning goals, and the opinions of the learners about the two different learning environments.

Despite the different ways of use, the content enjoyed by the two groups were essentially similar and related to the SUAP "Titolo Unico" work processes in the organization of a conference of Services.

We decided to perform an assessment aiming at examining the overall status of the project according to the different learning paradigms, as described in the previous chapter, and the various aspects related to the activities that an employee has to carry out within a BP enactment.

All the didactic and technological solutions, released and adopted coherently with the Learn PAd learning approach, have been evaluated considering both the users learning profit results (also analyzing the answers they give grouped by clusters of enabling functionalities), and their opinions on the usability of the proposed functionalities.

We focused on a specific set of models related to the SUAP scenario, which has been implemented in terms of contents and learning materials, according to the specific functionalities of each platform, as we better describe later. In particular, the platform final validation involved a quantitative assessment and the collection and analysis of data and feedback via questionnaires.

The chapter is organized as follows. In section 3.1 we resume the results obtained from the early validation at M18. In Section 3.2 we describe how and for what scenario we conducted the validation. We also introduce the main features of the two platforms and present the questions asked in the questionnaires, together with the ratio of their provision. In Section 3.3 we present in facts and figures the characteristic data representing the samples and the results obtained from the collected answers. Then in Section 3.4 we report a summary derived from all the verbose feedback we collected from the users (which will be reported in appendix).

3.1 Results from early validation

The main results obtained from the early validation are summarized in the table below, which represents the average opinions of the members who participated in the 2015 tests, answering on specific questions related to the perceived characteristics of the platform (usability, effectiveness, accessibility, innovation, etc.). The majority of these questions was proposed again in the final validation, in order to set a comparative meter with reference to the possible evolutions found on the current Learn PAd platform

functionalities. So these values, even if collected by only 7 testers of an earlier version of the platform (as of 6 november 2015) that had been assisted by platform experts, will be also considered and compared in section 3.3.

Criterions	Average rating during the early evaluation phase [from 1 = low to 5 = high]
Overall degree of satisfaction in the use of this e-learning solution	3,14
Degree of effectiveness of the various functionalities available within the platform	3,32
Degree of usability, ease of use and accessibility	2,42
Degree of completeness of the available features	3,42
Degree of integration and homogeneity of all the modules available within the learning environment	3,42
Degree of innovation of the proposed solution	4,33
Degree of usefulness and appropriateness of the platform with respect to the training needs of learners	4,00
Detected need of a greater presence of a wizard-driven content fruition	3,71
Detected need of a greater presence of gamification features	4,20
Detected need of a greater presence of an appropriate use of multimedia	4,71
Detected need of a greater presence of interactivity between learner and content	4,50
Detected need of a greater presence of multilingualism or explanatory technical vocabularies	4,28
Detected need of a greater presence of tutoring and external teaching support	4,00

Table 2 Usability results from the early validation

3.2 Validation into practice

In this section we describe in detail how we practically run the validation tests of the Learn PAd platform, in combination with a matching control group using MARLENE e-learning platform. We report the used methodology and we describe the validation scenario supported by the final instance of the Learn PAd platform (as well as by the moodle training module proposed within MARLENE). Finally, we introduce the ex ante and ex post questionnaires we developed for the evaluation purposes (in the appendix we report the Italian verbatim version of these questionnaires).

Such validation involved a total number of 72 end-users of the SUAP demonstrator, who had no knowledge of the learning platforms before the validation, and that have been invited to join by Marche Region, having confirmed their readiness to participate in the tests. 36 were asked to use the Learn PAd platform; 36 too were asked to test the MARLENE platform.
Eventually, we collected 61 answered questionnaires (31 from the Learn PAd users and 30 from the MARLENE users). The received data and feedback are reported in Sections 3.3 and 3.4 of this deliverable.

As for the Learn PAd platform validation results, we can anticipate (see in the following of this document - Chapter 4 - a more detailed analysis and explanation) that the actual release is on average perceived as quite effective, even if, probably, it needs a higher usage time in order to record more significant learning outcomes and even if some further development and content customization are needed. We expect to

fulfill those evolutionary maintenance requests, able to transform a prototype into something more similar to a market stable release, during the next coming exploitation phase.

3.2.1 Referenced platforms

We now turn to describe briefly each of the platforms used in the experiment and their main functionalities.

3.2.1.1 Learn PAd

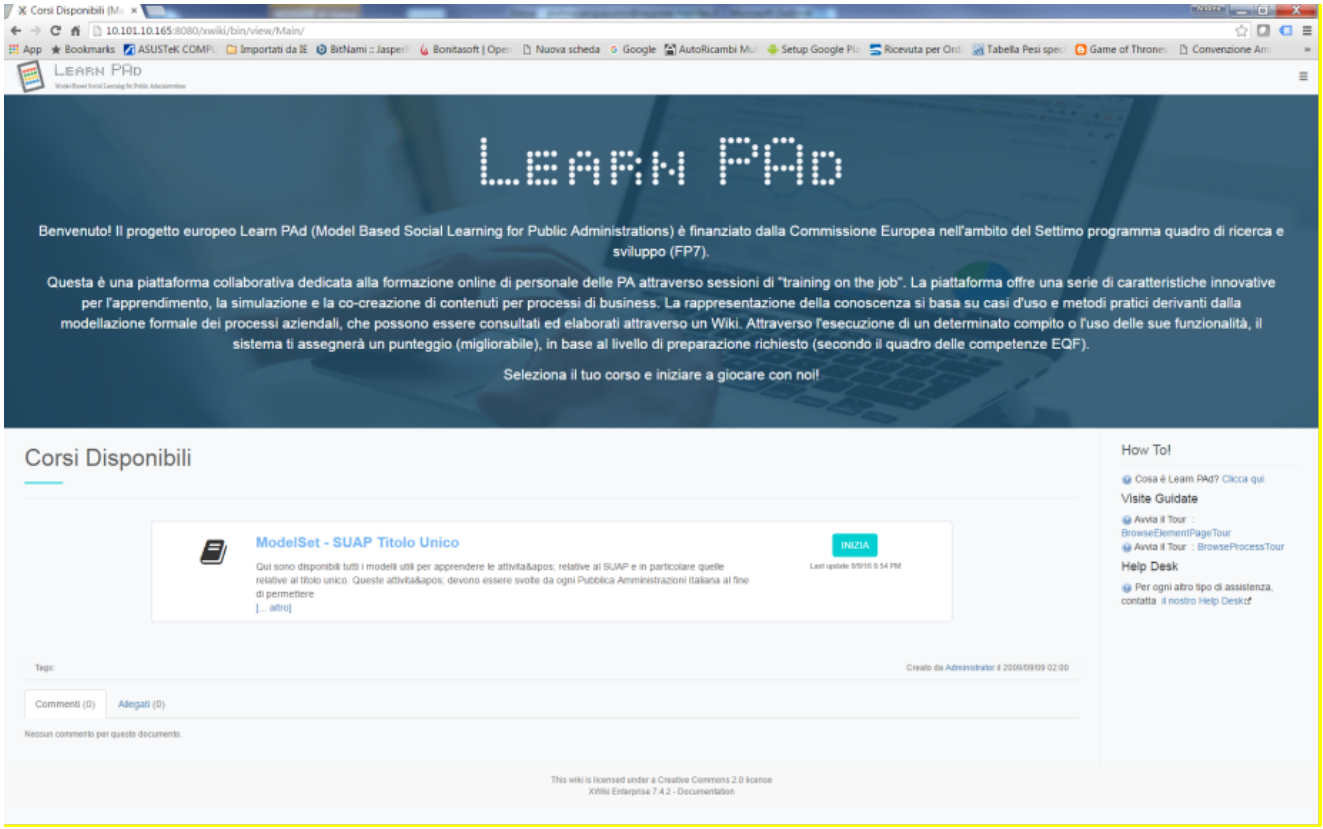


Figure 1 The Learn PAd platform home page

Briefly, in the Learn PAd web/wiki platform, after the log-in (using the assigned credentials, as from the users list represented in https://github.com/Learn PAd/Learn PAd/blob/master/lp-collaborative-workspace/lp-cw-component/lp-cw-component-ui/src/main/resources/LPUsers/UsersListY3Demo.xml#L42) and the selection of the specific case/course "ModelSet – SUAP Titolo Unico", the end user can find the list of the managed Business Processes (or significant parts of them), with a set of links, icons and buttons, mostly to:

- browse hierarchically the single tasks or choice gateways, roles in the organizational units, documents and other objects involved and described by the models
- view a navigable map of the process or sub-process activities
- contribute and generally to interact with the content and the functionalities of the platform.
- simulate a real case

As an indicative, although approximate, unit of measure the users had at their disposal for the validation a huge amount of material (almost 90 wiki pages), including BP and sub-process tasks and other modeling objects to be visited, collaborative and simulation activities to play and recommended content to explore.

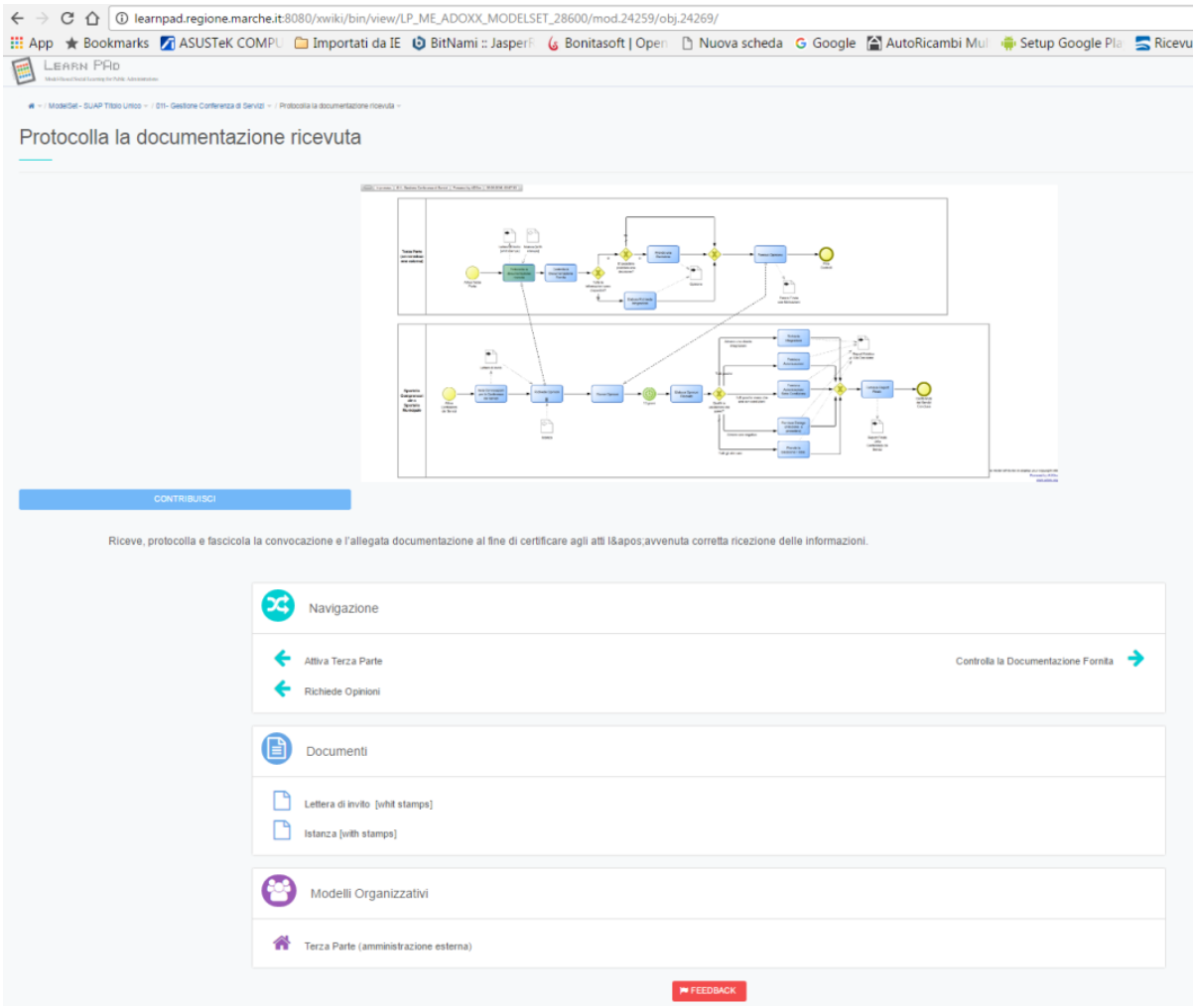


Figure 2 The browsing mode: a wiki page representing a task

More in detail, the main implemented functionalities of the Learn PAd platform under validation have been:

- The home page (providing introductive information and explanations, an online how-to handbook, some guided tours on features, etc.) – Fig. 1;
- The Browsing Mode (which allows to navigate among the textual contents and the images related to the interconnected models – BP, documents, organizational structures, … - , and in particular among the process tasks, represented within a wiki page, that are the knowledge segments of an overall procedural flow) – Fig. 2;
- The Collaborative features (including the possibility to: (i) provide comments in each page, (ii) give feedback to the modelers reporting logical errors or suggesting variations in the flow [this, indirectly and potentially, transform an individual learning process into an organizational learning process], (iii) contribute in writing extended wiki documents – that can also be analyzed and validated by the quality assessment mechanism in terms of quality for correctness, simplicity, non ambiguity, content clarity, presentation clarity and completeness) – Fig. 3;

- The Simulator (in which the user can practice an exercise based on a real use case he/she chooses - in this context a SUAP instance - following some executive steps, providing results and answering questions. As soon as the user correctly performs all the required jobs, the simulator returns an overall score. The simulation can be performed in individual mode, with robots, or involving other physical end-users to play the role of different actors involved as third parties in the process) – Fig. 4;
- The Recommendation bar (which provides additional semantically contextualized contents – meaning experts to be contacted, more learning materials from the document model, real use cases similar – that varies according to specific parameters of the user profile, types of wiki page the users land in, and the specific content therein selected by the users) – Fig. 4.

These functionalities are better outlined in the deliverables that we take as reference or background, and, of course, have been implemented in the Marche Region test-bed and will be demonstrated during the Y3 review.

Another fundamental functionality, which was not planned to be included in the final validation but worth mention, is the KPI dashboard ("pannello di controllo" – Fig. 5). It represents all the relevant aspects of a learning scorecard, in terms of learning and strategic goals, their connection to organizational goals, KPIs for assessing their achievement. It collects also input values that result from the actions that users make on the collaborative workspace and the simulation environment of the platform (eg. n° of valuable feedback, total time of use, global score per simulation and user, global actions per users, etc.).

Some of these input values need to reach a certain threshold, otherwise the recommender system provides some advices both to the learners and to their organizational units, in order to improve bad performance scores. All these functionalities are better described in Deliverable 5.4.

For the learning assessment and the final evaluation of the platform effectiveness, we preferred to use a platform-independent tool, structuring specific questionnaires, also in order to compare more homogeneous results got by the Learn PAd test and the control group's one. The use of the KPI Dashboard for evaluation purposes makes a greater sense in the context of a real training in the workplace pre-organized set, where the aspects of motivation of the users and PA commitment exist, and the organizational goals had been defined and tuned accurately with the PA management.

Content Analysis Information of Correctness Title: Collaborative Document on "Home"	
Overall Quality	NOT SO BAD
Overall Quality Measure	54.55%
Overall Recommendations	Quality is not so bad, but there are several errors.
Correctness	

Content Analysis Information of Simplicity Title: Collaborative Document on "Home"	
Overall Quality	GOOD
Overall Quality Measure	77.27%
Overall Recommendations	Quality is acceptable, but there are still some errors
Simplicity	

Content Analysis Information of Non Ambiguity Title: Collaborative Document on "Home"	
Overall Quality	NOT SO BAD
Overall Quality Measure	59.09%
Overall Recommendations	Quality is not so bad, but there are several errors.
Non Ambiguity	

Content Analysis Information of Content Clarity Title: Collaborative Document on "Home"	
Overall Quality	VERY GOOD
Overall Quality Measure	86.36%
Overall Recommendations	Well done, still few errors remaining
Content Clarity	

Content Analysis Information of Presentation Clarity Title: Collaborative Document on "Home"	
Overall Quality	BAD
Overall Quality Measure	42.86%
Overall Recommendations	Quality is poor, correct the errors
Split your paragraphs. Each paragraph shall be less than 5 sentences. Highlight in bold the relevant sentences and keywords of your text. Provide bullet point lists or numbered lists for your instructions Do not refer more than 5 external documents. The reader might be confused. Refer only relevant external documents.	

Content Analysis Information of Completeness Title: Collaborative Document on "Home"	
Overall Quality	VERY BAD
Overall Quality Measure	0%
Overall Recommendations	Quality is very poor, correct the errors
The field Headline appears to be without content. Please provide additional information. The field Glossary appears to be without content. Please provide additional information. The field Context appears to be without content. Please provide additional information. The field Motivation appears to be without content. Please provide additional information. The field Intended readership appears to be without content. Please provide additional information. The field Involved actors appears to be without content. Please provide additional information. The field Required tools appears to be without content. Please provide additional information. The field Detailed Description appears to be without content. Please provide additional information. The field Examples/Experiences appears to be without content. Please provide additional information. The field What to do in case of failures appears to be without content. Please provide additional information. The field FAQ appears to be without content. Please provide additional information.	

Figure 3 The validated output of a contribution by the quality assessment system

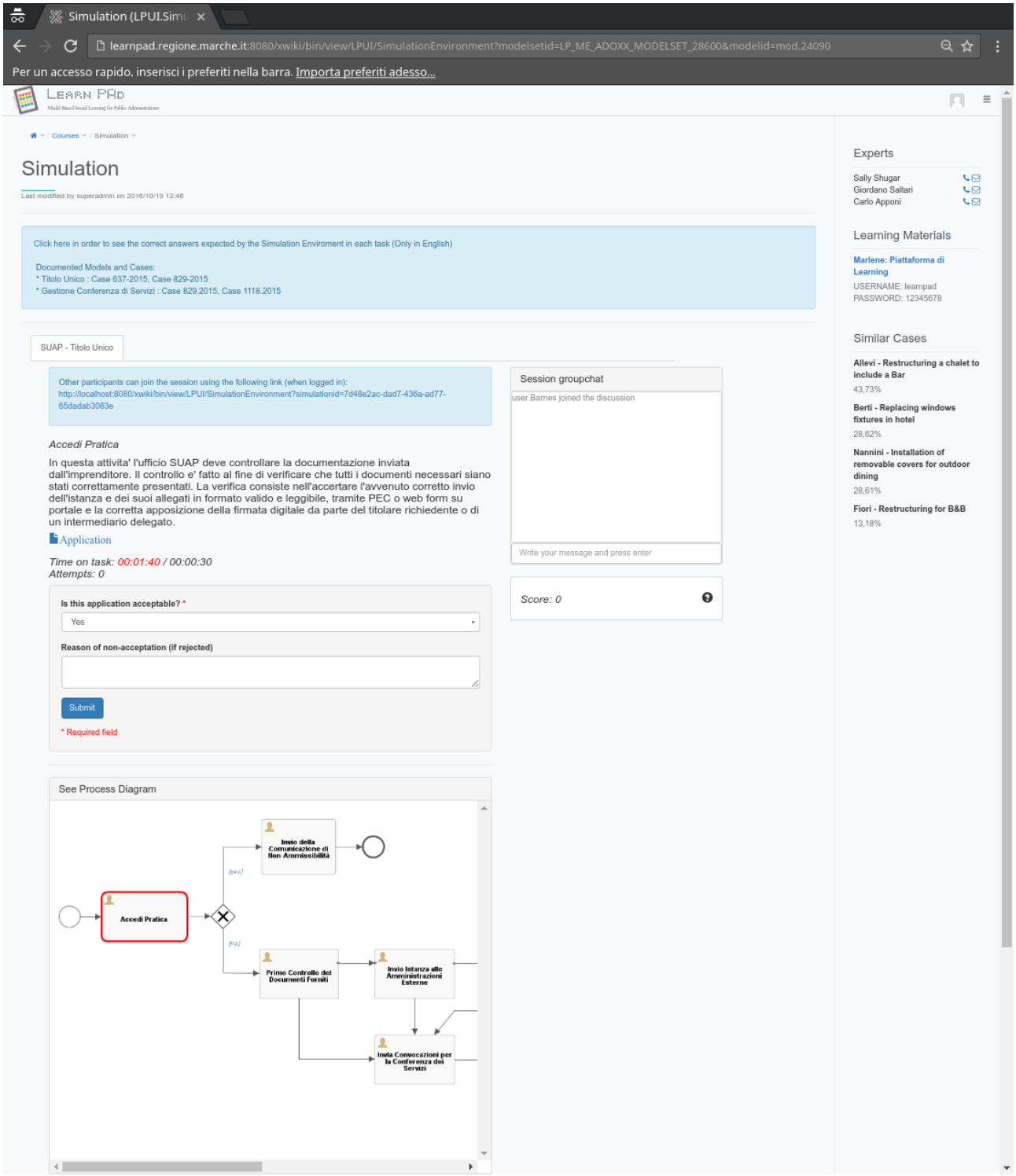


Figure 4 After the simulation is activated, the recommender bar proposes contextualized similar cases

