Projects and Products Portal for Leonardo da Vinci

TeTriS - Teaching triz at school

133847-LLP-2007-IT-LEONARDO-LMP

http://www.adam-europe.eu/adam/project/view.htm?prj=3759

Information sur le projet

Titre: TeTriS - Teaching triz at school

Code Projet: 133847-LLP-2007-IT-LEONARDO-LMP

Année: 2007

Type de Projet: Développement d'innovation

Statut: En cours

Pays: EU-Projets centralisés

Accroche marketing: TETRIS est une nouvelle façon d'enseigner TRIZ

La méthodologie et les techniques enseignées par TETRIS seront extraites de la méthodologie TRIZ.
Le projet TETRIS développera un cours qui surmontera l'inertie psychologique et qui stimulera la créativité et la capacité à poser et à résoudre un problème. Les participants au cours TETRIS seront plus créatifs, davantage

capables de comprendre des situations et des problèmes et ils trouveront des solutions innovantes plus rapidement.
Le projet comporte deux objectifs principaux :
- Identifier les besoins en apprentissage des systèmes d'éducation et des formateurs afin d'améliorer l'efficacité des cours visant à développer la capacité individuelle de résoudre des problèmes et à introduire TRIZ dans es écoles et les organisations professionnelles.
- Développer un cours et du matériel pédagogique destinés à améliorer l'aptitude individuelle à résoudre des problèmes et à accélérer l'apprentissage. TRIZ est un instrument orienté vers les directions principales uivantes :
o Introduire des techniques pour éviter l'inertie psychologique ;
o éliminer les approches de type essais & erreurs pour améliorer l'efficacité du processus d'innovation ;
o offrir une approche structurée à l'analyse du problème et à la créativité technique à l'aide de processus systématiques de raisonnement basés sur les principes fondamentaux d'ARIZ (Algorithm of Inventive Problem solving) ;
o introduire les principes fondamentaux de l'évolution de systèmes et les lois objectives identifiées par les chercheurs TRIZ.
Le travail d'une équipe d'experts permettra de développer une stratégie et une méthodologie pour l'ÉCOLE et l'ENTREPRISE. Ces deux mondes sont reliés par une PASSERELLE DE COMPÉTENCES qui assurera la mise en œuvre orrecte de la stratégie d'enseignement TRIZ.

TETRIS est dédié à la fois aux ENSEIGNANTS et aux ENTREPRISES.
Pour information: www.tetris-project.org

Résumé: Innovation is the main pillar of Europe future and it is the main objective of EU policies. To be effective, innovation requires trained researchers and designers with enhanced creativity, problem setting and problem solving skills. These skills are nowadays taught in very short courses (too short to overcome psychological inertia) and are usually not taught at school. The aim of TETRIS was to contribute to overcoming psychological inertia developing different tools. In particular, the main objectives of the project were:
1. identifying the learning needs of education systems and trainers in order to improve the efficiency of the courses aimed at developing individual problem solving skills and at introducing TRIZ at school and into professional organizations.
2. developing a course and training materials to improve individual problem solving capabilities and to speed-up the learning process of TRIZ philosophy and instruments according to the following main directions:
o introducing techniques for avoiding psychological inertia;
o eliminating the attitude to trials & errors in order to improve the efficiency of the innovation process;
o providing a structured approach to problem analysis and to technical creativity by means of systematic processes to reasoning based on ARIZ (Algorithm of Inventive

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Problem Solving) fundamentals;
o introducing fundamentals on systems evolution and on the objective laws identified by TRIZ researchers.

The scientific committee of TRIZ researchers and experts have devised a specific method for companies and for schools which has been tested in ad-hoc courses organized in schools and companies and have developed educational materials to enhance individual problem-solving skills, facilitate and speed up the learning of TRIZ theory and tools.

The educational materials developed by TETRIS consist of:

- a report on TRIZ educational requirements
- a handbook available in 5 languages (French, English, Italian, German, Latvian);
- 5 animations describing efficiently and in full detail what TRIZ is;
- a guide to introduce TRIZ at school.

TETRIS course and educational materials has been designed accordingly to the needs of the business world as outlined by the analysis of the educational requirements.

