



## **Learn2Lead**

Final Report

Public Part

## Project information

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Beneficiary organisation: ISTC CNR

Project coordinator: Rosario Falcone  
Project coordinator organisation: ISTC CNR  
Project coordinator telephone number: 0039 06 44595201  
Project coordinator email address: [Rosario.falcone@istc.cnr.it](mailto:Rosario.falcone@istc.cnr.it)

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## Executive Summary

This report is addressed to different target audience: teachers; VET trainers in public and private organizations; ICT specialists, research centers and laboratories, in the area of Lifelong Learning, Advanced Learning Technologies, innovative teaching methodologies, leadership and team working training, effective communication skills; other EU-funded project in the area of lifelong- and adult learning; educational and training institutions, associations of teachers and trainers; Policy Makers; SMEs and NGOs.

Nearly all productive activity involves work by teams of competing and collaborating individuals, each with their own personalities, motivations and skills. The effectiveness and efficiency of the team is an emergent property of dynamics that develop within the team. As well as technical skills related to their area of business, managers thus require competencies in “people management” and organization. Effective training in these areas is scarce and is usually available only in high quality MBA programs or in major corporations. In this setting, the goal of Learn2Lead is to implement and test a novel, online training in team leadership, suitable for use in SMEs, government offices, NGOs and individual learners.

The training provided by the Learn2Lead project is based on an online game, in which each learner manages a simulated team of employees, which competes against other teams to maximize its objectives (e.g. profit, volume of services delivered, customer satisfaction). An underlying computer model shows the effects of player’s decisions on the dynamics and efficiency of the team. The game is suitable for use, both for self-learning and in blended learning environment with the support of a trainer.

Learn2Lead lasted for 24 months. During its life cycle the project produced: i) an extensive literature review and benchmark on serious game for leadership training worldwide, ii) a study of user requirements through interviews of trainers, human resources directors and university professors, followed by iii) the definition of the training methodology, iv) the design of the underlying team dynamics model, v) the game design and the implementation of required vi) software components, in order to develop the Learn2Lead game. Followed vii) a pilot study of the training programme and viii) a fine tuning of the game and the teaching methodology, which were implemented in ix) a large scale trial. In the end, the project worked on a x) sounding quality plan to ensure a high quality of delivery of the programme and of the project itself. xi) a dissemination and xii) exploitation strategy were designed and carried out in order to promote the project and its results also after the end of funding period.

A central part of the project was covered by the vii) pilot study and ix) the large scale trial, to eliminate bugs and guarantee efficacy. The two sequence of trials took place in Spain, Italy and France with approximately 100 users. During the trials the Consortium gathered data and suggestion to improve the programme and make it ready for commercialization. Two training companies belonging to the partnership will offer tutor-supported training to their commercial customers. In parallel, the partnership will provide free access to the standalone (non-tutored) version of the game, through servers maintained by one of the partners for at least 2 year after the end of the project.

The Learn2Lead Consortium comprises 6 partners from 4 Countries, France, Italy, Spain and the United Kingdom: i) ISTC-CNR, part of the National Research Council coordinated Learn2Lead; ii) ENTROPY KN, an Italian SME specialized in soft skill training; iii) UNIVERSITY OF NAPLES FEDERICO II, specialized in cognitive technologies and Artificial Life; iv) MF & PARTNERS Consulting, a French SME specialized in training and business consultancy; v) UNIVERSITAT JAUME I, specialized in the use of ICT to modify behaviour; vi) UNIVERSITY OF LINCOLN, specialized in the design of online games, both for commercial purposes and for “serious gaming”. For further information visit [www.learn2lead.unina.it](http://www.learn2lead.unina.it).