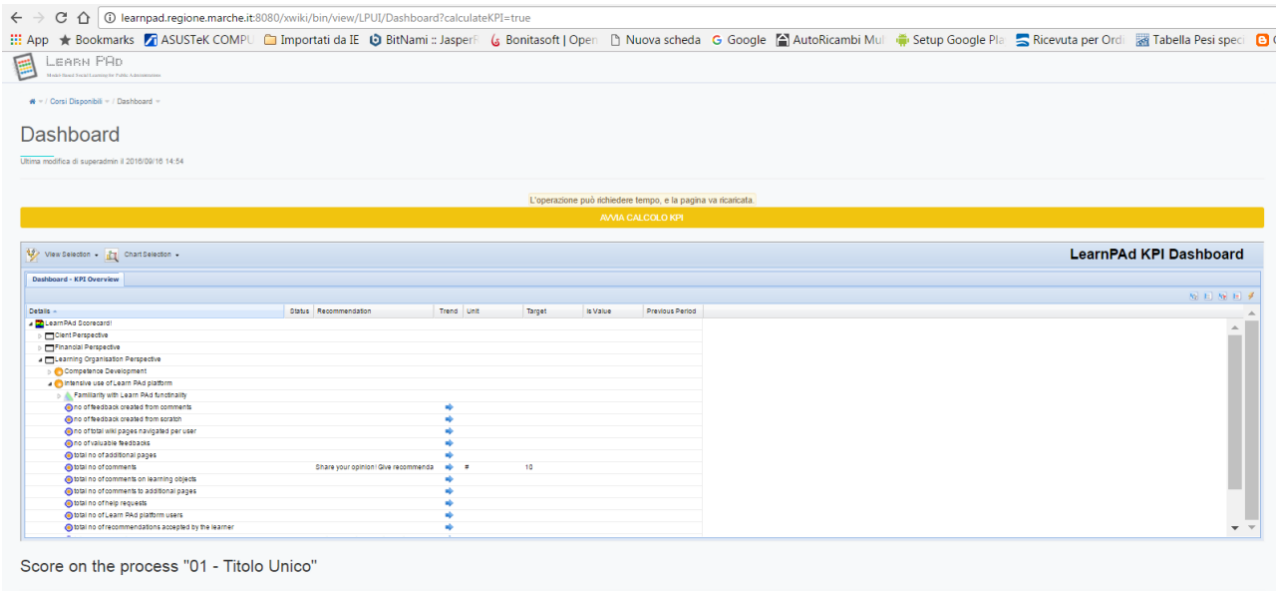


Figure 5 The Learn PAd KPI Dashboard

3.2.1.2 MARLENE

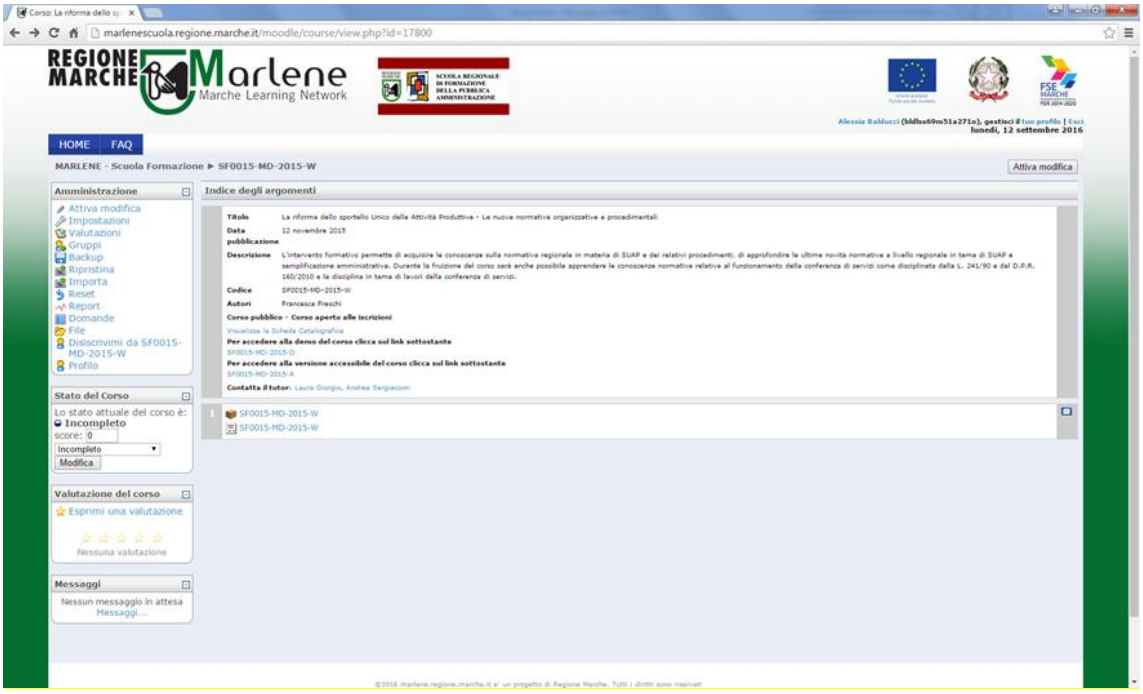


Figure 6 The MARLENE interface to access a SCORM course

The MARLENE (MARche LEarning NEtwork) platform is the regional web e-learning system, adopted, following a signed agreement with the Tuscany Region, for the reuse of the entire system called TRIO and its available learning objects, with the goal of maximizing the public investments dedicated to the development of any online training activity for civil servants of the local PAs.

The system is operational and offers to its users a wide range of learning resources, based on AICC/SCORM and Moodle standards.
Among the available courses, the module "SF0015-MD-2015-W" (La conferenza di servizi: quadro normativo di riferimento in ambito nazionale e regionale) provides a lesson about the regulatory framework, at national and regional level, on the conference of services. This module has been taken as reference for the experimentation of the control group, as it provides many contents related to the same scenario implemented within the Learn PAd SUAP demonstrator, even if at a more theoretical level. As an indicative, although approximate, unit of measure the users had at their disposal for the validation 28 pages of content.

With regards to the functionalities, the platform provides a manual and some online help. When the course begins, a web pop-up windows appears to guide the learner sequentially through the contents, offered in the form of slides, accompanied by timed and animated texts, images and audio support (Fig. 7). Some utility buttons allow the user to handle the subtitle, to pause the audio speech, to move between the next or previous slides, to access the glossary and the references, to consult a graphical help on line, to print the contents of the current page.

Figure 7 A page of content from the MARLENE course about SUAP CoS

The slides alternate with stages of verification (by multiple choice questions) exclusively for learning reinforcement, and, at the end of the fruition, a final assessment questionnaire is proposed to test the overall knowledge gained. The course is successfully passed answering correctly at least 70% of the final proposed questions.
A MARLENE back-end is also available to assess the state of completion of the course by each learner engaged, returning information (taken into account to validate some of the questionnaires answers and to assess the final conclusions) on the dates of registration and completion, score points, total time of use, number of accesses, status and % of completion.

If needed, we will be able to show practically the operation of this system during the Y3 review, as it can be reached through the Internet at the address http://marlenescuola.regione.marche.it/moodle/ by logging with the user credentials owned by the officers of Marche Region.

3.2.2 Validation scenario

The Learn PAd project demonstrators focus on two different workplace contexts.

The first demonstrator, referred to the European Project Budget Reporting (EPBR) scenario, engages a Public Administration (PA), partner in a funded project, which have to manage some internal administrative documentation and financial procedures in order to report data and information to the EU Community; in this case the models try to map a Business Process (BP) which does not cross the border of a PA.
The second demonstrator, referred to the "Sportello Unico Attività Produttive" (SUAP) scenario, represents a more complex inter-organizational scenario, involving many Pas engaged in providing a unique and shared formal answer (or authorization) to entrepreneurs who want to start a business activity or to build productive or commercial premises.
Both of them were developed on the basis of several interviews with civil servants working in the Public Administration and involved in the cases.

For both scenarios, the models we produced are those resulting from the WP3 (Organizational models, Business Process models, Documents and Knowledge models Competence models, Business Motivation models, KPIs, etc.). In particular, we considered the organizational structure of each of the involved PAs.
In some cases (mainly due both to reasons of synthesis, readability, complexity decrease and space availability) we focused only on part of those structures, considering the offices and the employees that mainly impact on the analyzed scenario, exercising their role. A huge effort was done with respect to the competences of employees, since they are relevant in terms of learning. These were elaborated according to the well know European standard competencies framework (EQF).

It was originally planned to carry out a final validation with users on both SUAP and EPBR scenario. However, we instead concentrated all efforts for final validation only on SUAP. One reason was that the Y2 review report requested to collect a sufficient number of users in the final validation (30 + 30) to get statistically significant results and the number of EPBR users would be quite far from such target. Moreover, we considered risky to divide the consortium efforts and attention on two demonstrators in the relatively limited time available, and preferred to focus all attention in one study.
For these reasons we focused on the case of SUAP, and in particular on the Conference of Services sub-process for the "Titolo unico" process, to be able to involve the largest number of available users around a community of practice clearly identified.

In the following, we introduce and explain briefly the considered SUAP scenario, chosen for the validation. The scenario is already detailed and explained in Deliberable 8.1: we just would like to provide an overview, within a self-contained document, to better highlight some of the choices we made in the setting of the validation study.

The SUAP office can be considered as an intermediary between entrepreneurs and local government bodies. This means that, if an entrepreneur wants to start a new business activity or make a construction intervention on a factory, he/she only needs to contact the SUAP officers. The latter are in charge of:

- collecting and formally verifying the application and any supporting documentation (eg. features of the applicant, possession or availability of the property titles, etc.);
- acquiring any intermediate answers from all the other authorities or offices, involved on the basis of their individual responsibilities (eg. fire safety, building permissions, protection of landscape, protection of archaeological sites and cultural heritage, environmental permits, food hygiene, sewage discharges, connection to the municipal utilities, etc.);
- issuing an official final decision that is enforceable against third parties.

A SUAP office can be organized as an office of the Municipality, or as a district office - managed by a consortium of PAs, by an aggregated administrative entity or by a locally superordinate public body (eg. mountain unions) - that provides services on behalf of several Municipalities. This distinction was considered in terms of Organizational Model: we assigned the user credentials distinguishing whether a user belonged - or simulated to belong - to a "district desk" or a "municipal desk"; this parameter has enabled, for example, to vary, depending on the user, the hint of the appropriate referenced experts on the recommender bar. So, all the users really working for a municipal SUAP, or for a third party administration, were given a “municipal desk” account; all the users really working for a districtual SUAP, or for another PA, indirectly involved in the SUAP processes for coordination, training and support, were given a “district desk” account.

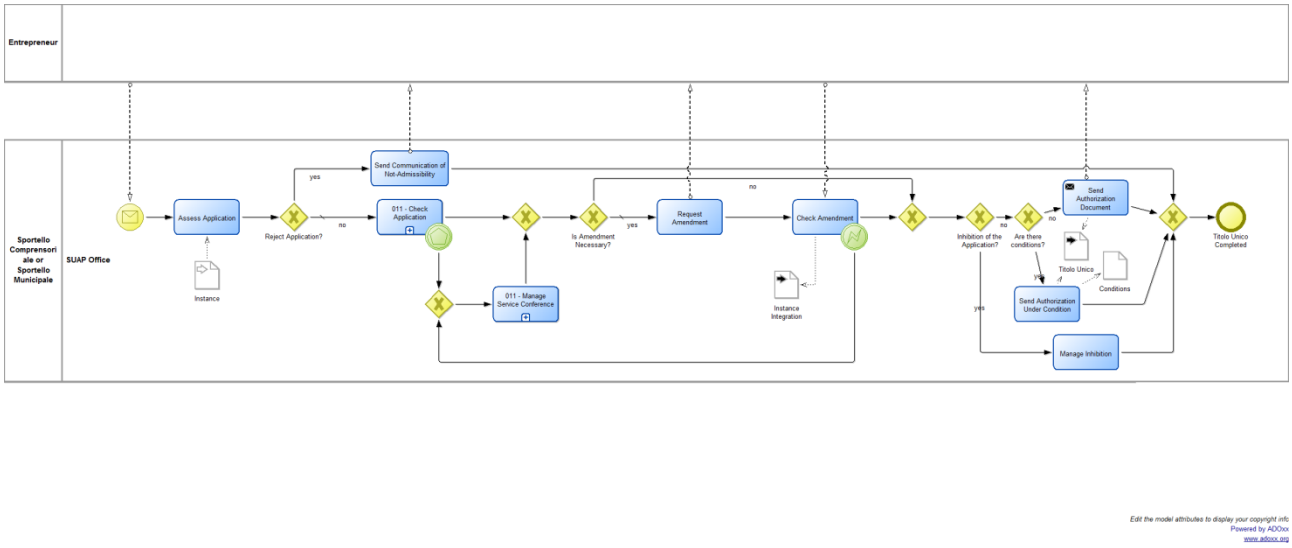


Figure 8 The SUAP “Titolo Unico” Business Process

The “Titolo Unico” application, also called standard request - Fig. 8 -, is one of the processes run by the SUAP offices (typically the most ordinary one). The legislation introduced other peculiar types of procedures, such as the “SCIA” or the “Urban Variant”. Here, for the validation purposes, we have not

included those, even though along the project they have been the subject of intense analysis and modeling activities.

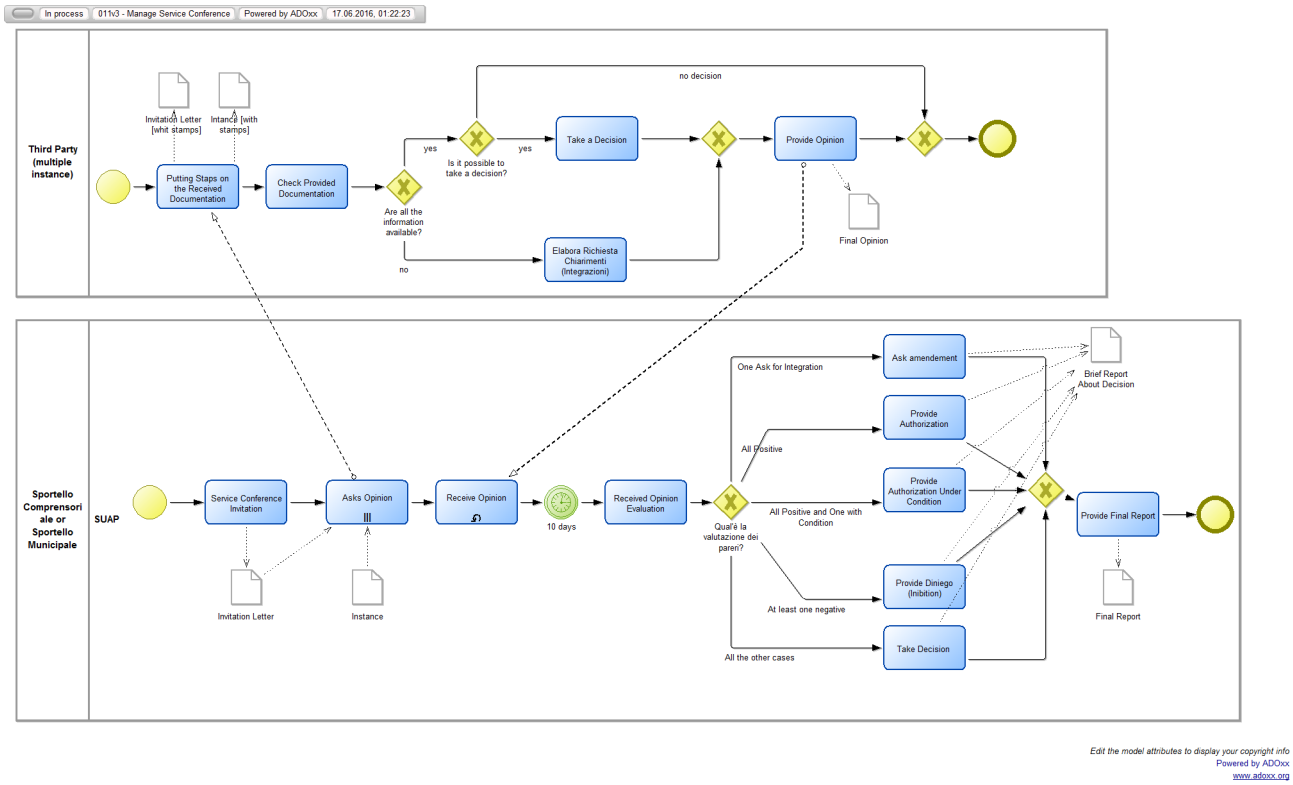


Figure 9 The "Conference of Services management" sub-process within the "Titolo Unico" BP

One of the sub-processes specified under the "Titolo Unico" is the management of the Conference of Services (CoS).

The CoS is a meeting, activated when required by law, in order to draw a collective decision as quickly as possible; typically it is required when is necessary to obtain an agreement, a clarification, an act of concertation or assent by one or more PAs involved. This can happen on complex dossiers, or when some PAs show a delayed response time if compared to the standard timing of completion of the overall procedure, or in any case where there is no consensus among all the public actors involved (and even, sometimes, the same private applicant). In particular, the simultaneous CoS, mapped in the sub-process in Fig. 9, is a meeting where all the involved participants (i.e SUAP offices, other municipal offices, other government units and possibly the applicant) discuss on the case, from all points of view, together and concurrently, and decide whether the request could be eligible or not. According to the procedural flow, the SUAP office: (i) announces the CoS and convenes the administrations involved - sending all the enclosed documentation, (ii) manages the agenda and the works of the meeting, (iii) collects the opinions summarizing them in a report, and then (iv) takes the final decision (which can be positive, negative, conditioned to the fulfillment of further requirements by the entrepreneur, etc.).

When using the Learn PAd platform, the learners were asked to play the role of a SUAP representative contact person. In some phases of the simulation, they had also the option to play the role of a third administration referee, called to express its opinion in a CoS.

A new regulation, changing consistently many circumstances and aspects of procedural flow of the SUAP CoS, has been recently introduced by the Decree "DLgs n. 127 30/06/2016". Unfortunately this happened at a late stage of the deployment of the contents on the Learn PAd platform; similarly we did not have the time to adapt the CoS moodle course on the MARLENE platform. For validation purposes we decided to leave, in both platforms, the outdated content, ie responsive to the previous legislation dictates. Nevertheless we reacted offering the users some additional learning material, as better described in the next section.

3.2.3 Used methodology

At the beginning of August we invited via email more than 90 public managers, officers, employers, civil servants or even freelance professionals, involved in the provisioning of the OSS/SUAP services towards entrepreneurs, to join the Learn PAd final validation activities. They were people working for SUAP offices or for local government bodies called to give an opinion on OSS practices or even other public administrations indirectly involved in the OSS processes for coordination, training, technical and regulatory support, etc.
We explained them about the Learn PAd project - and its aim to develop a prototype platform for the training of Public Employees based on work processes - and we asked for their availability and willingness to participate in this trial, carried out by the Marche Region ICT Department, in collaboration with the Regional School of Public Administration, as well as for their help in finding other people to engage. We informed them about estimated timing, modalities and required effort for the validation experiment. We told them that we would have assessed by questionnaires, aggregating their answers, the degree of teaching effectiveness of the new Wiki model-based Learn PAd platform, accessible via a web browser 24 hours on 24 during the trial time window, also in comparison with more traditional e-learning instruments. We also specified that the contents found in the platform, related to the SUAP, were to be considered purely as a means to test its validity. For this reason we would not have required any previous or extensive preparation on the subject, meaning that even an inexperienced novice, as long as insider, could attend the test to see if the platform had proved a useful learning tool.

We received back 72 candidatures from people available to join the experimentation.

In September we communicated the official start of the trial, from 15/09 till 26/09, sending the users a first ex ante questionnaire to assess, briefly, their:

- personal details, relevant characteristics and profile information, needed to classify and aggregate the samples
- a self-assessment of the level of expertise – from 1 to 8 – they believed to have with respect to 5 main EQF qualifications recommended to work in the SUAP area

Before the tests began, we gathered the completed questionnaires.
We divided the candidates in two groups (the main one of Learn PAd users and the control one of MARLENE users), as homogeneous as possible, considering their experience and expertise in OSS/SUAP, on the basis of our knowledge and understanding. As a result, each of the two groups resulted composed of: almost a 50% of novice users (with less than 1 year of work practice), a 25% of intermediate professionals and a 25% of expert users (with more than 5 years of work practice).

Then we provided the users with all the technical details to start (web address: respectively http://LearnPAd.regione.marche.it:8080/xwiki and http://marlenescuola.regione.marche.it/moodle/, credentials, operative instructions and manuals, telephone and email contact to request support). We also asked them to keep track of the real daily time spent in the learning activities, as this would also be the subject of specific follow-up questions.
For the Learn PAd sample, we created and assigned to users individual accounts to distinguish them by profiles (novice, intermediate professional, expert) and type of SUAP (districtual or municipal) according to the ex ante information provided. Those profiles were needed to customize the user experience with reference to the content proposed by the recommendation system. This distinction has not been necessary for the users of the control group, who accessed by authenticating themselves with the local "FedCohesion / SPID" identification system.

As said before the Decree "DLgs n. 127 30/06/2016" introduced significant changes in many circumstances and aspects of procedural flow of the SUAP conference of services. However, for integration and rectification, in the trial starting email we also attached three documents: (i) the new legislation itself, (ii) a brief guide to the changes introduced, (iii) an extensive interpretative guidance of the new regulatory framework. These supplementary documents were drafted with three levels of detail, respectively: (i) for experienced staff, (ii) for personnel with intermediate knowledge (iii) for staff with basic skills. Both the MARLENE and Learn PAd users were advised to consult the information material consistently with their knowledge; moreover, in the Learn PAd case, the documents were also referenced as learning materials that the recommender would have returned on the basis of the appropriate user profile (if expert, intermediate or novice).

Particularly for Learn PAd, since it is a prototype, some sections of the platform could have resulted, to a first approach, not very easy to to use and not immediately understandable. For this reason, during the tests, two information meetings (on 16 and 21 September at the Marche Region) had been provided to illustrate, with practical demonstrations, the platform main features. They were attended by almost 10 users.

At the end of the trial period we sent the users an ex post testing questionnaire to assess the effectiveness of the training platform and of the peculiar teaching module.
We informed them that the information and data retrieved would have been handled by the partners of the Project Learn PAd so as to ensure, under the Italian "Privacy code (Dlgs 196/2003)", its security and confidentiality. So we therefore asked them to sign a waiver of consent to the processing of the information and data provided, when delivering the completed questionnaire.

Finally we collected the ex post questionnaires (31 from the Learn PAd sample and 30 from the MARLENE sample). The tests results have been processed anonymously and on an aggregative basis, and analyzed comparing the two samples. The results are reported in section 3.3 and 3.4. The conclusions are reported in Chapter 4.

3.2.4 Questionnaires

As already explained we developed and submitted to the learners two kind of questionnaires.

3.2.4.1 The ex ante questionnaire

The **ex ante questionnaire** (fully reported in the appendix) asked the users some personal details, in order (i) to be able to classify and aggregate the samples by relevant characteristics, (ii) to give each user an appropriate profile with respect to the parameters of experience (expert, intermediate, novice) and organization of their SUAP offices (districtual or municipal), and (iii) to verify a properly homogeneous distribution of the users between the Learn PAd group and the MARLENE one. We collected useful information regarding Gender, Age, Geographical distribution within Marche region, Qualification, Public role, Years of work at (or on behalf of) a PA, Years of experience in OSS/SUAP, Type of public body they serve.

Moreover, the ex ante questionnaire, submitted before the starting of the platform testing activities, aimed also to get from each user a self-assessment of the level of expertise with respect to 5 main European Qualifications Framework skills we analyze as recommended to work in the SUAP area.
The recommended EQF skills were:

- Front-office activities, information, communication and management of the external relations with the public [needed for the tasks related to the preparation of work and to provide information to the SUAP desk external users]
- Assessing the administrative and procedural regularity of a request, through checking its completeness and formal correctness [needed for the tasks related to the execution of a BP and to check the admissibility of a SUAP application]
- Management and coordination of specific administrative procedures [needed for the tasks related to the execution of a BP and i.e. to send documentation to other PAs, to ask for integrations, to activate the CoS, to solicit the third parties in case of delay or non-compliance, etc.]
- Verifying the congruency and pertinence of data and documentation submitted in an instance, considering the merits with respect to the activity that the user intends to start or the intervention to be undertaken [needed for the tasks related to deep checking and monitoring and not only to accomplish a final check of the correctness of the whole acquired documentation, but also to be able to issue an expert opinion on the admissibility of a SUAP authorization]
- Drawing up formal documents (Decrees, reports, letters, etc.) during the execution or at the end of an administrative procedure [needed for the tasks related to the final audit and release of SUAP formal acts and to be able to write and organize administrative texts in a proper manner]

We asked learners to attribute themselves a level, from 1 (low) to 8 (high), as specified in the table below, derived from the European Qualifications Framework (EQF).

EQF level	**Knowledge** [*theoretical* and/or *factual*]	**Skills** [*cognitive* (involving the use of logical, intuitive and creative thinking), and *practical* (involving manual dexterity and the use of methods, materials, tools and instruments)]	**Competence** [*responsibility* and *autonomy*]
Level 1	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
Level 2	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems
Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
Level 5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others

Level 6	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
Level 7	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
Level 8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Table 3 Descriptors defining levels in the European Qualifications Framework (EQF)

3.2.4.2 The ex post questionnaires

On the other side, the **ex post questionnaire** (fully reported in the appendix) asked each learner to repeat the same EQF self-assessment at the end of the training activities, in order to verify whether the use of the platform had increased - and to what extent - his knowledge and his skills.
We also asked the user how much time he/she devoted to the use of the platform, in terms of overall period (in days) and in terms of actual time (in hours).

At the same time, we asked the users to answer 15 multiple choice questions related to specific SUAP content. Each question answered correctly was worth 1 point and only one of the possible answers was correct. Multiple choices were generally 5 for each question, except for the questions: 1 , 2, 9, 10 (the possible choices were 3) and for the questions: 5, 14 (the possible choices were 6).
The 15 questions could be grouped into 4 homogeneous clusters, by type of skills/knowledge assessed:

- group A (theoretical questions: n° 4, 5, 6 and 7) aimed at verifying a successful learning of content delivered through didascalic functions.

- group B (questions on the new CoS regulatory reform introduced by the Decree “DLgs n. 127 30/06/2016”: n° 3, 9 and 10) aimed at verifying a successful learning of content delivered by downloading supplementary material. In other words, we wanted to test if the users had been able to read the documentation attached to an email, or downloaded as an additional learning material, to analyze it and to learn in a more traditional mode (not fully brokered by the platform).
- group C (questions related to BPs: n° 1, 2, 8, 11 and 12) aimed at verifying a successful learning of content delivered through Business Process Modeling and the logic of the procedural flows. It was required the capability of tracing a mental path and moving between the different tasks which make up the CoS process, in compliance with the associated rules and timing.
- group D (questions about practical cases: n° 13, 14 and 15) aimed at verifying a successful learning of content delivered through simulations or hands-on practice on real and concrete use cases. It was required the capability of applying the theory to a particular concrete case taken from the real world, synthesizing and evaluating the main elements, and striving to solve it.

Finally, we asked the users to give their opinion, mostly expressing a numerical value to the elements submitted to their judgment [on a Likert rating scale from 1 = low to 5 = high], about usability, user experience, platform effectiveness and other topics. In detail, the aspects brought to their attention were:

1. Overall degree of satisfaction in the use of this e-learning solution
2. Degree of effectiveness of the various functionalities available within the platform
3. Degree of usability, ease of use and accessibility
   We informed the user that "Accessibility", in our context, means the characteristic of a computer system to be easily usable by any user, regardless of his sensory, motor or psychic individual capacities, of any temporary or permanent disability, of even cultural aspects or aspects relating to familiarity with the use of ICT interfaces.
4. Perceived user experience with regards to:
   a. graphics and colors
   b. the understanding of symbols and icons
   c. the meaning of textual contents
   d. search and suggestion of content they want to find
   e. orientation and guidance in browsing the pages or the content structure
   f. the structuring, placement and positioning of the content

   We informed the user that “UX or user Experience”, in our context, means the subjective feelings that he/she experienced using the platform with reference to the empiric and affective aspects, to the value and meaning attribution he/she related to the availability and the interaction with the solution, as well as to the overall perceptions and personal thoughts he/she had about its learning effectiveness, the ease of use of the interface, the system's efficiency, etc..
5. Degree of completeness of the available features
6. Degree of integration and homogeneity of all the modules available within the learning environment
7. Degree of innovation and novelty of the proposed solution
8. Degree of usefulness and appropriateness of the platform with respect to the training needs of learners
9. Detected need of a greater presence of:
   a. a wizard-driven content fruition
   b. gamification features

We informed the user that "Gamification", in our context, means the use of elements borrowed from the games and other fun techniques, adapted to external contexts (eg. scores, levels, rewards, badges, gifts and other loyalty methods or practices to arouse interest or contribute to the user satisfaction)

c. an appropriate use of multimedia
d. interactivity between learner and content
e. interactivity and knowledge exchange between platform users
f. multilingualism or explanatory technical vocabularies, glossaries, dictionary of acronyms, bibliographical references, etc.
g. tutoring and external teaching support

The obtained results, both from content and usability questions, of the Learn PAd group have been compared with the control group.
Moreover we compared the Learn PAd usability results to the feedback received in the early evaluation phase (except for the elements: 4 - from a to f - and 9e, that were not previously collected).
The questions n° 1, 2 and 5 required also a free-text comment (in synthesis, respectively: 1 - *motivate your opinion*; 2 - *which features are to be considered most useful*; 5 - *what features are missing or inadequate, and why, to consider the platform a valuable learning tool*). Those feedback have been analyzed and summarized in section 3.4, also separating positive and negative notes.
We present all the data and figures received from the ex ante and ex post questionnaires in the next section.

3.3 Results from questionnaires

In this section the results obtained from the answers to the ex ante and ex post questionnaires are represented in tables (and also graphically, for the key aspects to highlight).

3.3.1 Profiling and context data

We begin with representing the demographical data and the context information of the Learn PAd and MARLENE sample groups:

Sample:	**Learn PAd**	**MARLENE**
N° users	Invited to testing: **36** Questionnaires collected: **31**	Invited to testing: **36** Questionnaires collected: **30**
Gender	Males: **17** Females: **14**	Males: **18** Females: **12**
Age	Mean: **43,61** Composition by age groups: **2** under 30 years, **9** from 30 to 40, **14** from 40 to 50, **6** over 50	Mean: **44,40** Composition by age groups: **2** under 30 years, **6** from 30 to 40, **16** from 40 to 50, **6** over 50
Geographical distribution within Marche region	**18** in the province of Ancona, **4** in the province of Ascoli Piceno and Fermo, **4** in the province of Macerata, **5** in the province of Pesaro e Urbino	**15** in the province of Ancona, **2** in the province of Ascoli Piceno and Fermo, **7** in the province of Macerata, **6** in the province of Pesaro e Urbino
Qualification	University graduates: **23** School graduates: **8**	University graduates: **23** School graduates: **7**

Public role	**0** executive managers, **12** officers, **12** employees, **7** freelancers serving a PA	**1** executive manager, **17** officers, **8** employees, **4** freelancers serving a PA
Years of work at (or on behalf of) a PA	Mean: **14,81** Composition by PA experienced clusters: **7** up to 5 years, **4** from 6 to 10, **5** from 11 to 15, **8** from 16 to 20, **7** more than 20	Mean: **13,27** Composition by PA experienced clusters: **6** up to 5 years, **4** from 6 to 10, **10** from 11 to 15, **5** from 16 to 20, **5** more than 20
Years of experience in OSS/SUAP	Mean: **2,35** Composition by SUAP experienced clusters: **20** novices (up to 1 years), **7** intermediate professionals (from 2 to 5), **4** experts (more than 5)	Mean: **3,87** Composition by SUAP experienced clusters: **15** novices (up to 1 years), **7** intermediate professionals (from 2 to 5), **8** experts (more than 5)
Type of public body served	**1** work in a districtual SUAP, **3** in a municipal SUAP, **15** in a third party administration, **12** in another PA (indirectly involved in the SUAP processes for coordination, training, support)	**7** work in a districtual SUAP, **2** in a municipal SUAP, **18** in a third party administration, **3** in another PA (indirectly involved in the SUAP processes for coordination, training, support)

Table 4 Aggregated data related to the two samples involved in the testing

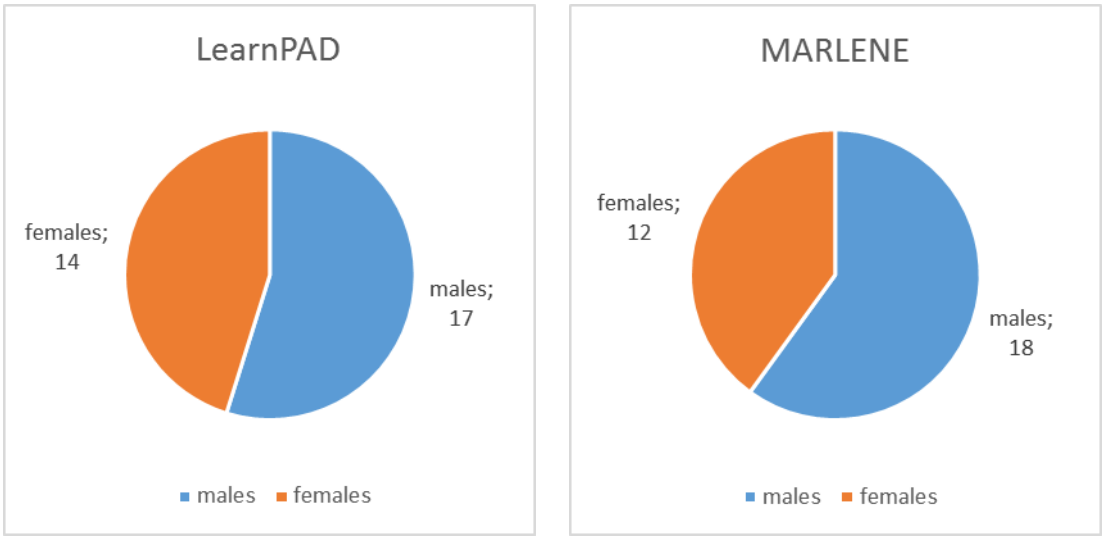
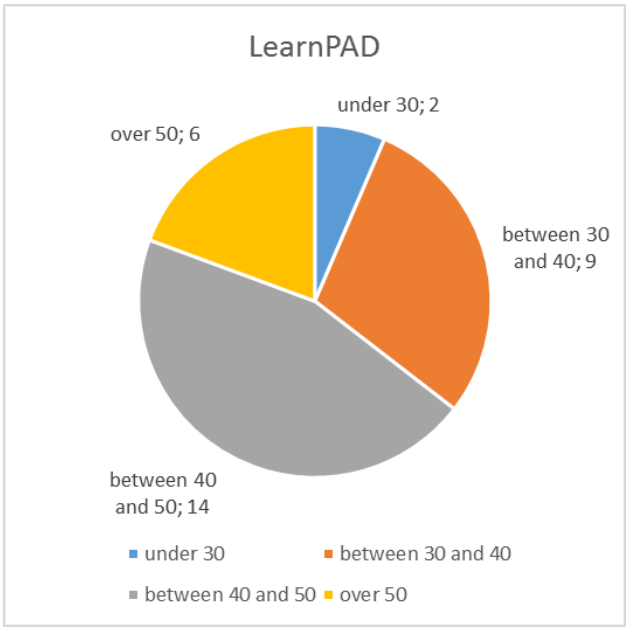


Figure 10 a/b The Learn PAd and MARLENE samples by gender



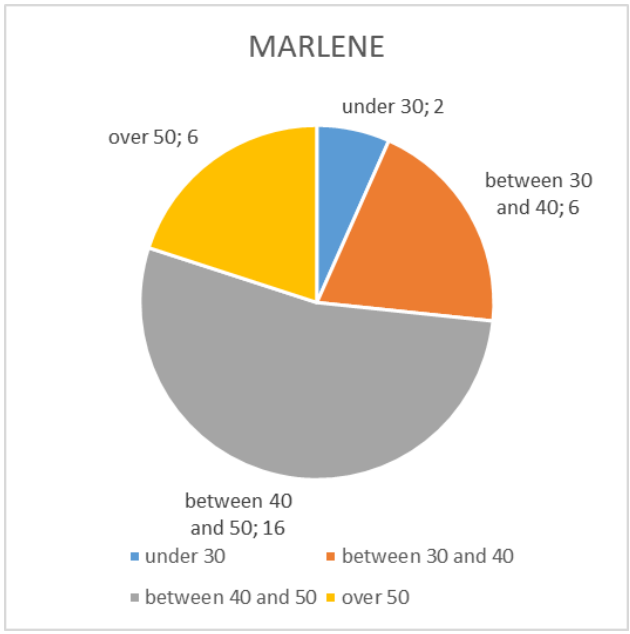
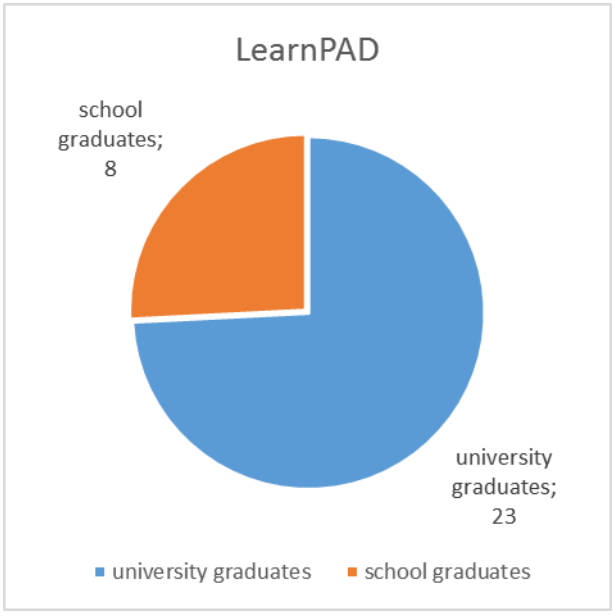


Figure 11 a/b The Learn PAd and MARLENE samples by age



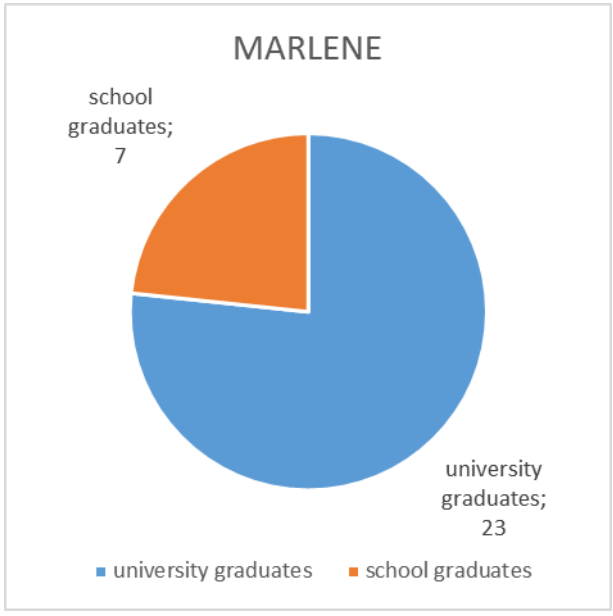


Figure 12 a/b The Learn PAd and MARLENE samples by qualification in education

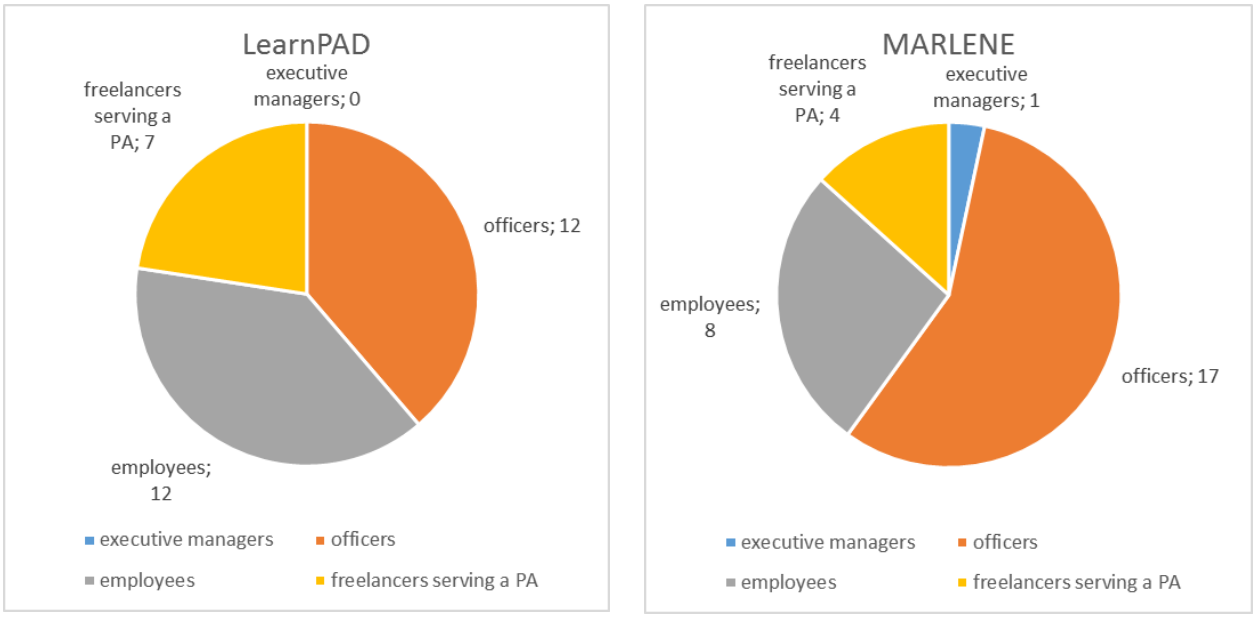


Figure 13 a/b The Learn PAd and MARLENE samples by public role

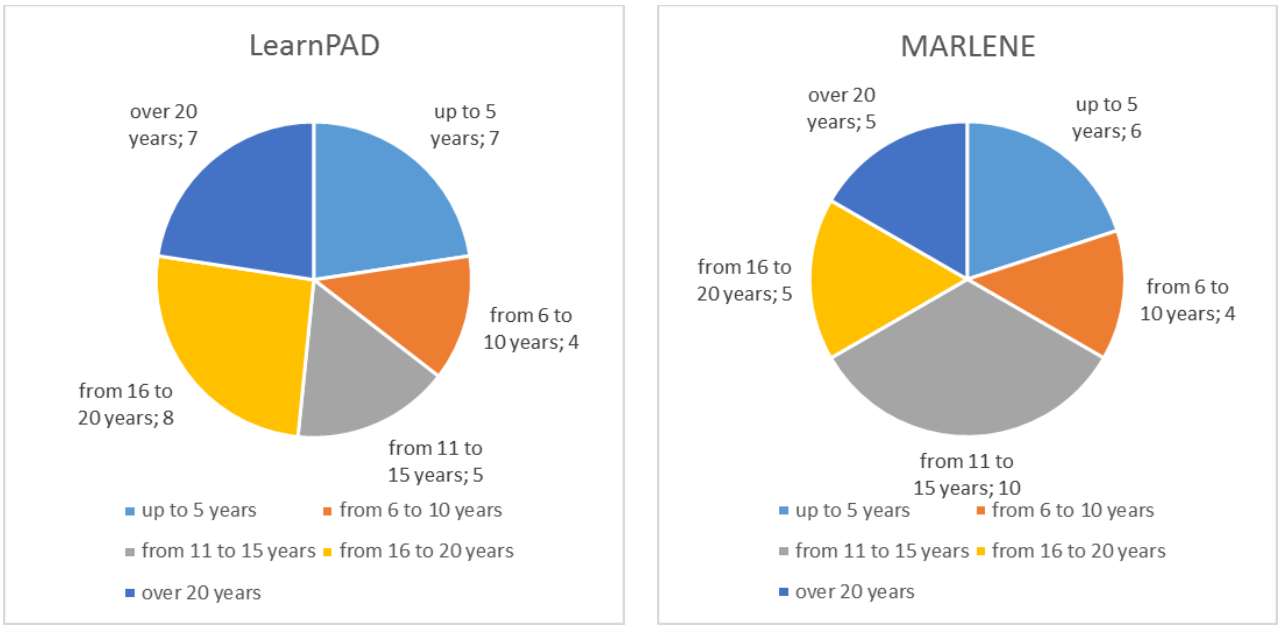


Figure 14 a/b The Learn PAd and MARLENE samples by years of work at (or on behalf of) a PA