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# 1. Project Objectives

The main goals of the project are:

1. To propose a programme for training in team leadership, designed both in blended (part of the training to be provided face to face and part online) and self-learning mode (online).
2. To offer an affordable, scalable approach, both for organizations (SMEs, local government offices, NGOs etc.) wishing to offer this kind of training to their employees, and to individuals seeking to develop their personal skills and improve their employability.
3. To support learners in acquiring practical skills complementary to the theoretical knowledge acquired in conventional training. A key emphasis in the program is to build learner awareness of the complexity of team dynamics and sometimes unexpected consequences of apparently straightforward managerial decisions.
4. To involve the learner in the training programme, introducing the use of “serious games” as a technique for adult learning. The use of a professional developed game, based on well-validated theories of group dynamics, is a guarantee of the quality of the training; at the same time, the competitive element of the game is likely to prove very attractive for users.
5. To offer a free online version of the learn2Lead game, lasting also after the end of the project, available for a huge number of individual users, SMEs and NGOs employees who do not usually have access to soft skills training, since it is very expensive.

## 2. Project Approach

From the managerial point of view, the Consortium has assigned each Work Package to a coordinator.

Technical development activities (development of the model of team dynamics, game design, software implementation) have been assigned to single partners, avoiding problems of integration.

Activities requiring close interactions among partners (needs analysis, development of the learning methodology, organization of the trials, quality management, dissemination, exploitation planning) have been assigned to larger groupings.

Testing of the methodology and technology has been designed in two cycles - the first to identify and correct methodological, technological and usability issues and bugs - the second to assess the effectiveness of the program as training tool and the satisfaction of users. The interval between the two cycles is dedicated to revision and testing of methodology and software. The project has clearly defined procedures, tools and criteria for Quality Management and for the evaluation of project results. A well it was defined a management structure to ensure rapid problem-solving and effective collaboration with the EU.

From the content point of view, Learn2Lead presents a number of innovations at several levels, compared to existing training programme in leadership management:

- Learn2Lead is designed to reach individuals and organizations (SMEs, small government offices, NGOs etc.) who have not previously access to training in this area. Individuals and organizations are able to use the system even when they cannot afford to invest in “blended learning”. The project exploitation offers online free services for other two years after the end of the project. This approach represents a major innovation.
- The combined use of gaming and simulation allow learners to gain new insights into team dynamics, to practice their skills and to test alternative strategies in a “safe”, highly motivating environment. Serious game are acknowledged more and more as the new frontier of the adult training, as they are involving, challenging and appealing.
- The underlying model of team dynamics is based on consolidated theories. Nonetheless Learn2Lead is the first attempt to apply the theory to a practical learning application. The model uses techniques from Artificial Life to simulate emergent dynamics within teams, providing learners with insights into the way the unintended consequences of their decisions and allowing them to “train” simulated teams with specific characteristics. To the knowledge of the authors, this is the first time these techniques have been used in leadership training.

During the project lifecycle, different managerial approaches have been used to fulfill tasks and activities.

Concerning the WP 2 - Needs Analysis - the following methods and tools has been put in place to reach the WP objectives and build the network among the different stakeholders around the project:

- LITERATURE REVIEW, in order to provide an extensive overview of the current practices in leadership training in Europe and especially in Italy, Spain and France.
- INTERVIEWING stakeholders and process owners (HR Managers, Training Managers, Policy Makers) among the three different targets of the Learn2Lead project. Questionnaire and interview template have been designed on purpose to collect data in the three regions.

- USER NEEDS COLLECTION of the three target groups and potential beneficiaries who have been involved in the pilot trials (WP 7), in order to understand and collect their learning strategies and needs.
- ANALYSIS OF CURRENT PRACTICE in leadership training, a benchmark analysis of the state of the art of the training in leadership and team management.

The goal of the mix of different approaches is to raise awareness, collect necessary information and selected potential users for the trials.

Concerning WP 3 – Definition of training methodology - the following methods and tools has been put in place to reach the WP objectives and guarantee an effective learning experience during the trials:

- Adaptation of the major findings of the D.2.1. User needs analysis Report as a consistent base for designing the teaching methodology of the Learn2Lead project.
- Set up of an internal REVIEW PROCESS (see WP 1 and 10) in order to provide effective feedbacks for the improvement of the teaching methodology and above all in the customization of some part of the contents according to the three targets of users.

The role of the internal reviewer was perceived as necessary in the finalization of each deliverable. Having a counterpart, collecting contribution from each partners, was a real added value, which also helped the project leader in the correct supervision of the project work.