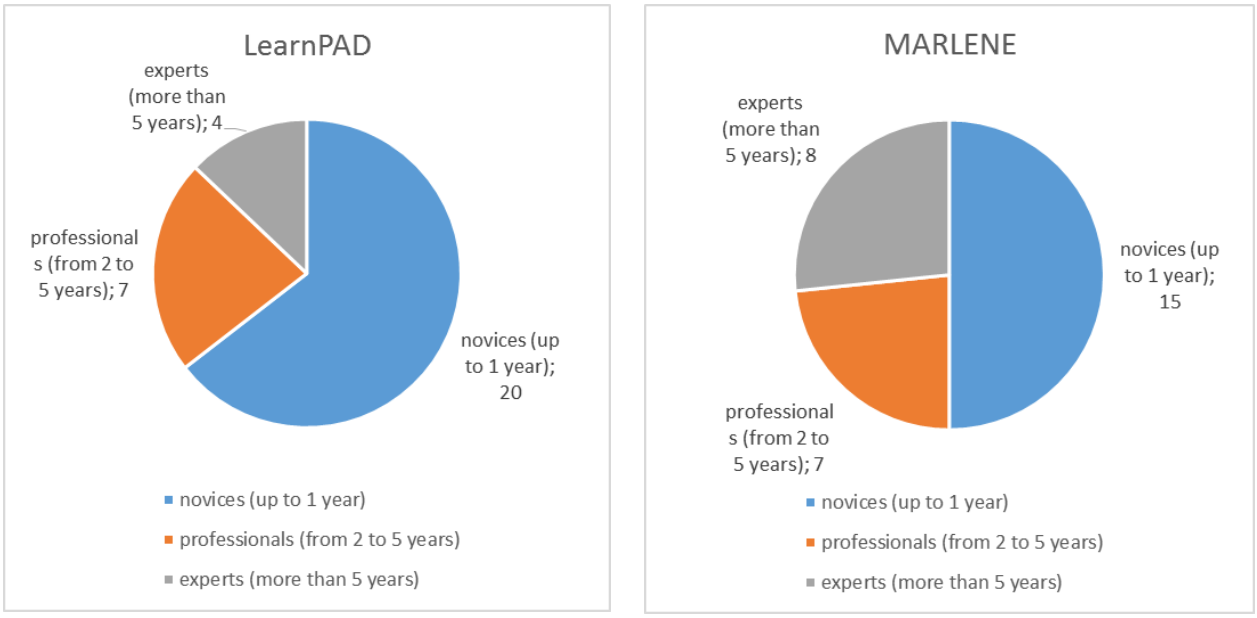


Figure 15 a/b The Learn PAd and MARLENE samples by years of experience in OSS/SUAP

As for the overall time spent on the platforms, Learn PAd usage time totalized 169 hours in 90 days (on average per user: 5:45 hours in 3 days); MARLENE usage time totalized 96 hours in 64 days (on average per user: 3:20 hours in 2 days).

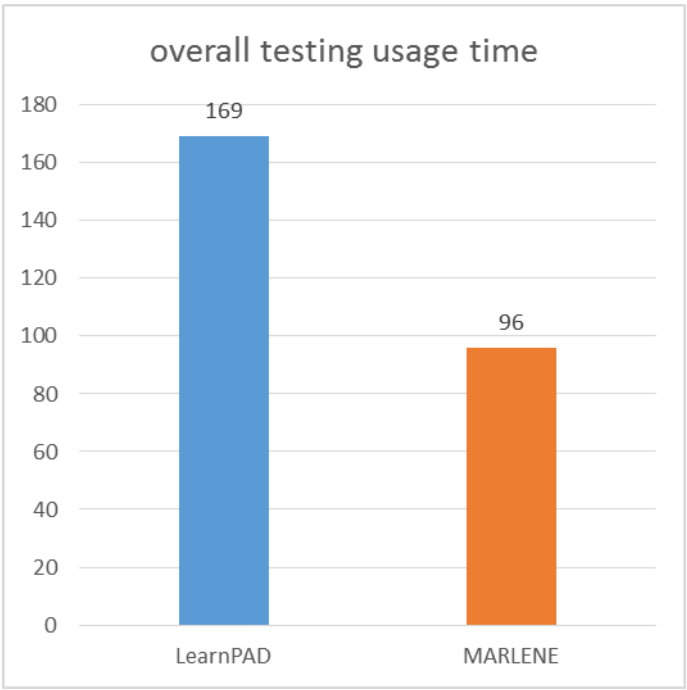


Figure 16 The platforms overall usage time (in hours)

3.3.2 Competence self-assessment data

Within the Learn PAd sample, 14 users out of 31 (45%) said they had improved one or more EQF skills; regarding MARLENE, 13 users out of 30 (43%) said this.

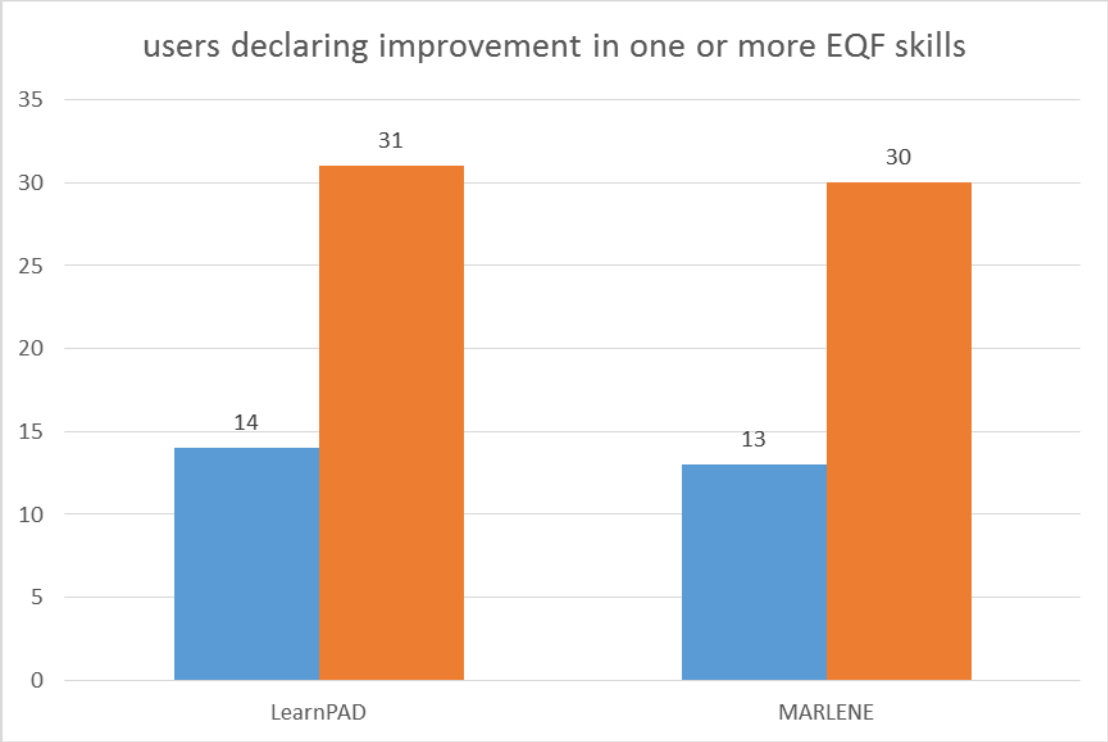


Figure 17 The declared improvement in EQF skills within the two samples

The total perceived improvements in each competence - calculated as a percentage of the sum of the ex post increases on the sum of the ex ante values declared - amounted to the following values:

EQF Skill	Learn PAd		MARLENE	
	% of users perceived improvement on average	standard deviation among the sample	% of users perceived improvement on average	standard deviation among the sample
Front-office activities, information, communication and management of the external relations with the public	9%	0,57	2%	0,25
Assessing the administrative and procedural regularity of a request, through checking its completeness and formal correctness	9%	0,63	5%	0,37
Management and coordination of specific administrative procedures	15%	0,70	6%	0,50
Verifying the congruency and pertinence of data and documentation submitted in an instance, considering the merits with respect to the activity that the user intends to start or the intervention to be undertaken	12%	0,79	4%	0,34
Drawing up formal documents (Decrees, reports, letters, etc.) during the execution or at the end of an administrative procedure	6%	0,47	6%	0,48

Table 5 Perceived improvements in EQF skills

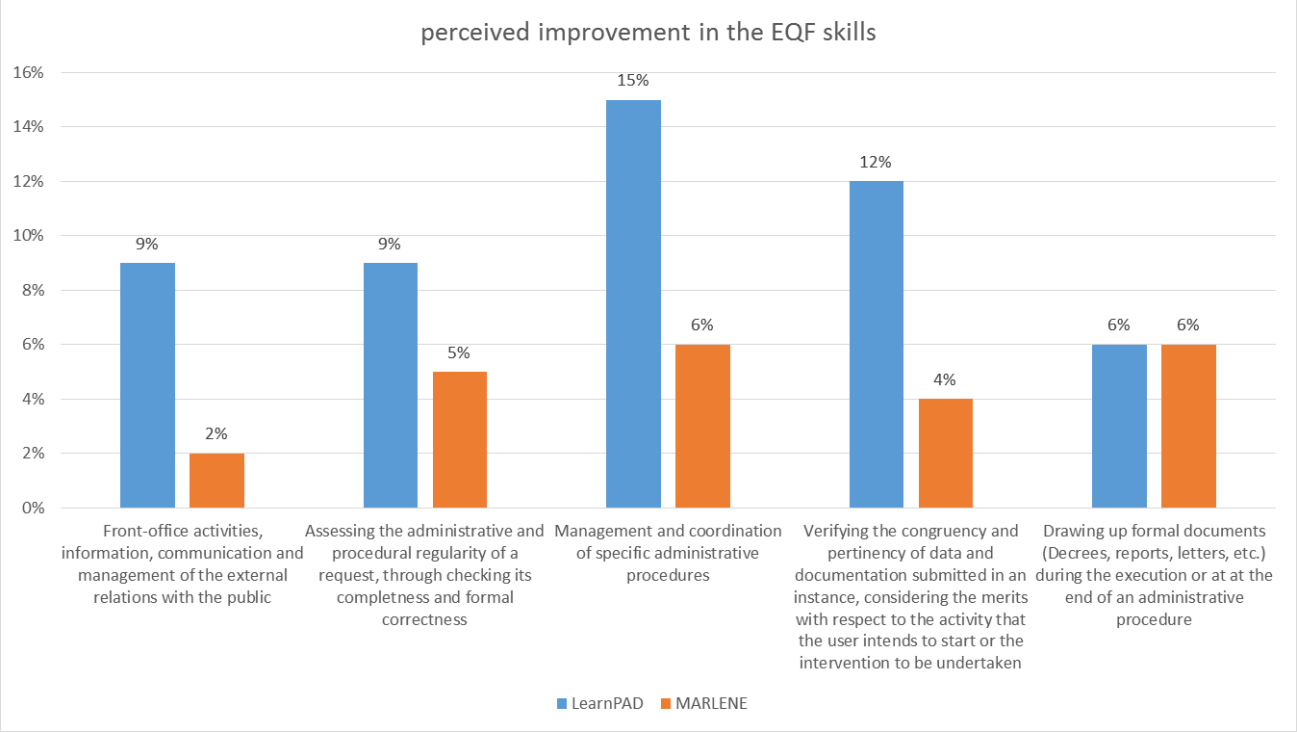


Figure 18 The percentage of declared improvement in each relevant EQF skill within the two samples

3.3.3 Learning assessment data

Summarizing the learning outcomes for the correct answers to the multiple choice questions:

In the Learn PAd sample, 15 users out of 31 (48% within the sample / 25% of the whole users) have correctly answered more than 70% of questions (that is the minimum threshold set by the PA Training Regional School to assess the successful passing of a course). The sample obtained a 62% of the total achievable points.

In the Marlene sample, 16 users out of 30 (53% within the sample / 26% of the whole users) have correctly answered more than 70% of questions. The sample obtained a 61% of the total achievable points.

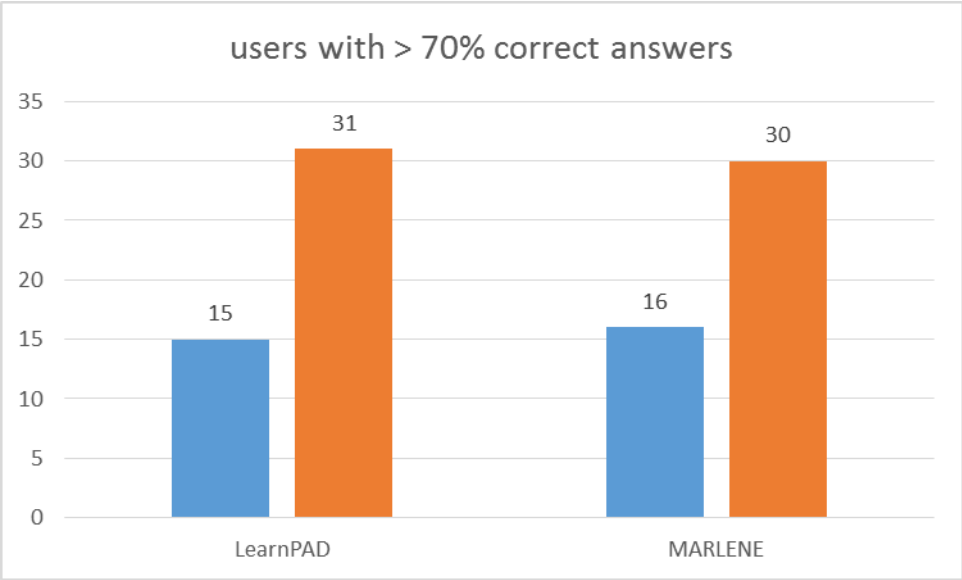


Figure 19 The number of users who answer correctly to more than 70% of the proposed questions within the two samples

We can also go deeply in the analysis separating the 15 questions into the 4 homogeneous clusters previously explained:

Cluster type	N ° of involved questions	Learn PAd			Marlene		
		N° Users with> 70% correct answers (out of 31)	Users percentage among the sample	% of total points achieved compared to the maximum achievable	N° Users with> 70% correct answers (out of 30)	Users percentage among the sample	% of total points achieved compared to the maximum achievable
A theoretical questions	4	9	29%	52%	12	40%	48%
B questions on a new regulatory reform	3	18	58%	76%	20	67%	80%
C questions related to BPs	5	12	39%	61%	11	37%	62%
D questions about practical cases	3	9	29%	59%	10	33%	56%
Results on the whole set of questions	15	15	48%	62%	16	53%	61%

Table 6 Profit results for each cluster of questions

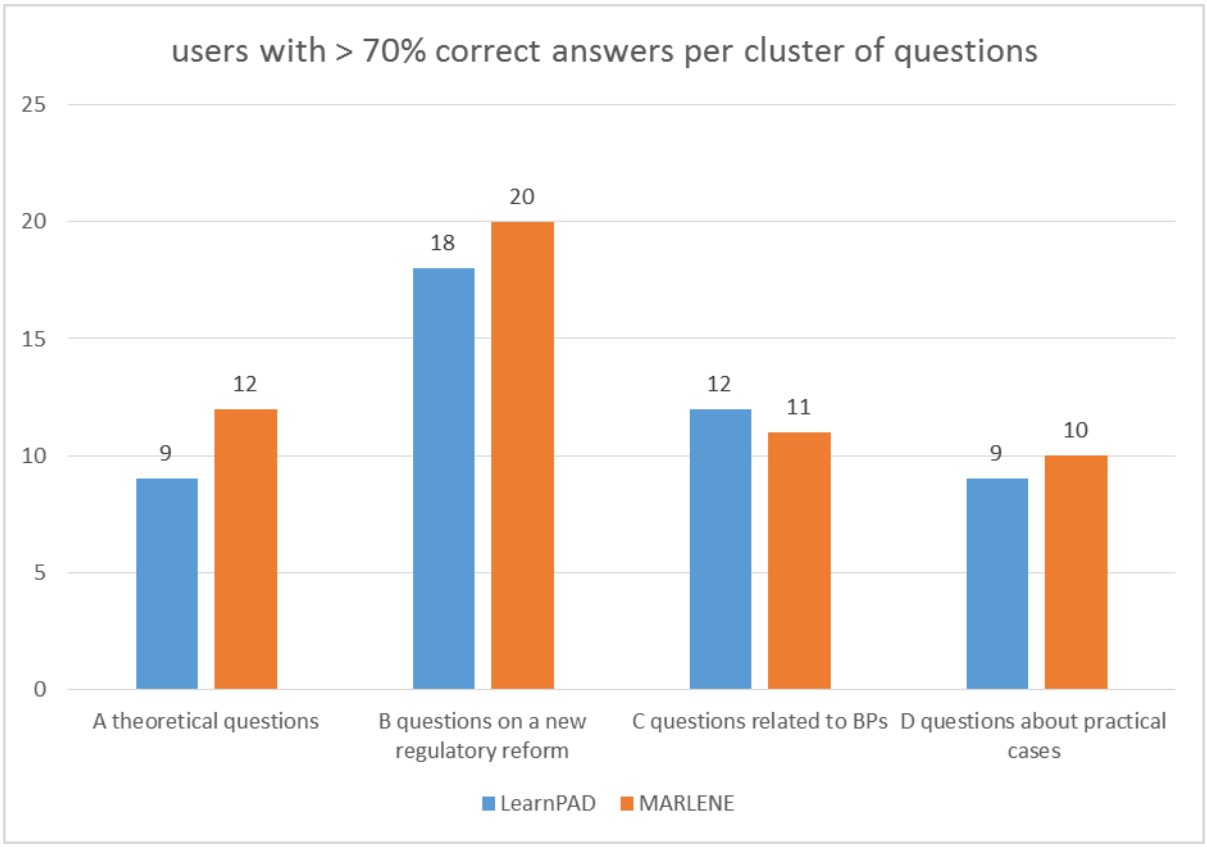


Figure 20 The number of users who answer correctly to more than 70% of the proposed questions within the samples and per clusters of questions

3.3.4 Usability data

As for the Usability criterions we calculated these results:

Criteria	Learn PAd earlier platform v. 6/11/2015	Learn PAd final platform v. 14/09/2016			MARLENE platform		
	Average rating [from 1 = low to 5 = high]	Average rating [from 1 = low to 5 = high]	N° users who expressed an opinion above average [over 3]	% users who expressed an opinion above average [over 3]	Average rating [from 1 = low to 5 = high]	N° users who expressed an opinion above average [over 3]	% users who expressed an opinion above average [over 3]
Overall degree of satisfaction in the use of this e-learning solution	3,14	2,97	8	26%	3,07	10	33%
Degree of effectiveness of the various functionalities available within the platform	3,32	2,94	10	32%	3,13	11	37%
Degree of usability, ease of use and accessibility	2,42	2,90	12	39%	3,33	13	43%
perceived positive user experience with regards to graphics and colors	N.A.	3,03	8	26%	3,50	18	60%
perceived positive user experience with regards to the understanding of symbols and icons	N.A.	2,84	7	23%	3,43	15	50%
perceived positive user experience with regards to the meaning of textual contents	N.A.	3,10	10	32%	3,60	17	57%
perceived positive user experience with regards to search and suggestion of content they want to find	N.A.	2,68	5	16%	3,07	11	37%
perceived positive user experience with regards to orientation and guidance in browsing the pages or the content structure	N.A.	2,65	8	26%	3,57	18	60%
perceived positive user experience with regards to the structuring, placement and positioning of the content	N.A.	2,97	11	35%	3,40	16	53%
Degree of completeness of the available features	3,42	3,06	10	32%	3,17	9	30%

Degree of integration and homogeneity of all the modules available within the learning environment	3,42	3,16	9	29%	3,07	11	37%
Degree of innovation of the proposed solution	4,33	3,61	19	61%	3,07	12	40%
Degree of usefulness and appropriateness of the platform with respect to the training needs of learners	4,00	3,06	11	35%	2,80	5	17%
Detected need of a greater presence of a wizard-driven content fruition	3,71	3,19	9	29%	3,27	9	30%
Detected need of a greater presence of gamification features	4,20	2,90	9	29%	3,33	8	27%
Detected need of a greater presence of an appropriate use of multimedia	4,71	3,45	6	19%	3,73	2	7%
Detected need of a greater presence of interactivity between learner and content	4,50	3,35	6	19%	3,67	2	7%
Detected need of a greater presence of interactivity and knowledge exchange between platform users	N.A.	3,42	4	13%	3,77	5	17%
Detected need of a greater presence of multilingualism or explanatory technical vocabularies	4,28	3,35	8	26%	2,73	13	43%
Detected need of a greater presence of tutoring and external teaching support	4,00	3,23	5	16%	3,27	8	27%

Table 7 Data and figures related to the usability ex post answers

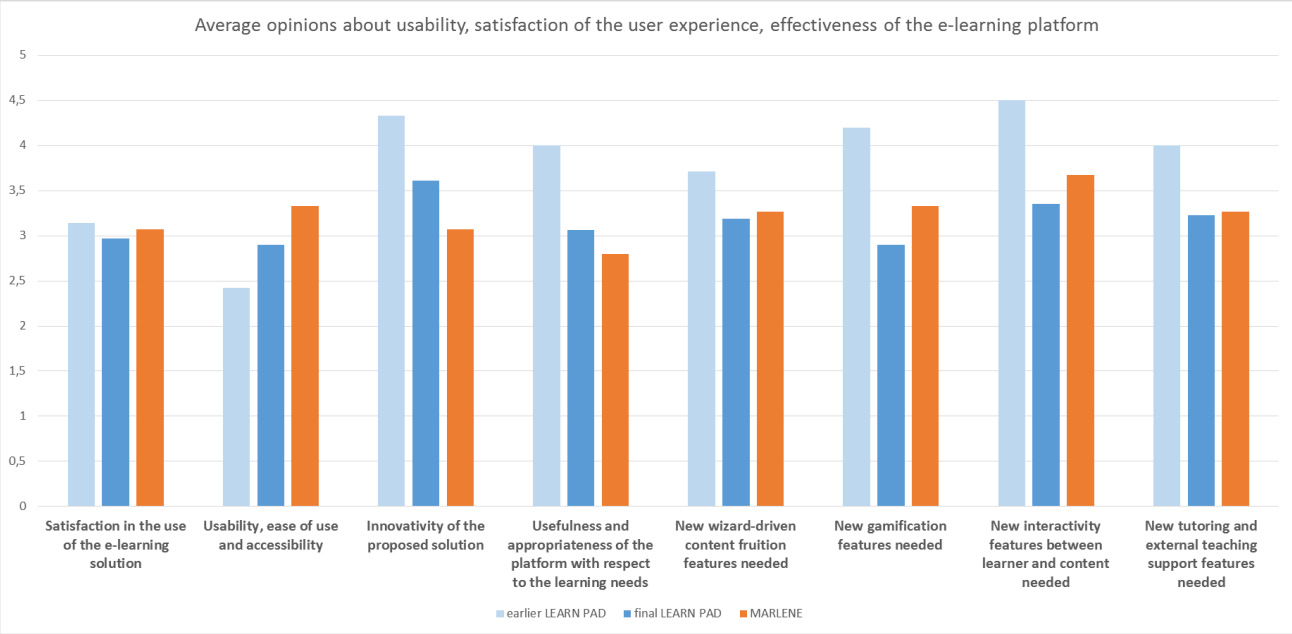


Figure 21 A comparing overview on acquired opinions about usability, user experience and platform effectiveness by the users of Learn PAd and MARLENE

3.4 Synthesis of the collected feedback

In this section a synthetic summary of the collected verbose feedback is described. The full lists (in Italian and in English) are reported in the appendix.

3.4.1 Positive overall opinions and platforms strengths

Figure 22 a/b The POSITIVE FEEDBACK Word-Clouds for Learn PAd and MARLENE

Regarding the Learn PAd platform, we received 20 among 31 positive feedback related to the BP browsing functionality, said to be a simple, logical, intuitive, fast and flexible way to navigate, by content or by graphic schemes, through the workflow; the processes themselves and their related content were described as accurate, well structured, clearly explained and easy to understand.
10 users also appreciated the simulation mode and its exercises based on real cases.
4 users have praised the social interaction features based on comments, the chat and the other forms of contribution; 4 more, in particular, evidenced the functionalities for drawing up and adding contributively structured texts through the wiki environment.
2 learners noticed the advantages of the dynamic recommendation of new content based on semantics.
Finally 2 users have spoken well of the homogeneous and responsive visual identity and 1 user spoke of a newer and interesting way to learn.

About MARLENE 13 users among 30 liked the intermediate comprehension tests via multiple choice questions.
6 users succeeded in updating their knowledge and in quickly memorizing SUAP notions, thanks to the well described and synthetic content and to some in-depths sections.
5 users talked about an easy to use tool, with a clear interface and a simple sequential flow that links all the pages.
3 users judged valid the fact that the content were presented through timed animation, highlights and audio.
Finally 2 users recommended e-learning and online web content as a way to save time and money.

3.4.2 Negative overall opinions and missing functionalities

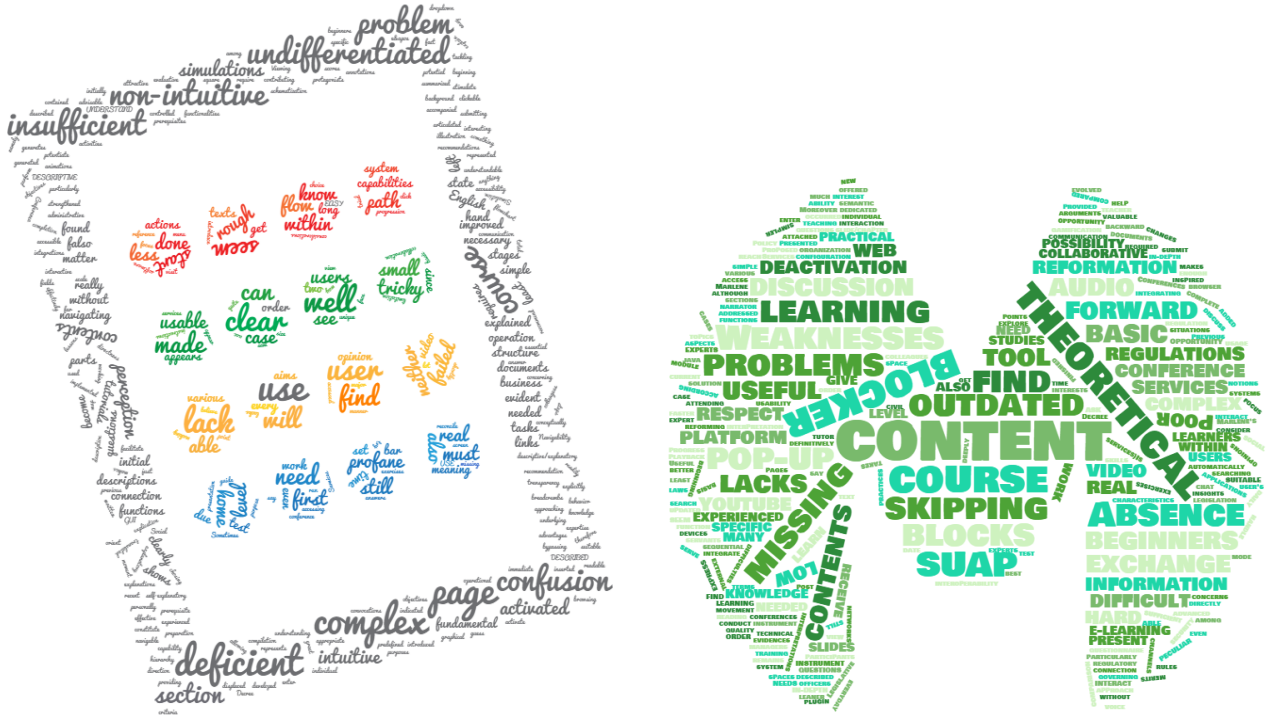


Figure 23 a/b The NEGATIVE FEEDBACK Word-Clouds for Learn PAd and MARLENE

Speaking about Learn PAd, 19 users among 31 have complained about an initial feeling of disconcert, uncertainty, displacement, unclarity. They reported that the platform was difficult to explore since there was not a predefined orienting path to follow or explaining the progression. There were too many unknown available links and features, vehicolated through non exhaustive introductions and through a tricky and not so intuitive interface. One also remarked that just learning to use the platform itself is hardly time consuming.
10 learners wrote that simulation did not seem to work well or was not well explained or even that it was shortly effective in stimulating real problem solving attitudes
4 users reported that the graphical schemes representing the flow charts were difficult to use and read
3 users noticed the presence of disturbing typos (eg. e&apos) and english words
3 users suggested to strengthen and make more attractive the social collaboration and interaction capabilities
2 learners believe that the Learn PAd platform is not suitable for beginners as the course and even the profit questionnaire required as a prerequisite a previously acquired knowledge.
2 people asked to introduce the use of video, multimedia and animations in order to facilitate learning.
2 users commented that the recommending bar showed poor content and it could have been more effective.
An isolated opinion reported that content about CoS was outdated.

Concerning Marlene, 11 users among 30 suggested to introduce, as more advanced e-learning systems provide, interactive and social functionalities, to gain the opportunity of having chat, submitting questions on regulatory concerns and complex situation to handle, receiving in-depth opinions and legislation interpretation from experts or other colleagues attending the course or experts.
7 learners described the course as very basic and theoretical, suitable for beginners, lacking insights on everyday practical work, real applications and complex situation to handle.
4 users complained about an insufficient accessibility because of the pop-up blocker and the browser or I/O devices configuration changes to be put in place.
Other 4 users reported the lack of a content search system to go directly to the content of interest.
Residual single opinions noticed outdated content for CoS, the high amount of time needed to complete all the training module, the absence of gamification aspects and of videos as resources for learning.

4 Results analysis and conclusions

In summary, the validation data collected are of different type. Precisely, for each respondent, they include:

X. A **self-assessment** evaluation on own competence concerning the **5** expected **EQF capabilities**, collected ex ante and ex post;
Y. **15** answers to **multiple-choice profit questions** related to learning **contents** (within the **SUAP** context as a validation scenario);
Z. Qualitative answers, on a **Likert scale**, on **9 questions** (and for 3 of them by an accompanying commentary), **assessing usability** and liking of the platform.

As said, all the above data have been identically collected from both users of Learn PAd and of Marlene, as a baseline.

The questions we addressed in the experiment for validation can be stated as follows:

VQ1: How does learning through the use of Learn PAd approach compares against learning through the use of a more traditional e-Learning platform (such as Marlene), in terms of learning effectiveness ?

VQ2: How do users assess the usability and the functionality of the Learn PAd platform ?

The considerations related to data collected by non-statistically significant samples should be taken with the necessary precautions. However we tried to summarize some general conclusions.

To address VQ1 we examine both the qualitative self-assessment by users (answers to group X questions) and the answers to questions testing users acquired knowledge on the subject of learning experiment (group Y questions). The first group of answers supports a subjective measure of learning effectiveness whereas the second group supports a more objective - even though limited - measure.
The measurement of learning effectiveness has been assessed also in relation to the learners profile (such as the years of working experience in a PA).

To address VQ2 we examine the answers to the group Z questions (both the resulting ratings and the free-text comments, aggregated for relevancy and similarity).

RESULTS OF GROUP Y (profit answers)

We start the analysis considering answers to group Y. Overall we can see (Table 8) that the provided answers are better for the Marlene group that have a higher median value and lower standard deviation, although the differences are small. We then performed a statistical test to assess the null hypothesis that the difference between the number of correct answers for the two groups follows a symmetric distribution around zero, i.e., the null hypothesis is that the median values are statistically equivalent. Because our data could not be assumed to be normally distributed, we adopted a non-parametric statistical hypothesis test, the Wilcoxon signed-rank test. With a resulting p-value of 0.5604, the null hypothesis could not be rejected, i.e., the median values observed are statistically equivalent.

	Marlene	Learn PAd
Mean	9,93	9,23
Median	10	9
St. Dev.	3,38	3,5

Table 8 Overall statistics for profit answers results (the mean of the total score acquired and the median score)

We repeated the test for the 4 clusters of questions described in Section 3.2.4.2 (A theoretical questions, B questions on a new regulatory reform, C questions related to BPs, D questions about practical cases) and the results are the same: the medians are statistically equivalent.

It means that the learning assessment are equivalent between the two samples, and we can say that it is a good result for the Learn PAd platform, as it is a prototype with respect to the more tested and utilized Marlene platform.

We further examined these results looking for possible correlation with some of the factors that we collected. We hypothesized that demographic characteristics of the learners, such as age or matured experience in the topic of the learning session (SUAP), might impact the learning results. We also tested the hypothesis that the time spent on the learning platform (either Marlene or Learn PAd) is not correlated with such results.

We performed, for a set of comparison variables considered significant, both the Pearson correlation test and the Kendall tau correlation test. Kendall tau is similar to the more commonly used Pearson coefficient but it does not require the variables to be normally distributed. The results are reported in Table 9 and 10.

	Marlene	Learn PAd
Years of PA experience	0,360	0,577
Years of SUAP experience	0,467	0,563
Hours dedicated to testing	0,189	0,096

Table 9 Pearson correlation between the number of correct answers and possibly influencing factors (PA experience, SUAP experience, and dedicated time)

With the Pearson index we noticed a no significant correlation of the individual learning results with respect to the platform time usage and a moderate correlation, more evident for the Learn PAd sample, with respect to the years of working experience within a PA and regarding SUAP. This is plausible and it could indicate that, as the Learn PAd approach is centered on work processes, learning is easier and more immediate for those who are the longest more familiar with these processes.

	Marlene	Learn PAd
Age of learners	0.2827474	0.403308
Years of SUAP experience	0.5207782	0.469423
Hours dedicated to testing	0.1636847	0.15134

Table 10 Kendall tau correlation between the number of correct answers and possibly influencing factors (age, SUAP experience, and dedicated time)

For interpreting the data displayed in Table 10 (where all entries are statistically significant at a 95% level), we use the Guildford scale[1] [1], in which correlations with absolute value less than 0.4 are described as "low", 0.4 to 0.7 as "moderate", 0.7 to 0.9 as "high", and over 0.9 as "very high".

We observed some interesting and convincing results, as follows.

The age of respondents has a low correlation with the number of correct answers both for Marlene and Learn PAd.

The time spent on the platform does not have a statistical correlation with the amount of correct answers. This is in line with the current state-of-the-art.
Even if time had no relevance on the progression of learning, we found that Learn PAd, to be tested, required a greater effort in hours than Marlene (about twice of what users spent on Marlene). Learn PAd sample users provided a higher level of commitment during the tests, maybe also because of the huge amount of content that the platform contains (about three times the amount that is contained in the Marlene course). We acknowledge that two weeks of trial had been too few, especially for the Learn PAd platform, whose usage needs to be extended over time before it can fulfill all its potential strengths – such as generating a real community of practice - and before it is granted the possibility to walk through, study and understand all the tasks of BP. However, for organizational reasons, the final validation could not have been structured otherwise.

The experience on SUAP has a moderate correlation with the number of correct answers both for Marlene and Learn PAd, and represents the factor that is better correlated with the number of correct answers.
Based on such outcome, and noticing that within the Learn PAd sample a larger part of subjects declared to be novices in terms of expertise about SUAP, we made a further analysis by computing the correlation between SUAP and the number of correct answers after removing those users who declared less than 1 years of SUAP experience. The correlation coefficient improved for both Marlene (from 0.5207782 to 0.6958166) and Learn PAd (from 0.469423 to 0.5957597). Such results seem to suggest that, independently

[1] J. P. Guilford. Fundamental Statistics in Psychology and Education. McGraw-Hill, 1942

from the platform used, learning effectiveness is better when some previous knowledge exists, which might be explained by the extreme complexity of SUAP regulations.

As for the final profit results of learning, only 48% of Learn PAd users has exceeded the threshold of 70% of correct answers (which defines the minimum acceptable level). Similarly, the percentage of MARLENE sufficient results stood at 53% of users. Given that the Learn PAd group included a higher proportion of learners with up to 1 years of SUAP experience (20 out of 31) than Marlene (15 out of 30), in practice we can also affirm that our assessment is slightly biased in favor of Marlene.

Although the final learning outcome, in itself, is not satisfactory, we noticed that it is a cross-platform effect (independent of the platform used). What it can be said in favor of Learn PAd - unlike MARLENE - it is that Learn PAd is a more complex and multi-faceted platform, which surely needs more assimilation time to deploy benefits (especially those of the collaborative learning).

According to the Marche Region PA Training School, the learning results of online methods are generally lower than those of the training based on courses in presence (and also the drop-out rate is much higher). This can be due to a general lack of humanization and personal relationships in eLearning practices, but as for the final validation also a lack of motivation - from the learners side - and the absence of a mandant or an agreed training plan - from the organizations involved - could have influenced.

Finally, we also performed a Kendall tau correlation analysis between the experience with SUAP and the individual's self-assessment (ex post EQF skills values declared). We observed a negative correlation for both platforms with correlation coefficients of -0.336554 and -0.05058633 for Marlene and Learn PAd, respectively. This result is consistent with the expectation: individuals who are less experienced with SUAP will probably notice a greater improvement after using the platform, than those who are already experienced.

RESULTS OF GROUP X (EQF self-assessment)

We now discuss the results from group X answers. A similar number of subjects (45% of Learn PAd users and 43% of Marlene users) assessed that they have acquired some competence, although this number is not high.

Table 5 (and Figure 18) in Section 3.3.2 show that, at the end of the test, the Learn PAd users, more than the MARLENE ones, said they had achieved improvements in their competences. However the figures of the standard deviation shows that, within the MARLENE sample, there has been a more equitable distribution of the improvements between users (and so, that the highest improvement attributed to the use of Learn PAd may be due to the presence of some outliers). Checking data, we found a single Learn PAd user self-assessing improvement in his levels of 2, 3, 3, 4 and 2 points for the five EQF Skills (that could be exaggerated, or perhaps it could mean than the user underestimated his skills in the ex ante questionnaire).

The percentage of improvements varies across the five different EQF competences, and we think it may be useful to look at the results singularly as they addressed different type of competences.
An interesting thing to notice is that the higher incremental percentage for the Learn PAd sample is the 15% on the EQF Skill "Management and coordination of specific administrative procedures", which, notably, is the most used skill when working, for instance, with the coordination of the tasks within the "Titolo Unico" BP. And, by the way, the BP browsing mode has been considered the best functionality of

the Learn PAd Platform, as assessed by the positive verbal feedback provided by the vast majority of the users (64%).
Also the better improvements in "Assessing the administrative and procedural regularity of a request, through checking its completeness and formal correctness" (9% among the Learn PAd sample instead of the 5% within Marlene) and in "Verifying the congruency and pertinence of data and documentation submitted in an instance, considering the merits with respect to the activity that the user intends to start or the intervention to be undertaken" (12% among the Learn PAd sample instead of the 4% within Marlene), could be related to the Learn PAd case based activity, performed in simulation mode, where users were asked to read a submitted application form to check it and determine how to proceed.

	Marlene	Learn PAd
ex ante declared level in EQF competences	0,463	0,454
ex post declared level in EQF competences	0,565	0,413

Table 11 Pearson correlation between the number of individual correct answers and the sum of declared levels in the five EQF competences

With the Pearson index we also noticed a weak correlation, but present in both cases, of the individual learning results with respect to the self-assessed ex ante EQF levels. For what concerns the declared ex post EQF competence, it seems that MARLENE self-assessments has a slightly higher level of coherence with respect to the learning results.

RESULTS OF GROUP Z (usability related answers)

As a general comment, we observed that the average of ratings stands to mid-range for almost all the criteria, and for both the platforms.

There is a poor correlation between the profit total scores obtained by users and their ratings of overall satisfaction on the use of the platform. And at the same time these judgments are placed on intermediate values that make such an indicator a poor proxy.

For Learn PAd we recorded values below average, though slightly, on:
overall satisfaction; effectiveness of the various functionalities; usability and accessibility; user experience (UX) for symbols and icons; UX for search and suggestion of content; UX related to orientation and guidance in browsing the pages or the content structure; UX for structuring, placement and positioning of the content. We believe that the non-positive score, mostly about effectiveness of functionalities, usability and accessibility, search and suggestion of content, guidance for browsing the content structure (also

corroborated by the verbal comments of users) will have undoubtedly to inspire the next actions for the evolution of the platform.