Concerning the implementation of the WP 4 - Model of team dynamics -, the leading partner, University of Naples developed a complex model on team dynamics based on a literature review of the major theories on Leadership, motivation and stress management, which is downloadable from the Learn2Lead website ([www.learn2lead.unina.it](http://www.learn2lead.unina.it)) has provided a solid foundation for the creation of the model which has been validated by Prof. Claudio Barabanelli, one of the most well-known expert in the Big Five personality traits. Prof. Barabanelli has been hired on the project as external evaluator.

Concerning the WP 5 – Game Design – the tasks have been coordinated by University of LINCOLN, which has design all the major features of the Learn2Lead game design according to the specification provided by the D.2.1. Report on needs analysis. There has been a close connection between WP 4, 5 and 6, since the model of the team dynamics, the game design and the software implementation are different sides of the same coin, which is the game. For this reason, a joint team composed by UNINA, ULINC and ISTC CNR has been created the most suitable way to implement the game design and the team dynamics model in the software. This team basically worked in close connection for a long part of the project, stretching to WP 8 Revision of methodology and software.

WP 6 - Software implementation – the approach with this WP was to proceed in a step by step implementation, meaning that the game was developed in three moments: in January 2011, during the third meeting of the project, a prototype of the game was presented to the Learn2Lead Consortium in order to get feedbacks on the implementation of the model team dynamics. In April 2011, a second prototype was released to share the implementation of the graphics. In the end a third release was delivered at the beginning of September and used in the large scale trial. This last release implemented the major suggestions produced by the pilot studies and led to the final version.

WP 7 – Pilot Studies – specific procedures were put in place by the trial partners to recruit the participants and involve them in the operations from the very beginning (see WP 3 for more details). The goal was to make a sort of beta-testing of the game and the training programme itself. Moreover quality procedures helped in supporting this debugging phase. Each participants was requested to fill in an incident report, in which it was described the type of problem incurred. So the general collection of all the reports helped in setting up a “wish list”, meaning a list of improvements to be added to the game and /or the training programme. The list was fundamental to create the second release of the game which was used in the large scale trial. For more details check the trial report D.7.1.

WP 8 - Revision of Methodology and software - was joint effort of all the project team, because it involved the trial partners, the designers and the developers. Based on the suggestions of the tutors and of the pilot study the training programme and the game went through a revision process, led by the wish list and a user centered design approach started in the very beginning of the project with the needs analysis. During this phase also the graphics was enriched in its last version.

WP 9 – Large Scale Trial – was dedicated to a larger testing of the training programme. In total 72 people took part in the operation, which were again led by the procedures described in WP 3. The Dissemination activities helped a lot in raising awareness and engage people in the experimentation. A strict evaluation protocol was followed to check the satisfaction of the participants with the game and the programme and their learning improvements. A report was drafted at the end of the WP, reporting the major finding of both the online and blended ode users.

WP 10 - Quality plan, project monitoring and project evaluation – the Learn2Lead Consortium has put in place a set of procedures and tools, which combined with the ones provided in WP 1 and WP 3, has guided partners in the development of deliverables and outcomes. Especially the role of the internal reviewers and external evaluator has guaranteed the coherence and the accuracy of the work done during the project.

Concerning WP 11 – Dissemination – a strong relevance has to be given to the dissemination plan, D.11.0, issued as an extra deliverable. The Learn2Lead Consortium, since realised in fact that in order to have a very synergic action within the Consortium an overall direction was necessary. This direction was provided by the Dissemination Plan, created by the Coordinator ISTC CNR and the Partner MF, in this way the dissemination strategy was clear to each partner, which has contributed accordingly (see on the learn2lead website, dissemination section). A major part of the dissemination took place in the second year of the project.

In the end, concerning the WP 12 – Exploitation – even though the beginning of the WP was planned for the second year of the project, the Learn2Lead Consortium anticipated it to the first year, in order to have a clearer overview of the major issues in term of IRM (Intellectual Right Management) and possible exploitation strategy to be applied at the end of the project lifecycle.

Moreover at the very beginning of the project a partnership agreement was signed by each partner in order to take care of specific issue of the project execution, i.e. the IPR. In this way, in year two it was possible to concentrate on the exploitation plan.