	Marlene	Learn PAd
Overall degree of satisfaction in the use of this e-learning solution	0,357	0,242

Table 12 Pearson correlation between the number of individual correct answers and the users overall rating of the platforms

About the perceived degree of usability, ease of use and accessibility, the judgment of the users is improved compared to the previous assessment in the early evaluation.

With the exception of the need for greater presence of multilingualism or explanatory technical vocabularies, Learn PAd presented better results than the previous assessment and than MARLENE concerning all the other 10 indicators monitoring deficient or absent features, meaning that:

- the consortium addressed many of the comments that emerged in the early evaluation, solving requests and issues
- on average Learn PAd is considered, with a very slight margin of advantage, a complete environment, concerning the needed functionalities to be effective in terms of learning. Clearly this does not imply that the quality of the implemented features is good enough for users or may require further improvements.

Learn PAd presented better results than MARLENE only on: degree of integration and homogeneity of all the modules available within the learning environment; degree of innovation of the proposed solution; degree of usefulness and appropriateness of the platform with respect to the training needs of learners (and this last is a good result because it considers the content of the platform and how they are transmitted).

Unless for completeness, innovation and usefulness for training needs, MARLENE scored for the other criterions the highest number of users that express positive judgments.
This result is not surprising, because Marlene is a platform used in production for several years, while Learn PAd, at the moment, is just a research prototype that (although producing evidences of learning) is heavily based on a business process model, in which the local civil servants have little or no experience at all.

Analyzing the free-text feedback provided by the users, we noticed that many of them considered Marlene a more suitable tool for beginners than Learn PAd, mainly because it uses a more simplified and sequential process of acquiring information and knowledge. Instead Learn PAd would be more suitable for experienced people, also because it makes a wide use of features for socialization, sharing, contribution and collaboration.

It is not easy to deduce clear recommendations from the verbal feedback related to the Learn PAd platform. For example, simplifying the analysis, 10 users among 31 argued that simulation is a very good idea, but, on the other end, the same amount of users said it did not work well and should be revised; 20 out of 31 users believed valuable the browsing mode, but, at the same time, other 20 users told they did not feel well-oriented during the navigation.

Trying to draw some conclusions we believe that, unsurprinsingly, there is still work to do around the platform. The actual release (and the learning approach it represents) is on average perceived as effective, even if, probably, it needs a higher usage time in order to record more significant learning outcomes and even if some further development (or adjustment) of features and content customization are needed. We expect to fulfill those evolutionary maintenance requests, able to transform a prototype into something more similar to a market stable release, during the next coming exploitation phase.

We provide a quite high effort to update content in the platform: from process modeling within a single reference meta-model, till the collection of educational materials, the editing of explanatory texts and the verification of the state of a constantly changing legislation, passing through the personalization of the simulation exercises, of the recommender suggestions and of the KPI Dashboard goals to be fed. At the same time it was also challenging to maintain aligned the technologies and the functionalities of the platform around a single and integrated application infrastructure. It is therefore logical to assume that those who intend to pursue the result of making use of Learn PAd as a teaching tool, are equipped with resources to maintain up-to-date the platform, even technologically, and to customize its content (and the managed business processes) according to similar needs and requests coming from more than one PA as a profitable market segment, and consequently they should be subjects able to reap economic or organizational gains from these activities.

Appendix

Ex ante Questionnaire (in Italian)

Dati anagrafici e di profilo utente

- Nome e Cognome …… ……
- Sesso (M, F) ……..
- Età ……..
- Sede lavorativa (Comune) ……
- Titolo di studio ……..
- Ruolo pubblico (Dirigente, Funzionario, Impiegato, Libero professionista o altra figura al servizio di una PA) ……..
- Anni di lavoro presso (o per conto di) PA ……
- Anni di lavoro svolti in ambiti attinenti al SUAP ……
- Ente di appartenenza/svolgimento servizio e tipologia (Ente terzo, SUAP comprensoriale, SUAP municipale, Altro) …… ……

Le chiediamo di compilare, prima dell'avvio delle attività formative, un'autovalutazione rispetto al livello europeo (EQF) di competenze possedute in ambito SUAP (Sportello Unico Attività Produttive) o comunque nei processi di lavoro di una Pubblica Amministrazione.
Per ogni specifica competenza descritta nella Tab.1 (colonna competenza), dovrà indicare il livello di competenza che ritiene di possedere (1=bassa/nulla – 8=alta). I diversi livelli sono meglio descritti nella Tab.2

Tab.1

Competenza	Livello da 1 a 8 (rispetto alla tabella EQF sottostante)
a. Attività di sportello, di informazione, di comunicazione e di gestione delle relazioni con il pubblico	
b. Verifica della regolarità amministrativa e procedimentale di un'istanza, attraverso controlli di completezza e correttezza formale	
c. Gestione e coordinamento di specifiche procedure amministrative	
d. Verifica di merito di un'istanza in ordine alla congruenza e alla pertinenza dei dati e della documentazione presentata rispetto all'attività che l'utente intende avviare o all'intervento che si intende realizzare	
e. Stesura di documenti formali (atti, verbali, lettere, etc.) nell'esecuzione o alla conclusione dei vari passaggi procedurali	

Tab.2

Livello EQF	Conoscenza	Abilità	Competenza

1	Generale di base.	Basilari necessarie per svolgere compiti semplici, anche in assenza di esperienza pregressa.	Lavorare o studiare sotto la diretta supervisione, in un contesto strutturato.
2	Pratica di base in un ambito lavorativo o di studio.	Cognitive e pratiche di base necessarie per utilizzare le informazioni rilevanti al fine di svolgere compiti e risolvere problemi di routine utilizzando regole e strumenti semplici.	Lavorare o studiare sotto la supervisione con una certa autonomia.
3	Conoscenza di fatti, principi, processi e concetti generali, in un ambito lavorativo o di studio.	Cognitive e pratiche necessarie a svolgere compiti e risolvere problemi scegliendo e applicando metodi di base, strumenti, materiali ed informazioni.	Assumersi la responsabilità per il completamento delle attività nel lavoro e nello studio. Adeguare il proprio comportamento alle circostanze nel risolvere problemi.
4	Pratica e teorica in ampi contesti, in un ambito lavorativo o di studio.	Cognitive e pratiche necessarie a risolvere problemi specifici in un campo di lavoro o di studio.	Autogestione nell'ambito delle linee guida in contesti di lavoro o di studio che sono solitamente prevedibili, ma soggetti a cambiamenti. Supervisionare il lavoro di routine di altri, assumendosi una certa responsabilità per la valutazione e il miglioramento di attività lavorative o di studio.
5	Pratica e teorica, completa e specializzata in un ambito lavorativo o di studio e consapevolezza dei confini di tale conoscenza.	Una gamma completa di abilità cognitive e pratiche necessarie per sviluppare soluzioni creative a problemi astratti.	Gestire e sorvegliare attività in contesti di lavoro o di studio esposti a cambiamenti imprevedibili. Controllare e sviluppare le prestazioni proprie e di altri.
6	Avanzata in un ambito lavorativo o di studio, che presuppone una	Avanzate, che dimostrino padronanza e innovazione	Gestire attività tecniche o professionali complesse o

	comprensione critica di teorie e principi.	necessarie a risolvere problemi complessi ed imprevedibili in un ambito specializzato di lavoro o di studio.	progetti, assumendosi la responsabilità per il processo decisionale in contesti di lavoro o di studio imprevedibili. Assumersi la responsabilità di gestire lo sviluppo professionale di persone e gruppi.
7	Altamente specializzata, che può costituire l'avanguardia della conoscenza in un ambito lavorativo o di studio, come base del pensiero e/o di ricerca originale. Consapevolezza critica delle problematiche legate alla conoscenza in un campo e all'interfaccia tra campi diversi.	Problem solving specializzato necessario nella ricerca e/o nell'innovazione, al fine di sviluppare nuove conoscenze e procedure e per integrare conoscenze provenienti da ambiti diversi.	Gestire e trasformare contesti complessi di lavoro o di studio imprevedibili che richiedono nuovi approcci strategici. Assumersi la responsabilità di contribuire alla conoscenza e alla pratica professionale e/o di verificare le prestazioni strategiche dei gruppi.
8	Livello conoscitivo più avanzato in un ambito lavorativo o di studio e all'interfaccia tra campi.	Tecniche più avanzate e specializzate, tra cui la sintesi e la valutazione, necessarie per risolvere problemi complessi della ricerca e/o dell'innovazione e per estendere e ridefinire le conoscenze esistenti o la pratica professionale.	Dimostrare effettiva autorità, innovazione, autonomia e integrità tipica dello studioso e del professionista e un impegno continuo nello sviluppo di nuove idee o processi all'avanguardia in contesti di lavoro o di studio, tra cui la ricerca.

In base al documento programmatico sulla sicurezza dei dati personali della Regione, il titolare del trattamento dei dati personali è la Giunta regionale, il responsabile è il dirigente titolare della PF SISTEMI INFORMATIVI E TELEMATICI e gli incaricati sono i responsabili regionali dei procedimenti e dei processi correlati al progetto Learn PAd.

Per comunicazioni:

Regione Marche
P.F SISTEMI INFORMATIVI E TELEMATICI
Dirigente Dott.ssa SERENELLA CAROTA
Via Tiziano 44 60125 Ancona (AN)
Fax 071 8063071
funzione.sisinf@regione.marche.it

Il sottoscritto acconsente pertanto, al momento di riconsegnare il questionario compilato, a concedere una liberatoria per il trattamento delle informazioni e dei dati raccolti, nei termini sopra individuati.

In fede _____

Ex post Questionnaire (in Italian)

SPERIMENTAZIONE PIATTAFORMA …….. – Questionario di validazione ex POST

- Nome e Cognome …… ……..
- Nome utente Learn PAd assegnato ……..
- Quanto tempo ha dedicato alla fruizione della piattaforma, in termini di arco temporale complessivo in giorni …… ed in termini di tempo effettivo di utilizzo in ore ……

Le chiediamo di compilare, al termine delle attività formative, un'autovalutazione rispetto al livello europeo (EQF) di competenze che ritiene di aver acquisito nei processi di lavoro di una Pubblica Amministrazione e/o in relazione ai temi del SUAP (Sportello Unico Attività Produttive); ciò a scopo di verifica, relativamente al fatto se l'utilizzo della piattaforma, a suo avviso, abbia incrementato – e in che misura – le sue abilità e la sua conoscenza.
Per ogni specifica competenza descritta nella Tab.1 (colonna competenza), dovrà indicare il livello di competenza che ora ritiene di possedere (1=bassa/nulla – 8=alta). I diversi livelli sono meglio descritti nella Tab.2 riportata nel questionario ex ante

Tab.1

Competenza	Livello da 1 a 8 (rispetto alla tabella EQF già proposta nel questionario ex ante)
f. Attività di sportello, di informazione, di comunicazione e di gestione delle relazioni con il pubblico	
g. Verifica della regolarità amministrativa e procedimentale di un'istanza, attraverso controlli di completezza e correttezza formale	
h. Gestione e coordinamento di specifiche procedure amministrative	
i. Verifica di merito di un'istanza in ordine alla congruenza e alla pertinenza dei dati e della documentazione presentata rispetto all'attività che l'utente intende avviare o all'intervento che si intende realizzare	
j. Stesura di documenti formali (atti, verbali, lettere, etc.) nell'esecuzione o alla conclusione dei vari passaggi procedurali	

Domande a risposta multipla sui contenuti relativi a SUAP, Titolo Unico, Conferenza di Servizi
(soltanto una delle possibili risposte è corretta – EVIDENZIARE LA RISPOSTA SELEZIONATA O SCRIVERE LA LETTERA ALLA FINE DELLA DOMANDA)

1. nel caso in cui al SUAP pervenga una istanza per la realizzazione di una nuova struttura sanitaria, di cui alla L.R. 20/00, in quali casi può indire la conferenza di servizi?
    a. Potrà indire la conferenza di servizi solo se sono decorsi 30 giorni dalla richiesta dei pareri alle amministrazioni interessate (Azienda Sanitaria Unica Regionale ASUR; Servizio Sanità della Regione Marche, ecc.) senza che queste si siano in alcun modo pronunciate
    b. Dovrà in ogni caso indire la conferenza di servizi, in quanto è necessario
    c. Non potrà mai indire la conferenza di servizi, ma dovrà richiedere i pareri alle singole amministrazioni interessate (ASUR; Servizio Sanità della Regione Marche, ecc.)

2. in caso di assenza dell'ASUR, regolarmente convocata, alla conferenza di servizi, come deve essere inteso il relativo parere?
    a. Espresso favorevolmente
    b. Non deve essere inteso in alcun modo, ma il procedimento amministrativo viene interrotto fino all'acquisizione del parere da parte dell'ASUR, che potrà essere acquisito anche al di fuori della conferenza di servizi
    c. Espresso negativamente
3. Che cosa è la conferenza dei servizi sincrona?
    a. Meeting tra i responsabili SUAP coinvolti nel medesimo procedimento amministrativo
    b. Incontro tra i legali rappresentanti di ciascun Comune
    c. Tutte le risposte (tranne la e)
    d. Strumento che riunisce nello stesso luogo le PP.AA. coinvolte nel procedimento amm.
    e. Nessuna delle risposte
4. Qual è lo scopo della conferenza dei servizi?
    a. Riunire i responsabili delle amministrazioni coinvolte nel medesimo procedimento
    b. Far incontrare i legali rappresentanti di ciascun Comune
    c. Tutte le risposte (tranne la d)
    d. Nessuna delle risposte
    e. Ridurre i tempi e il contemperamento degli interessi pubblici coinvolti
5. Quali sono le norme che sono intervenute prevedendo l'utilizzo di strumenti informatici per i lavori della conferenza di servizi?
    a. Tutte le risposte
    b. la Legge 18 giugno 2009 n. 69
    c. il D.L. 5/12, convertito nella L. 35/12
    d. la Legge 11 febbraio 2005 n. 15
    e. la Legge 7 agosto 2015 n. 124
    f. il DLgs n. 127 del 30/06/2016
6. Quali sono i vantaggi della conferenza dei servizi telematica?
    a. Prevalentemente la semplificazione dei rapporti tra i soggetti partecipanti alle conferenze servizi
    b. Prevalentemente l'azzeramento delle difficoltà che consentono di partecipare in tempi diversi
    c. Prevalentemente la trasparenza e la tracciabilità della procedura nonché la riduzione dei tempi di risposta
    d. Prevalentemente la dematerializzazione della documentazione e la digitalizzazione del procedimento
    e. Tutte le risposte
7. In quale procedimento di cui al D.P.R. 160/2010 trova applicazione lo strumento della conferenza di servizi?
    a. Tutte le risposte (tranne la d)
    b. Nel procedimento ordinario
    c. Nel procedimento di valutazione della conformità dei progetti preliminari
    d. Nessuna delle risposte
    e. Nel procedimento in variante allo strumento urbanistico
8. Ai sensi e per gli effetti dell'art. 7 del D.P.R. 160/2010, entro quanti giorni dal ricevimento dell'istanza il responsabile del SUAP deve verificare la completezza formale dell'istanza?

a. 30 giorni
b. 20 giorni
c. 25 giorni
d. 35 giorni
e. 15 giorni

9. Il DLgs 30 giugno 2016 n. 127 introduce una nuova disciplina e 5 tipologie di Conferenze di Servizi attivabili; esse sono:
    a. Decisoria, Automatica, Consensuale, in Variante, Istruttoria
    b. Decisoria, Semplificata, Simultanea, Preliminare, Istruttoria
    c. Decisoria, Automatica, Parziale, Preliminare, Procedimentale
10. Chi convoca la Conferenza di Servizi Decisoria
    a. L'ente terzo in caso di emissione di parere non favorevole al rilascio del Titolo unico
    b. Il titolare richiedente (o suo intermediario delegato) quando l'attività del privato è subordinata ad un unico atto di assenso da adottare a conclusione di un procedimento di competenza di una amministrazione pubblica
    c. L'amministrazione procedente, nella persona del responsabile del procedimento, quando per la conclusione del procedimento devono essere acquisiti almeno due pareri, intese, concerti, nulla osta o altri atti di assenso, da parte di diverse amministrazioni, inclusi i gestori di beni o servizi pubblici.
11. In una istanza di titolo unico, qualora, a seguito dell'esame formale da parte del SUAP, la documentazione allegata risulti essere non conforme alla normativa:
    a. Il SUAP richiede ulteriori chiarimenti e integrazioni al titolare della pratica
    b. Gli enti terzi coinvolti emettono parere negativo, ciascuno per l'endo-procedimento di competenza (ovvero per ogni sub-attività - Business Process task - in cui vengono coinvolti e chiamati ad emettere parere di merito)
    c. Il SUAP deve convocare una conferenza di servizi
    d. Il SUAP rigetta l'istanza in quanto inammissibile o irricevibile
    e. Il Tribunale Amministrativo Regionale (TAR) deve prendere in esame d'ufficio l'istanza e la documentazione allegata
12. Se, a seguito di una conferenza di servizi o del controllo di merito di un'istanza, un ente terzo esprime, per quanto di competenza, un parere favorevole condizionato all'avvio di un'attività produttiva, ciò significa che:
    a. L'ente terzo ha necessità di ulteriori chiarimenti prima di potersi esprimere definitivamente, pertanto emette un parere sospensivo dei termini del procedimento
    b. L'attività produttiva da avviare si intende esercitabile, previa verifica delle condizioni di idoneità professionale da parte del richiedente
    c. L'ente terzo ha espresso un parere sostanzialmente favorevole, previo adempimento da parte del richiedente di una o più prescrizioni vincolanti individuate
    d. L'utente richiedente è giudicato in condizione di esercitare l'attività produttiva, ma solo in riferimento alle specifiche competenze a pronunciarsi che l'ente terzo ha in capo per norma
    e. L'ente terzo ha espresso un parere positivo, segnalando all'utente una serie di interventi aggiuntivi opzionali non obbligatori da porre in essere
13. Un utente ha correttamente presentato istanza di Titolo Unico al SUAP del Comune di Senigallia, in ordine alla ristrutturazione di uno stabilimento balneare su una spiaggia ricadente in area

paesaggistica tutelata a norma della parte III del D. Lgs. 42/2004; Il SUAP convoca una conferenza di servizi: quali di questi enti terzi verranno sicuramente invitati ?

a. Multiservizi SpA in quanto ente gestore della rete fognaria (per l'esame del referto analitico sullo scarico di acque reflue) e ARPAM (per la valutazione di impatto acustico ai sensi della L. 447/95 e della L.R. 14 novembre 2001, n. 28)
b. Il Dipartimento di igiene alimentare e nutrizione dell'Azienda Sanitaria Unica Regionale - ASUR (per il parere igienico sanitario preventivo in ordine all'esecuzione dei lavori edili) e la PF VALUTAZIONI ED AUTORIZZAZIONI AMBIENTALI della Regione Marche (per la richiesta di autorizzazione integrata ambientale di cui al DLgs 59/05, in ordine a impianti con capacità produttiva pari o superiore ai valori di soglia indicati nell'Allegato I)
c. L'area Ecologia della Provincia (per il parere in ordine all'adozione dell'AUA - autorizzazione unica ambientale – per le emissioni in atmosfera) ed il DIPARTIMENTO DI PREVENZIONE INCENDI dei Vigili del Fuoco (per la valutazione del progetto ai sensi dell'art. 3 del DPR 151/2011)
d. La Rete Ferrovia Italiana SpA - ex FF.SS. (per il parere in merito ai confini e distanze dalla linea ferroviaria ai sensi DPR 753/1980) ed il DIPARTIMENTO DI PREVENZIONE E SICUREZZA NEI LUOGHI DI LAVORO dell'ASUR (per l'acquisizione dell'autorizzazione di cui all'art. 5 del R.D. 147/27 in materia di utilizzo di gas tossici)
e. Gli uffici comunali ambiente (per il parere di compatibilità paesaggistica) ed edilizia (per l'ottenimento del permesso di costruire)

14. Conclusasi una conferenza di servizi in cui sia stata convocata la Soprintendenza per i beni artistici, architettonici, ambientali e storici, affinché si esprima ai sensi dell'art. 146 DLgs 42/2004 e smi e art. 14-ter comma 3bis L. 241/1990, qualora la Soprintendenza non abbia emesso parere formale né abbia partecipato ai lavori:
    a. Il SUAP, ai sensi della normativa sul silenzio assenso, intende acquisito un parere favorevole
    b. La Soprintendenza ha 30 giorni di tempo dall'emissione del verbale per integralo con eventuali e successive osservazioni, richieste di chiarimento, prescrizioni
    c. Il SUAP sollecita la Soprintendenza ad esprimere definitivamente il parere entro ulteriori 15 giorni dall'emissione del verbale
    d. La Soprintendenza ha 15 giorni di tempo dall'emissione del verbale per convocare una nuova conferenza di servizi
    e. L'utente richiedente acquisisce di diritto l'autorizzazione a realizzare l'intervento o avviare l'attività d'impresa
    f. Il SUAP è costretto a comunicare all'utente il diniego all'autorizzazione
15. Conclusasi una conferenza di servizi relativa ad un'istanza di Titolo unico in cui hanno preso parte, oltre al SUAP, tutti gli enti terzi necessari, qualora la soprintendenza per i beni artistici, architettonici, ambientali e storici abbia emesso parere favorevole ai sensi dell'art. 146 DLgs 42/2004 e smi e art. 14-ter comma 3bis L. 241/1990, l'ufficio patrimonio del comune abbia accordato il NULLA OSTA all'intervento in qualità di Ente proprietario dell'area, l'ufficio ambiente del comune abbia evidenziato la compatibilità dell'intervento a livello paesaggistico ai sensi dell'art. 146 DLgs 42/2004 e l'ufficio comunale edilizia abbia evidenziato la non ammissibilità dell'intervento a seguito della contestuale richiesta del permesso di costruire:
    a. Al termine di procedimento il SUAP emetterà titolo unico a procedere all'intervento
    b. Il consiglio comunale sarà chiamato a pronunciarsi sul procedimento di variante urbanistica
    c. Al termine di procedimento il SUAP comunicherà al richiedente il diniego (o il preavviso al diniego) per l'effettuazione dell'intervento

d. L'ufficio comunale edilizia sarà invitato a riesaminare il proprio pronunciamento legato al permesso di costruire entro il termine di 15 giorni
e. Al termine di procedimento l'utente potrà presentare al SUAP la Segnalazione Certificata di Inizio Attività

Domande sull'usabilità della piattaforma

(EVIDENZIARE LA RISPOSTA SELEZIONATA O AGGIUNGERE UNA X NELLA RELATIVA CASELLA)

1. In generale, quanto è soddisfatto della fruizione in modalità e-learning a cui ha avuto accesso ?
   (Scala di riferimento 1 = insoddisfatto; 5 = totalmente soddisfatto)

1	2	3	4	5

Può spiegarci in sintesi perché ……

……

2. Come giudica nel complesso l'efficacia delle diverse funzionalità rese disponibili dalla piattaforma ?
   (Scala di riferimento: 1 = per niente efficaci ; 5 = molto efficaci)

1	2	3	4	5

In particolare quali funzionalità giudica più utili: ad es. esercizi di simulazione basati su casi reali, raccomandazione dinamica di contenuti, navigazione sequenziale del flusso di lavoro, interazione social con commenti e altre forme di contribuzione, elementi di approfondimento evidenziati attraverso grafica o multimedia, momenti di verifica intermedi con domande a risposta multipla, attribuzione di punteggi finali, etc. .....

……

……

3. Come giudica "facilità d'uso" ed "accessibilità" dei servizi resi disponibili ? *Per "accessibilità" si intende la caratteristica di un sistema informatico di essere facilmente fruibile da qualsiasi tipologia di utente, indipendentemente dalle capacità sensoriali, motorie o psichiche dell'individuo, da eventuali disabilità temporanee o stabili, o anche da aspetti culturali o relativi alla dimestichezza con l'uso delle interfacce e delle tecnologie ICT.*
   (Scala di riferimento 1 = difficile; 5 = facile)

1	2	3	4	5

4. In termini di "usabilità" ed "esperienza utente" come valuta i seguenti aspetti ? *Per "esperienza utente" (User Experience - UX) si intende la sensazione soggettiva che avete provato utilizzando la piattaforma con riferimento agli aspetti esperienziali, affettivi, di attribuzione di senso e valore collegati alla*

disponibilità del prodotto e all'interazione con esso nonché alle percezioni complessive e ai pensieri personali circa l'efficacia nell'apprendimento, la semplicità di utilizzo dell'interfaccia, l'efficienza del sistema.
(Scala di riferimento: 1 = esperienza del tutto negativa; 5 = esperienza del tutto positiva)

Grafica e colori	1	2	3	4	5
Comprensione dei simboli	1	2	3	4	5
Significato dei testi	1	2	3	4	5
Ricerca e suggerimento dei contenuti desiderati	1	2	3	4	5
Orientamento nella navigazione	1	2	3	4	5
Struttura e posizionamento dei contenuti	1	2	3	4	5
Altro (specificare e aggiungere righe se necessario) ……..	1	2	3	4	5
……..	1	2	3	4	5

5. Come giudica la "completezza" delle funzionalità rese disponibili ?
   (Scala di riferimento 1 = incomplete; 5 = complete)

1	2	3	4	5

In particolare quali funzionalità mancherebbero o a suo giudizio reputa carenti (e perché) per poter considerare la piattaforma un valido strumento di apprendimento ……

……

……

6. Quanto valuta efficace l'integrazione degli ambienti didattici presenti ? In altre parole le è sembrato di operare in un contesto di apprendimento sufficientemente omogeneo, rispetto a tutti i moduli, i contenuti e le funzionalità esplorati ?
   (Scala di riferimento 1 = per niente integrati; 5 = molto integrati)

1	2	3	4	5

7. Come valuta il grado di innovatività della soluzione proposta ? Le è sembrato di apprendere in una modalità nuova rispetto ad esperienze didattiche già avute ?
   (Scala di riferimento 1 = per niente innovativo; 5 = molto innovativo)

1	2	3	4	5

8. Come valuta l'utilità della soluzione proposta ? La reputa adeguata rispetto alle sue esigenze formative ? (Scala di riferimento 1 = per niente utile; 5 = molto utile)

1	2	3	4	5

9. Ai fini di una migliore efficacia della piattaforma in termini di apprendimento ritieni necessaria una maggiore presenza dei seguenti aspetti ?
   (Scala di riferimento: 1 = per niente necessario; 5 = del tutto necessario)

Fruizione guidata dei contenuti	1	2	3	4	5
"Gamification" ovvero l'utilizzo di elementi mutuati dai giochi e delle tecniche ludiche riadattate a contesti esterni (ad es. punteggi, livelli, ricompense, distintivi, doni e altri metodi di fidelizzazione o per destare interesse o contribuire alla soddisfazione degli utenti)	1	2	3	4	5
Multimedialità (uso appropriato di audio, video, immagini, …)	1	2	3	4	5
Interattività tra discente e contenuti	1	2	3	4	5
Interattività e scambio di conoscenza tra utenti della piattaforma	1	2	3	4	5
Multilinguismo o comunque anche uso di didascalie in grado di spiegare il significato di acronimi, vocaboli tecnici da addetti ai lavori, etc.	1	2	3	4	5
Tutoring (animazione per i discenti, supporto alla didattica)	1	2	3	4	5
Altri aspetti necessari (specificare e aggiungere righe se del caso) ……..	1	2	3	4	5
…….. ……..	1	2	3	4	5

Ai sensi del Dlgs196/2003 - "Codice Privacy", desideriamo informarla che le informazioni ed i dati personali forniti in tale contesto (sperimentazione e validazione della piattaforma Learn PAd) saranno utilizzati esclusivamente per finalità statistiche e scientifiche e trattati in conformità al documento programmatico per la sicurezza informatica in vigore, nonché nel rispetto della normativa vigente, in modo da garantirne la sicurezza e la riservatezza. I risultati dei test ed i questionari compilati saranno analizzati ed utilizzati dai partners del Progetto Learn PAd (Regione Marche: PF Sistemi Informativi e Scuola di formazione regionale, CNR Consiglio Nazionale delle Ricerche: ISTI, Università di Camerino, Università dell'Aquila, Università FHNW Switzerland, BOC Asset Management GmbH Austria, No Magic Europe Lituania, Linagora GSO Francia, XWIKI Sas Francia), confrontati con quelli raccolti dagli altri partecipanti al test e comunque rielaborati in forma aggregata ed anonima ai fini di una presentazione verso i soggetti terzi abilitati (ad es. funzionari e valutatori UE). Essi saranno utilizzati per comprendere i livelli di efficacia raggiunti con il nuovo modello formativo sperimentato nel progetto europeo Learn PAd.

Tali dati sono conservati da Regione Marche ed accessibili solo da parte di personale autorizzato fino alla conclusione del progetto; la cancellazione dei dati avviene su richiesta via mail, fax o lettera degli interessati, senza indugio. In ogni caso i dati saranno cancellati al termine dell'iniziativa e a seguito del loro utilizzo nei termini indicati.

I soggetti cui si riferiscono i dati personali hanno il diritto, ai sensi dell'art. 7 del D.Lgs. n.196/2003, in qualunque momento, di ottenere la conferma dell'esistenza o meno dei medesimi dati e di conoscerne il contenuto e l'origine, verificarne l'esattezza, chiederne l'integrazione o

l'aggiornamento, oppure la rettifica, la cancellazione, la trasformazione in forma anonima o il blocco dei dati trattati in violazione di legge, nonché di opporsi in ogni caso, per motivi legittimi, al loro trattamento.

In base al documento programmatico sulla sicurezza dei dati personali della Regione, il titolare del trattamento dei dati personali è la Giunta regionale, il responsabile è il dirigente titolare della PF SISTEMI INFORMATIVI E TELEMATICI e gli incaricati sono i responsabili regionali dei procedimenti e dei processi correlati al progetto Learn PAd.

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Il sottoscritto acconsente pertanto, al momento di riconsegnare il questionario compilato, a concedere una liberatoria per il trattamento delle informazioni e dei dati raccolti, nei termini sopra individuati.

In fede _____

Collected feedback (in Italian)

Learn PAd

Negative overall opinions and missing functionalities

- L'impatto iniziale con la piattaforma sconcerta e genera incertezze – non essendoci un percorso predefinito da seguire, ma una serie di funzionalità attivabili a piacere di cui inizialmente non se ne conoscono utilità o comportamento, l'utente si trova spiazzato -> si consiglia di potenziare gli aspetti introduttivi (es. testo esplicativo iniziale, video tutorial, etc.).
- Per quanto ho avuto modo di vedere, alcune funzionalità sembrano non funzionare bene (es. barra raccomandazioni: non vedo alcuni contenuti che i miei colleghi invece hanno sperimentato) – altre non sono ben spiegate (es. simulation non è chiara, né nei contenuti, né nella presentazione delle azioni da fare)
- Difficoltà a navigare all'interno della piattaforma. Ho notato che vi sono alcune imprecisioni sui contenuti relativi alla conferenza di servizi (non sono contemplati gli aggiornamenti di cui al recente Dlgs di riforma della materia)
- Poco efficace la simulazione che risulta essere semplicemente una compilazione di campi (quasi un test) senza prevedere funzioni che stimolano il problem solving. Inoltre i punteggi finali non sono rapportati ad una scala di riferimento per cui perdono ogni significato valutativo
- Interfaccia poco intuitiva. Difficile capire dove ci si trova
- Con la vastità delle informazioni e dei link che ci si trova davanti risulta non facile capire se si siano esplorate tutte le funzionalità
- La piattaforma è ancora in uno stato embrionale in cui i contenuti guida sono poco chiari e la fruizione delle informazioni risulta ostica tramite l'interfaccia proposta
- Il corso richiede un grado pregresso di conoscenza e competenza specifica sulla materia trattata (non adatto a neofiti)
- LA PARTE DESCRITTIVA E' COMPLETA E DI FACILE COMPRENSIONE (AD ECCEZIONE DI ALCUNI ERRORI DI ORTOGRAFIA ES. e&apos); I CONTENUTI SONO BEN DESCRITTI, MA HO TROVATO DI DIFFICILE FRUIBILITA' E LETTURA GLI SCHEMI GRAFICI
- La fruizione della piattaforma non è molto intuitiva, bisogna prenderci dimestichezza e conciliare concettualmente le due modalità di organizzazione dei contenuti (quella di flusso, che è molto chiara e avviene tramite la schematizzazione, e quella di spiegazione dei processi)
- La piattaforma non mi è sembrata particolarmente intuitiva, la "mappa" navigabile è interessante, ma non è immediato il collegamento con i link e i testi sottostanti
- I business process dovrebbero regolare il funzionamento, ma non diventare protagonisti del corso, l'utente non dovrebbe vederli, la fruizione del corso deve essere accompagnata da call to actions o descrizioni semplici che lo guidino attraverso i contenuti e le esercitazioni/simulazioni. Finché non me l'hanno spiegato non sono riuscito a capirci niente, mancano le descrizioni delle sezioni, ma in ogni caso un software è usabile quando si spiega da solo e non ha bisogno di guide
- Poco intuitiva
- L'attività formativa sulla conferenza dei servizi, come prima pagina, illustra il flusso documentale che si attiva in relazione ad una Conferenza dei Servizi, tuttavia non appare con evidenza nella pagina introduttiva l'illustrazione delle finalità e della struttura della piattaforma (o almeno io non sono riuscita a trovarla con immediatezza – poi ho visto dopo la sezione HOW TO). La sezione HOW TO dovrebbe essere resa più evidente nella prima pagina o costituire proprio i contenuti della prima pagina per esplicitare le finalità dell'attività che si andrà a svolgere. E' essenziale che le finalità e gli obiettivi, nonché la struttura e le funzionalità della piattaforma siano rese chiare sin da subito. Non credo queste

informazioni possano essere lasciate alla libera scelta di chi accede alla piattaforma. E' essenziale che siano enunciate esplicitamente prima di avviare la navigazione per una esigenza di chiarezza e trasparenza e per consentire ai fruitori di orientarsi maggiormente nel percorso, avendo anche chiara la direzione a cui tendere.

- Visualizzare il contenuto dei "tasti" che costituiscono il diagramma di flusso non è semplice. Sono di dimensioni troppo piccole e, dunque, scarsamente fruibili (da un punto di vista grafico). D'altro canto, è ottimo che siano cliccabili, permettendo a chi entra in piattaforma di orientarsi in ogni fase del percorso, dopo un primo momento di confusione (dovuta al fatto che non sono chiari gli obiettivi e le finalità dell'attività, a mio parere). La piattaforma non risponde a criteri di accessibilità per tutti (gli step nel diagramma di flusso sono descritti con caratteri troppo piccoli e ho avuto difficoltà a capire cosa ci sia scritto in ogni tasto).
- In generale, l'interfaccia appare poco intuitiva e di non immediata comprensione per i potenziali fruitori che si avvicinino da profani all'utilizzo della piattaforma. Ad esempio, nella schermata iniziale dell'attività si potrebbe indicare gli obiettivi formativi e chiarire le funzionalità fondamentali, ovvero: navigare, affrontare simulazioni di lavoro di gruppo o per singoli utenti, contribuire attraverso proprie considerazioni ed annotazioni.
- E' ottima l'idea che sia possibile fare delle simulazioni, anche se poi non sono riuscita (o non si riesce) ad avviarle. E' come se la simulazione fosse raccontata, ma non ci fosse la possibilità di attivarla. Non ho ben capito come tale funzionalità sia attivabile. Ho provato a cliccare sui menù a tendina per avviare una simulazione, ma al submit non è successo nulla. Non so cosa il sistema abbia generato, se abbia generato qualcosa e come questo possa attivare il controllo (casi e risposte inserite – che però non sono riuscita ad interpretare). In altre parole la simulazione, a mio parere, non funziona in modo adeguato (poco chiare le istruzioni per farla partire - mancano documenti necessari x comprendere il caso reale).
- I modelli di lavoro (format convocazioni, format per comunicare o richiedere integrazioni, format per redigere verbali, etc.) non sono utilizzabili e non sembra siano disponibili nel corso.
  L'interfaccia grafica è assolutamente da migliorare perché rappresenta il grande limite della piattaforma, rendendola poco intuitiva, poco accessibile e non chiaramente organizzata per un'ideale fruizione delle funzionalità che prevede.
  Per poter rispondere alle domande di contenuto nel test è necessario fare riferimento a documenti che non sono disponibili in piattaforma
- Ho trovato il sistema abbastanza approssimativo e poco intuitivo
- La dimensione dei font è troppo piccola
- Le funzionalità di collaborazione social andrebbero irrobustite e rese più accattivanti
- Le funzionalità necessarie sono tutte presenti, dovrebbero però essere implementate in maniera più efficace in termini di: organizzazione logica, interattività (il livello di interattività tra user e contenuti è troppo basso), progressione nel completamento del percorso di apprendimento (non si intuisce qual è il complessivo ammontare dei contenuti da fruire per cui non si percepisce il quanto è stato fatto e quanto deve essere ancora fatto); esplicitazione degli obiettivi del percorso formativo
- La navigabilità potrebbe essere migliorata, così come le informazioni relative a dove ci si trova in ogni pagina (breadcrumbs insufficienti)
- Non è chiara la modalità di funzionamento della simulation
- Le funzionalità di simulation e recommendation sono ancora incomplete o in uno stato embrionale che ne rende difficile la fruizione. A volte i testi dell'interfaccia sono in inglese

- I tutorial sono ben sviluppati e articolati. Occorre dedicare comunque molto più tempo. La scrivente , per il poco che ha utilizzato, ha trovato vantaggio. Almeno due giornate lavorative dovrebbero essere dedicate (apprendere a utilizzare la piattaforma è di per sé time consuming)
- LA PARTE DEI CASI PRATICI NON RISULTA FUNZIONANTE
- Risulta carente la funzionalità delle simulazioni, che andrebbero rese più interattive e meno complesse
- Mancano: la possibilità di fare annulla/esci dalla simulazione; uno strumento di design dei processi di business accessibile; un percorso formativo a tappe, nel senso che tutti i contenuti sembrano rappresentati in modo non differenziato allo stesso livello (mentre alcuni risultano ostici ed altri più accessibili) e personalmente non ho colto quali argomenti sono "propedeutici per…"
- Sarebbe opportuno inserire, sulla sinistra, una "barra" dei contenuti che evidenzi la struttura del corso e la gerarchia dei contenuti stessi. L'utilizzo di video e di animazioni agevolerebbe l'apprendimento
- Ci sono delle parti in lingua inglese che andrebbero tradotte; i grafici, molto utili, dovrebbero essere più leggibili
- Aggiungere video: nella home per introdurre il sistema e il suo funzionamento, nelle varie lezioni per spiegare i contenuti che vi si troveranno. Aggiungere spiegazioni testuali di cosa fa ogni singola pagina/sezione che si visita (ad esempio la simulazione)

Positive overall opinions and strenghts

- Nel complesso è un modo totalmente nuovo ed interessante di imparare
- Molto valido il modello relativo al processo di lavoro e il fatto che sia navigabile
- Superato il momento di smarrimento iniziale e compresa la logica di come interagire con la piattaforma la fruizione è risultata semplice e intuitiva
- Modalità di e-learning veloce in quanto permette di saltare i contenuti che non interessano per dedicarsi a quelli da approfondire
- L'uso dei business process model in questo ambito da un grande valore aggiunto, poiché credo siano utili per avere una visione grafica di un processo complesso. Tuttavia l'aggiunta della interattività nell'immagine che descrive il BP, per renderla navigabile, garantirebbe una maggiore usabilità della piattaforma
- Ben strutturato e di facile fruizione
- L'illustrazione del flusso documentale è completa e chiara a livello concettuale. I tasti di ogni step sono cliccabili e rimandano ad ogni fase di lavoro. Cliccando ogni step, compare una sintetica e chiara descrizione della fase di lavoro in cui ci si trova.
  E' ottimo che in ogni step ci sia anche la possibilità di redigere documenti attraverso il wiki, lavorando in forma collaborativa
  In generale, le funzionalità essenziali ci sono. In particolare il diagramma di flusso, cliccabile ad ogni step con le rispettive opzioni, è un ottimo strumento, chiaro e comprensibile dal punto di vista concettuale
- La grafica semplice e lineare aiuta e favorisce l'apprendimento attraverso la navigazione del processo
- Utile l'esercizio di simulazione basato su casi reali (ma va curato meglio); efficace (ma da implementare meglio) il meccanismo dello SCORE
- Interessante la raccomandazione dinamica di contenuti (potenzialità semantica che tuttavia non ho avuto modo di vedere in esecuzione – mi è stata raccontata)
- Utilissima la navigazione sequenziale del flusso di lavoro anche attraverso l'immagine del processo, ma da ottimizzare (purtroppo l'immagine nella fase di navigazione è troppo piccola sullo schermo, ma ho apprezzato che i singoli elementi sono cliccabili / ancora più utile se l'esplorazione potesse avvenire

come nella simulazione, dove ad ogni step si evidenzia graficamente l'attività del processo in cui sono. Nella simulazione il riquadro che evidenzia questo scorrere nel flusso è troppo ristretto)

- L'interazione social con commenti e altre forme di contribuzione è abbastanza utile
- Buona idea la funzionalità contribuisci, con la possibilità di aggiungere testo esplicativo
- La navigazione sequenziale del flusso di lavoro è l'aspetto più innovativo ed efficace della piattaforma
- Giudizio positivo per la raccomandazione dinamica contenuti
- La simulation è una funzionalità utile, ma va resa più intellegibile
- Presenza degli stessi elementi di approfondimento in ogni pagina, evidenziati attraverso grafica omogenea
- La simulazione su casi reali aiuta moltissimo nel processo di training. Unico aspetto negativo è che lo spazio ristretto della finestra contenente il flusso dei task via via attivi non permetteva di capire immediatamente (senza scroll orizzontale e verticale) in quale fase del processo mi trovavo
- Le immagini del processo rendono chiara la visione d'insieme. Chiaro il testo descrittivo dei singoli passaggi
- Validi gli esercizi di simulazione basati su casi reali nonché le funzioni di interazione social con commenti ed altre forme di contribuzione. Le descrizioni dei contenuti sono complete e di facile comprensione
- Tra i moduli più interessanti segnalo: la navigazione sequenziale del flusso di lavoro; l'interazione collaborativa degli utenti; le simulazioni, ma da rendere più strutturate e più aderenti a casi reali complessi e verosimili
- Ho apprezzato gli esercizi di simulazione basati su casi reali, la navigazione sequenziale del flusso di lavoro e la visione grafica del processo
- Ritengo utili le mappe navigabili, l'interazione nei commenti e le simulazioni di casi reali
- La simulazione è una buona e utile idea, ma l'uso di termini come robot e umano andrebbero cambiati o spiegati in qualche modo
- OK per interazione social, simulazione, navigazione sequenziale
- La navigazione sequenziale del flusso di lavoro basata su clic è facilmente comprensibile a livello concettuale. Le descrizioni sono chiare e sintetiche. Ottima la possibilità di co-produrre documenti e di contribuire in modalità collaborativa (wiki)
- Punti di forza: l'esercizio di simulazione con casi reali; la navigazione sequenziale del flusso di lavoro; linearità e semplicità della grafica
- LA NAVIGAZIONE SEQUENZIALE DEL FLUSSO DI LAVORO MI SEMBRA LA MIGLIORE FUNZIONALITA' DEL SISTEMA
- Tra le funzionalità più utili: navigazione sequenziale dei flussi di lavoro