### 3. Project Outcomes & Results

During the execution of the project, the Learn2Lead Consortium has reached interesting results which the community can benefit from.

Each deliverable contributed in realizing the innovative traits of the Learn2Lead project, in term of teaching and evaluation methodology, technological solution implemented, prototype of the model of team dynamics, which can be very useful to easily understand which are the dynamics into a group according to the major leadership theories. Also the needs analysis has been addressed as a user centred experience which has helped in designing also the successive step of the project.

#### **WP DELIVERABLES**

- D1.1. Management manual
- D1.1. Annex Template
- D1.1. Annexes
- D1.3. List server
- D 2.1. Analysis of current practices and user needs
- D 3.1. Manual for the evaluation of learning outcomes v.1
- D 3.2. Teaching Manual v.1
- D 4.1. Model of team dynamics v.1
- D 5.1. Game and design document v.1
- D 6.1. Functional and non-functional requirements
- D 6.2. Software architecture specifications
- D 6.3. Learn2Lead software v.1
- D 7.1. Report on pilot study
- D 8.1. Manual for the evaluation of learning outcomes v2
- D 8.2. Teaching Manual v2
- D 8.3. Learn2Lead software v2
- D 8.4. Manual for the evaluation of learning outcomes v3
- D 8.5. Teaching Manual v3
- D 8.6. Learn2Lead software v3
- D 9.1. Report on large scale trial
- D 10.1. Quality plan
- D 10.2. Results of learn2lead
- D 11.0. Dissemination Plan
- D 11.1 Learn2lead Website
- D 11.2 Learn2lead brochure
- D 11.3 Learn2lead Poster
- D 11.4. International public awareness event
- D 11.5. Presentations and Publications
- D 12.1. Exploitation agreement
- D 12.2. Exploitation plan

Please the Learn2Lead website ([www.learn2lead.unina.it](http://www.learn2lead.unina.it)) for downloading the public deliverables which have been produced during the project lifecycle.

## 4. Partnerships

The Learn2Lead Consortium comprises 6 partners from France, Italy, Spain and the United Kingdom. Three of the partners are universities; one is a major national research institution; two are SMEs specialized in training and business consultancy. All the partners have previous experience in the use of ICT for training (and other applications), acquired both in research projects under FP6, and FP7 and in particular in LLP. In addition to this general competences, the partners bring to the project a broad range of complementary know-how and skills.

**ISTC-CNR** coordinates Learn2Lead. The group has already coordinated other projects in the LLP. In addition, ISTC CNR contributed a team of dedicated software developers with experience in modelling and development research project. This team developed Learn2Lead game within the project.

**ENTROPY KN (ENT)** is an Italian Small Enterprise specialized in training and consultancy, especially in soft skills. ENTROPY was responsible for the development of Learn2Lead training methodology and coordinated the Italian trials. ENT also contributed to the exploitation strategy.

**UNIVERSITA' DI NAPOLI "FEDERICO II" (UNINA)** is specialized in cognitive technologies and Artificial Life and their potential for learning and in other areas. In Learn2Lead, UNINA has developed the Model of Team Dynamics.

**MF & PARTNERS (MF) CONSULTING** is a French small enterprise, specialized in training and business consultancy. In Learn2Lead, MF led the Needs Analysis and coordinated the French trials. MF also contributed to the exploitation plan.

**UNIVERSITAT JAUME I (UJI)** is specialized in the use of ICT to modify human behaviours. In Learn2Lead, UJI contributed to the development of the needs analysis and the Learning methodology and coordinated the pilot trials and the large scale.

**UNIVERSITY OF LINCOLN (ULINC)** is specialized in the design of serious games, both for commercial and for educational purposes. In Learn2Lead ULINC was responsible for the game design.

During the project implementation, the Consortium experienced two crucial moments: the first at the very beginning when partners had to make sense of the goals of the project. It was challenging to give a shared definition to the word "leadership" as set in the proposal because of the different background of each partners' organization and because of a wild literature spread all over the world. The second challenging moment concerned the different ways of working, so the intercultural aspects of the project management have been central during the project lifecycle.