MARLENE

Negative overall opinions and missing functionalities

- Difficoltà nell'integrare le dispense con le informazioni fornite nel corso
- Durante il corso in modalità e-learning sono troppe le sezioni in cui viene richiesta una semplice lettura del testo (senza l'ausilio della voce narrante)
- Mancano approfondimenti su casi reali ed esercizi pratici
- Fruibilità della piattaforma scarsa, per via del blocco popup e di numerosi blocchi durante l'avanzamento delle slide
- Corso molto teorico con poche evidenze pratiche rispetto al lavoro quotidiano

- I contenuti non sono aggiornati rispetto al nuovo DLGS che riforma la normativa sulle Conferenze di Servizi
- I contenuti proposti sono basici sarebbe meglio avere contenuti più approfonditi
- Utile per dipendenti pubblici alle prime armi, ma i contenuti vanno aggiornati rispetto alla normativa vigente per le conferenze di servizi
- I contenuti di alcuni argomenti non sono aggiornati, (ALMENO PER I TEST A CUI HO AVUTO ACCESSO), sarebbe utile avere la possibilità di interagire per sottoporre domande su dubbi normativi
- Problemi nella disattivazione delle policy di sicurezza del browser per la riproduzione plugin java; Non sufficiente qualità dell'insegnamento rispetto al mio (basso) livello di conoscenza
- Occorre dedicare molto tempo al completamento del modulo formativo. Servirebbe una modalità più snella
- Occorre maggiore spazio collaborativo e funzioni dedicate per discutere e approfondire normativa, interpretazioni, prassi tra colleghi del SUAP
- Esistono sistemi di e-learning più all'avanguardia cui ispirarsi
- Mancano specifiche pagine dedicate alla risoluzione di casi reali o con interpretazione delle norme per situazioni particolarmente difficili da gestire
- Strumento di apprendimento non evoluto in termini di web 2.0 (interazione tra discenti, possibilità di postare sui social network i progressi, interoperabilità con youtube o altri contenuti web esterni, …) e web semantico (ricerca contenuti, proposta automatica di contenuti in base a interessi e caratteristiche dell'utente, …)
- Non presenti: spazi di approfondimento che integrano le variazioni normative intercorse rispetto alla pregressa disciplina
- Per poter considerare la piattaforma un valido strumento di apprendimento manca un sistema di ricerca dei contenuti all'interno della piattaforma. Lo strumento ha un approccio solo sequenziale
- Mancano chat o strumenti di scambio informazioni tra partecipanti al corso
- Carenze: possibilità di scambiarsi opinioni con esperti o altri utenti su casistiche reali; gamification, come più avanti descritta
- NON MI SEMBRA ADATTA LA POSSIBILITA' DI INTERAGIRE PER POTER PORRE DOMANDE O POTER ESPRIMERE LA NECESSITA' DI UN APPROFONDIMENTO
- Mancano altri canali utili all'apprendimento quali il confronto con gli altri discenti o con un docente esperto per approfondire temi specifici. Inoltre i contenuti presentati, sebbene utili, non entrano nel merito delle conoscenze che servono nell'esperienza quotidiana del lavoro – è come se si rimanesse in un piano ancora teorico (per cui resta comunque uno strumento utile per ricevere nozioni ad esempio normative)
- Non c'è la possibilità di saltare alcune slide per dedicarsi direttamente ai contenuti di interesse
- Non ho trovato spazi collaborativi, di discussione e di interscambio tra utenti e verso un tutor esperto
- Assente la fruizione di video

Positive overall opinions and strenghts

- VALIDO PER LA PRESENZA DI FUNZIONALITA' DIFFERENTI COME CONTENUTI DINAMICI, TEST INTERMEDI, APPROFONDIMENTI
- I contenuti sono esaustivi e di semplice fruizione
- Buon strumento di aggiornamento
- Con l'E-learning si evita di dover partecipare a corsi in presenza (e dunque di spostarsi fisicamente) e ciò permette una fruizione più a misura degli impegni professionali in essere

- Abbastanza semplice da usare e schematico per memorizzare gli elementi principali
- Pratico, sintetico e veloce
- Interfaccia chiara – flusso sequenziale semplice e scorrevole
- Utile per ricevere nozioni normative, credo sia un valido strumento
- UTILISSIME LE VERIFICHE INTERMEDIE
- Apprezzabili i momenti di verifica intermedi
- Interessante la presenza di link agli argomenti trattati nelle varie slide e dei momenti di verifica intermedi con domande a risposta multipla
- Punti di forza: Verifica intermedia al termine delle singole unità; Guida audio sulle slide
- Valido approccio quello delle domande di verifica intermedia
- Ottimo il flusso di scorrimento sequenziale del corso
- Bene gli intervalli di verifica a risposta multipla
- OK VERIFICHE INTERMEDIE E FINALI
- Positiva la fruibilità online dei contenuti
- Maggiormente utili: momenti di verifica intermedi e riferimenti normativi
- Piuttosto utili i momenti di verifica intermedi
- Valida l'enfasi sui contenuti principali data con grassetto e riquadri in evidenza
- I momenti di verifica aiutano a ricapitolare e ragionare e intervallando il corso, spezzano la monotonia della lettura
- Le domande di verifica intermedia permettono di farsi un rapido riassunto mentale e verificare i principali concetti appresi
- I momenti di verifica intermedi con domande a risposta multipla mi sono piaciuti

Collected feedback (in english)

Learn PAd

Negative overall opinions and missing functionalities

- The initial impact with the platform disconcerts and generates uncertainty - since there is not a predefined path to follow, but a various number of features that can be activated at will, which utility or behavior we do not know initially. So the user is displaced -> we recommend to potentiate the introductory aspects (eg. the initial explanatory text, video tutorials, etc.).
- As far as I got to see, some features do not seem to work well (eg. recommendations bar: i could not see all the content that my colleagues on the other hand have experienced); other features are not so well explained (eg. Simulation is not clear, neither in content nor concerning the presentation of the actions to be done)
- It is difficult navigating within the platform
- I have noticed that there are some inaccuracies in content related to conference services (the changes referred to the recent reform Decree on the matter, are not covered)
- The simulation is shortly effective: in the long run it is simply a compilation of fields (almost a test) without providing functions that stimulate a real problem solving. In addition, the final scores are not computed on a scale of reference and so they lose any evaluative meaning
- unintuitive interface. Hard to know where you are
- With the vastness of the information and links that you face is not easy to understand if you have explored all the functionality
- The platform is still in an embryonic state in which the guide contents are unclear and the use of information by the proposed interface is tricky
- The course requires a previous level of knowledge and specific expertise on the subject matter (not suitable for beginners)
- THE DESCRIPTIVE PART IS COMPLETE AND EASY TO UNDERSTAND, EXCEPT FOR SOME TYPOS (ES. e&apos); THE CONTENTS HEREIN ARE WELL DESCRIBED, BUT I FOUND DIFFICULT TO USE AND READ THE GRAPHIC SCHEMES
- The use of the platform is not very intuitive, we must get familiar and conceptually reconcile the two modes of content organization (the flow, which is very clear and takes place through the schematization, and the descriptive/explanatory section of the processes)
- The platform do not seem particularly intuitive; the navigable map is interesting, but it is not immediate to catch the connection with the links and the underlying texts
- The business processes should regulate the operation, but not become the protagonists of the course: the user should not see them; the fruition of the course must be accompanied by call to actions or simple descriptions guiding him through the contents and exercises / simulations. As long as they have have explained it to me, i was not able to understand anything: there are missing descriptions of the sections, but in any case a software is usable when it is self-explanatory and does not need guides
- Unintuitive
- The first page of the training shows the document flow that is activated in connection with a Conference of Services; however, it does not appear clearly, in the introductory page, an illustration of the aims and the organization of the platform (or at least I could not find it with directness - only later I saw the HOW TO section). The HOW TO section should be made more evident within the home page, or even it should become itself the unique content of the first page, in order to clarify, since the beginning, the purpose of the tasks you will perform. It is essential that the learning objectives, as well

as the content structure and the functions of the platform, are made clear from the outset. I do not believe that this information can be left to the free choice of each user accessing the platform. They need to be explicitly set out before you start navigating, for clarity and transparency, and also to allow the users to focus more in what they will find during the path, having as a prerequisite an evident direction to go.

- Viewing the description of tasks that constitute the flow chart it is not simple. They are too small and, therefore, poorly usable (from a graphical point of view). On the other hand, it is great that they are clickable, allowing those who enter the platform to orient themselves in every step of the way, bypassing the very first moment of confusion (due to the fact that, in my opinion, the aims and purposes of the activities to try are not so clear). The platform does not meet the criteria of accessibility for every user (the steps in the flowchart are described with too small fonts and I had trouble understanding what is written on each square).
- In general, the interface appears less intuitive and not readily understandable by the potential users, approaching as profane the use of the platform. For example, on the home screen, it should be indicated what the training goals are and also be summarized the fundamental capabilities of the platform, namely: browsing, tackling teamwork simulations or, for individual users, contributing by posting their own considerations and annotations.
- It's a good idea that you can do the simulations, even though I can not (or am not able to) start them. The simulation was introduced, but there was no chance to activate it. I do not understand how this feature could be activated. I tried to click on the dropdown menu to start a simulation, but after submitting nothing happened.I did not know what the system have generated, if i had really created something chosing a real case, how this could be controlled and what answers i needed to inserted - maybe also because I failed to understand some of the questions. In other words, and in my own opinion, the simulation does not work properly (mainly due to unclear instructions to get it started - and lack of the necessary background documents to understand the real case). The administrative modules (convocations format, communication notes, letters to require integrations, drafts for reports, etc.) does not seem to be available and usable among the simulation stages.
- The GUI need to be improved, because it represents the major limitation of the platform, making it non-intuitive, difficult to be accessed and not clearly set up for an ideal use of the provided functionalities.
- In order to answer to some of the questions contained in the test, it has been necessary to refer to documents that were not available within the platform
- I found the prototype quite rough and unintuitive
- The font size is too small
- Social collaboration capabilities should be strengthened and made more attractive
- The fundamental basic features are all present, but should be implemented more effectively in terms of: overall logical organization; interactivity (the level of interactivity between user and content is too low); progression in the completion of the learning path (i could not guess what the total amount of content to be enjoyed was, so without that perception i could not find what has been done and what was still needed to be done); explication of the training objectives
- Navigability should be improved, as well as information about where you are in each page (breadcrumbs seem insufficient to me)
- It is not clear the operational mode of the simulation
- The simulation and recommendation features are still incomplete or in an embryonic state, which makes it difficult to use.Sometimes the interface texts are in English

- The tutorials are well developed and articulated. However, the platform requires a lot of time to be devoted to. For the less i used it, i have found some advantages.At least two more working days should have been spent on (that is to say that just learning to use the platform itself is hardly time consuming)
- THE PRACTICAL CASES ARE NOT WORKING
- The simulation functionality are deficient and should be made more interactive and less complex
- It lacks: the capability to make undo / quit the simulation; a design tool available to correct the business processes on the go; a training course by stages, meaning that all content appears like if it is represented in an undifferentiated manner, all at the same level (while in reality some parts are more difficult and some other more accessible), and personally I have not grasped what topics are prerequisites "in preparation for ..."
- It would be appropriate to include, on the left, a "bar" of contents that shows the course structure and content hierarchy. The use of video and animations falso would facilitate learning
- There are some parts in English that should be translated; graphics, very useful, should be more readable
- Videos need to be added, i.e. in the home to introduce the system and its operation, in the various lessons to explain the content that you will be able to find. Also it would be advisable to add textual explanations of what each single page / section you visit stands for (during simulation it is really a must)

Positive overall opinions and strenghts

- Overall, it is a totally new and an interesting way to learn
- The model of the work process is very accurated and the fact that it is navigable is a valid feature
- Going through an initial moment of confusion and once understood the logic of how to interact with the platform, the fruition was simple and intuitive
- This e-learning mode proves to be faster, because it allows the user to skip not of interest content, to embrace directly those judged to be explored
- The use of business process model in this area is a big plus, because I think they are useful to get a easy understandable graphical view of a complex process.However the addition of more interactivity features within the image describing the BP, eg to make it fully navigable, would guarantee a greater usability of the platform
- Well structured and easy to use web pages
- The illustration of the flow of steps of the process is complete and clear at a conceptual level. The areas of each step are clickable and refer to each stage of work.Clicking on each step area, you will see a concise but clear description of the work phase in which you are located
- It is great that, in every task of the BP, there is also the possibility of drawing up documents through wiki and also to validate them, working with texts in a collaborative and assisted way
- In general, the essential features are included. In particular, the flow chart, clickable at each progression and evidencing the respective options, is a great tool, clear and understandable from a logic point of view
- The simple and straightforward graphic helps and encourages learning through the navigation of the process
- Users can get profit from the simulation based on real cases (but it should be better configured and curated); the mechanism of the SCORE is effective (but it needs to be to implemented more accurately, also letting the users to understand the logic of the points awarding)

- An interesting feature is the dynamic recommendation of content (a semantic potentiality that nevertheless i have not noticed while running the system, because it works in background - I was told about and then i realized it watching a collegue of mine testing the platform)
- The forward and backward navigation of the workflow through the image of the process is very useful, but still need to be optimized (indeed, unfortunately, the picture showed in the navigation phase is too small on the screen, even if I appreciated that the individual elements were clickable; at that point i got a greater benefit downloading the picture to my desktop). For instance it would be more useful if the exploration of the single activities in the browsing mode could take place as in the simulation, where each step is graphically highlighted showing the current activity of the process in which we stand. However, during simulation, the pane that contains the dynamic flow picture is too small and we need to scroll horizontally and vertically (and it bothers).
- The social interaction with comments and other forms of contribution is quite useful, also to ask help to other users
- Good is the idea of the window to contribute, with the ability to add brand new explanatory texts
- The sequential browsable process workflow is the most innovative and effective aspect of the platform
- A positive rating goes to the dynamic content recommendation
- The simulation is a useful feature, but it should be fixed and made more intelligible
- I liked the presence of the same elements on each page, identified through standard graphics and icons
- The simulation of real cases helps a lot during the training process. The only downside is that the confined space of the window, containing the tasks flow and the active task, does not allow to understand immediately and without scrolling at what stage of the process I am
- The process images give a clear overview. Also clear are the textual descriptions of each individual step
- The simulation exercises based on real cases are valid, as well as the collaboirative and social interaction functions for posting comments (and comments to comments), give feedback and add a contribution. As for the contributions, the header of each section of the document should be translated in Italian. The content descriptions are complete and easy to understand
- Among the most interesting modules i point out: 1) the navigable workflow; 2) the collaborative interaction of the users; 3) the simulation of a real case and the possibilities to chat with other learners while doing it, but the real case itself has to be made more structured and - for learning purpose - more adherent to likely to happen complex cases
- I enjoyed the simulation exercises based on real use cases, and the navigation of the Conference of Services workflow plus the graphical overview of the process
- I consider useful the navigable maps, the option to add comments and the simulations of the SUAP applications
- The simulation is a good and useful idea, but the use of terms such as robots and human has to be avoided ... otherwise these options (and how to use them) have to be explained in some way
- OK: social interaction, simulation, sequential navigation
- The browsing mode, based on clicks to move through the Titolo Unico process, is easy to use, to understand and effective for training on the job. The descriptions of every activity involved are clear and concise. Excellent too is the opportunity to co-produce documents and to contribute in the collaborative mode (wiki)
- Strengths: the exercises simulating the real cases; the sequential navigation of the workflow; the linearity and the simplicity of the graphic, which works even with mobile device
- THE SEQUENTIALITY OF PROCESS BROWSING SEEMS TO ME THE BEST FUNCTIONALITY OF THE SYSTEM

- The most useful functionality is the navigable business process, both by page click and by interacting with the image

MARLENE

Negative overall opinions and missing functionalities

- I experienced difficulties in integrating the attached documents (about the reformation of the conference of services) with the information provided within the Marlene's course
- During the course in e-learning, too many sections required a simple reading of the text (without the help of the narrator voice - function that, when present, makes me learn faster). At the beginning i had some problems with the configuration of my PC audio devices
- It lacks insights on real applications and practical exercises. The SUAP organization is definitively more complex than what the laws say
- Poor usability of the platform, because of the pop-up blocker and various other blocks during the forward movement of the slides
- A very theoretical course, with few practical evidences with respect to my daily work
- The contents are outdated compared to the new Legislative Decree reforming the regulation of Conferences Of Services
- The proposed contents are basic. It would be better to have more in-depth content
- Useful for civil servants beginners, but the contents need to be updated with respect to the current regulations for SUAP and for conferences of services
- The SUAP contents, at least for some arguments to which i had access for the test, are out of date. It would be useful to have the opportunity to interact to submit questions on regulatory concerns and to receive opinions from other colleagues attending the course
- I had technical problems in the deactivation of browser security policy for the java plugin playback
- I do not find a sufficient quality of the teaching according to my (low) level of knowledge. I find it hard learning
- It takes too much time to complete all the training module. It would serve a leaner mode to go through the content and to give as finished each slide/chapter
- A more collaborative space is needed, and also some dedicated functions to discuss and explore deeply the legislation, to give interpretations and to exchange best practices among SUAP officers and managers
- There are many more advanced e-learning systems to get inspired by
- no specific pages addressed to the solution of real cases or interpretation of the rules for particularly difficult situations to handle
- Marlene is a learning tool not evolved in terms of web 2.0 (interaction between learners, ability to post individual progress on social networks, interoperability with youtube or other external web content, ...) and the semantic web (content searching, automatically offered content on the basis of the user's interests and characteristics, ...)
- There weren't enough studies that integrate the changes occurred with respect to the previous regulations governing the conference of services
- In order to consider the platform a valuable learning tool, it lacks a content search system within the platform. The instrument has only a sequential forward and backward approach to reach content
- A chat - or even a simpler communication tool to exchange information between the participants at the course - is missing

- Weaknesses: i do not find any possibility to exchange my points of view with experts or other users on real case studies; also gamification aspects - as described in the questionnaire - are not present
- IT DOES NOT SEEM SUITABLE TO ME, AS A LEARNING INSTRUMENT, BECAUSE I CAN'T FIND THE OPPORTUNITY TO INTERACT WITH SUAP EXPERTS IN ORDER TO ASK QUESTIONS OR TO BE ABLE TO EXPRESS MY PECULIAR NEEDS FOR IN-DEPTH
- Other useful learning channels, such as comparison with other learners or with an experienced teacher to focus on specific topics, need to be added Moreover, the presented content, although useful, do not enter into the merits of the knowledge and skills needed in everyday work - it is as if the course remains in a more theoretical level (so it is still a useful tool to receive such regulations notions, but not to learn how to conduct a conference of services)
- Is there the possibility of skipping some slides to go directly to the content of interest ? I cannot find it ...
- I did not find collaborative spaces for discussion and information exchange between users or from an expert tutor
- Absence of any connection or usage of learning by video

Positive overall opinions and strenghts

- THE SYSTEM IS VALID FOR THE PRESENCE OF DIFFERENT FUNCTIONALITIES AS DYNAMIC CONTENTS, INTERMEDIATE COMPREHENSION TESTS, IN-DEPTHS SECTIONS
- The content is comprehensive and the tool is easy to use
- A good tool to update one's knowledge
- With the E-learning you avoid having to take courses in the presence (and therefore you quit physically transferts). This enables a more tailored usage of time, in relation with the outstanding professional commitments
- Pretty simple to use. It Provides a schematic approach to store in mind quickly the main elements to be learned
- Practical, synthetic, quick to understand and fast to use
- A clear interface - A simple and smooth sequential flow
- Useful to receive regulatory notions, I think it is a good tool
- INTERMEDIATE CHECKS ARE USEFUL
- The intermediate verification moments are appreciable
- The platform is interesting for the presence of links to the topics covered in the various slides and for the multiple-choice questions, both for intermediate and final assessment of learning
- Among the strengths: intermediate checking - by theroretical questions - at the end of each unit; audio guide on each slide
- A viable approach, that of the mid-term examination questions
- Excellent for the sequential slip stream of the course
- Well for the intervals with the multiple choice questions
- OK FOR THE INTERMEDIATE AND FINAL CHECKS
- Positive is the online availability of the content
- The most useful features are: the intermediate moments of verification and the presence of normative and standard references
- Rather useful the intermediate moments of verification
- How effective is the emphasis on the key content, conveyed through bold, colors and highlight boxes

- The moments of verification help the learners to summarize and reason and, spacing out the course, they break up the monotony of reading
- The interim review questions help you making a quick mental recap and checking mentally the effective assimilation of the main concepts to learn
- I liked the moments of intermediate check based on multiple choice questions