As a final conclusion on the Learn2Lead partnership, it is possible to state that working in team is not easy, especially when the team is distributed and dispersed, but keeping in mind the specific features and background of each partner makes it is easier to find the most effective communication way to overcome difficulties and arrange the work at the best.

## 5. Plans for the Future

A major goal the Learn2Lead Consortium in the near future is the sustainability of the Learn2Lead training programme for the next two years. The Consortium is committed in keep up and running the Learn2Lead website and the Learn2Lead online programme, so that individual users interested in the programme can continue to benefit from Learn2Lead, even after the end of the project.

In order to reach this goal, the Learn2Lead Consortium has already put in place some actions:

- to enhance the visibility of the Learn2Lead project, by creating a Learn2Lead website “as is”, on each partner’s website, so that there will be 6 different access points to the programme, not just one as it is right now.
- to reduce the maintenance costs, by devoting internal staff to the updating of the contents and the helpdesk service.
- to market the Learn2Lead programme, blended version, on private and public markets creating an ad hoc selling proposition for each specific contest / target group
- to propose other applications of the Learn2Lead programme in different sectors (master degree, training for private company, TOI programme) in order to transfer the innovation created by the Learn2Lead project.

In order to put in place these steps and reach these goals, the Consortium will find some sponsors and resources that will support the project as it has been detailed in the exploitation plan. It will not be easy, but the choice of an in-house strategy to support the project major assets will reduce the cost of maintenance dramatically and will be an integral part of the research / business strategy of the Learn2Lead Consortium.

## 6. Contribution to EU policies

The Knowledge Society envisaged in the EU's Lisbon Objectives requires forms of team work and group collaboration ill-suited to top-down management. In brief, the development of a knowledge society requires new styles of team leadership. Learn2Lead contributes to this goal by designing, implementing and testing an affordable, scalable training methodology for training in this area. Learn2Lead methods and technologies are suitable for use in all kinds of organization, large and small (SMEs, larger businesses, government, NGOs) as well as by individuals interested in their own personal development. The project is thus highly relevant to the general goals of the LLP.

Learn2Lead contributes to the development of innovative ICT-based content, services, pedagogies and practices (LLP-Obj-h). The training proposed by the project is based on a online games, suitable for use both in blended learning and for self-learning. The methodology and technology is deliberately designed to be offered as a free service. This possibility allows a major expansion of the target audience, which today is largely restricted to MBA programs and major corporations. Learn2Lead's pedagogic practices emphasizes practical skills complementing the theoretical knowledge provided by traditional training. To this end the project makes use of a number of innovative simulation technologies, inspired by research in Artificial Life, much of it conducted by the participants themselves. This previous work is a strong guarantee that the project's technical objectives can be achieved. The use of gaming and presence of a group entirely dedicated to Game Design ensures that the final product is attractive to learners. This is a key priority for the Leonardo Programme (LEO-MultiProj-2).

The Consortium believes that LEARN2LEAD is clearly addressing the majority of the EU policies and objectives dedicated to education and training; nonetheless the Consortium is here stating the prominent indicators and competencies relevant for our project.

### **Indicator: Open Learning Environment (code LIS-E19)**

Description: Population aged 25-64 participating in education and training

LEARN2LEAD provides training on Advanced Learning Technologies to large groups of direct and indirect beneficiaries who currently receive almost no training even though there is a large demand for it.

The forms of training offered by the project proved attractive. The project contributed to the empowerment of a number of adult participants in education and training both directly – by providing training to trainers and teachers – and indirectly – students, workers, managers - by making them aware of the opportunities provided by attractive online learning solutions.

### **Competence: Communication in the mother tongue (code KC1)**

The LEARN2LEAD teaching program and the materials linked to it were translated in the four languages of the Consortium, English, French, Spanish and Italian. A part from Italian and French the other two languages are basically the “Esperanto” of the these days, guaranteeing in this way also a deep spread of the work done.

### **Competence: Interpersonal, intercultural and social competences and civic competence (code KC6)**

During the trials, the beneficiaries were involved in the trial session which gave the possibility of using Learn2Lead Game as tool for learning. In this way they experimented in first person how learning soft skills online can be and how technologies could facilitate this process.