Description: TETRIS is based on TRIZ - theory for creative problem solving
Moving towards a post industrial innovation oriented society requires new skills and attitudes and a change in company organization and culture.
While enterprises are adapting themselves to this new environment, the educational system is still referring to traditional industrial systems and its outdated requirements. In past, standardization was the keyword, now customization and creativity are the leading principles. Everyone can learn to be creative, this is one of the basic principles of TRIZ. Being creative is a skill required in every innovative enterprise and in every R&D department. TETRIS wanted to contribute in rising the employability of those that will have been trained under the standards set by TETRIS.
TETRIS project has therefore exploited and merged experiences and competences coming from different fields and countries.
The TETRIS aim was to give teachers and trainers the methodology and the tools to teach their students/trainee to be creative and enhance their problem setting and problem solving abilities.
The TETRIS courses participants were trained in being more creative, enhancing capacity in understanding situations and problems and finding innovative solutions more easily.

HOW DID TETRIS WORK?
An expert team developed a strategy and a methodology to boost creativity in SCHOOLS and in COMPANIES. This two worlds has been connected assuring the right implementation of the TRIZ tools.
TETRIS was devoted both to TEACHERS and COMPANIES
TEACHERS
The project developed a methodology for the teaching of creativity, problem setting and solving skills that can be applied in secondary schools, VET centres and universities. Techniques and methodologies to improve creativity and problem solving attitudes are, nowadays, not taught at schools. At present creativity is only seldom taught at adult education courses.
Since the attitude to creativity is stronger at young age, integrating creativity and problem solving techniques and methodologies into VET education has improved the efficiency of such learning. Moreover a problem solving attitude as well as an improved problem setting capacity has also enhanced the learning capacity of students in any field.
COMPANIES
The TeTRIS Project, through its courses and educational materials, has promoted systematic innovation, efficiency in research, development and creativity. TeTRIS has provided a method and practical tools to achieve technical solutions focusing on the

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objectives set by the company. This way, no time or money will be wasted in unprofitable ideas. With TRIZ a team's creative potential in the fields of research and development, as well as of production, can be dramatically enhanced.
We live in a world which keeps changing at an unprecedented pace. The speed of transformations, new trends and developments relentlessly change the context surrounding us.
Learning to focus the creativity on the relevant objectives and choosing continuous innovation are crucial skills to overcome the challenges of our times.
Tetris to face out these challenges has provided these training tools:
- a report on TRIZ educational requirements
- a handbook available in 5 languages (French, English, Italian, German, Latvian);
- 5 animations describing efficiently and in full detail what TRIZ is;
- a guide to introduce TRIZ at school.
- a prototype of an effective training course for teaching creativity, problem setting and problem solving in companies
All these material is freely downloadable from the TETRIS website: www.tetris-project.org

Thèmes: *** Formation tout au long de la vie
*** Entreprise, TPE, PME
** Formation continue
* Enseignement supérieur

Sectors: *** Activités Spécialisées, Scientifiques Et Techniques

Types de Produit: Site Internet
Matériel d'apprentissage
CD-ROM
Autres

Information sur le produit: The project has produced:
- A report on educational requirements
- A TRIZ handbook
- 5 multimedia animations introducing TRIZ
- A guide on introducing TRIZ at School
- The project website (www.tetris-project.org)
All the project products will be freely available for downloading on the project website: www.tetris-project.org

Page Web du projet: www.tetris-project.org

Contractant du projet

Nom:	AREA Science Park
Ville:	Trieste
Pays/Région:	Friuli-Venezia Giulia
Pays:	IT-Italie
Type d'organisation:	Institution de recherche
Site Internet:	http://www.area.trieste.it

Personne de contact

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Site internet:	http://www.area.trieste.it

Coordinateur

Nom:	AREA Science Park
Ville:	Trieste
Pays/Région:	Friuli-Venezia Giulia
Pays:	IT-Italie
Type d'organisation:	Institution de recherche
Site Internet:	http://www.area.trieste.it

Personne de contact

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Site internet:	http://www.area.trieste.it

Partenaire

Partner 1

Nom:	Siemens AG, Sector Industry, Industrial Automation and Drive Technology
Ville:	Nurberg
Pays/Région:	Bayern
Pays:	DE-Allemagne
Type d'organisation:	Grande entreprise (plus de 250 employés)
Site Internet:	http://www.siemens.com

Partner 2

Nom:	Jelgava regional Adult education centre
Ville:	Jelgava
Pays/Région:	Latvija
Pays:	LV-Lettonie
Type d'organisation:	Institution de formation continue
Site Internet:	http://www.jrpic.lv

Partner 3

Nom:	HIGH TECHNICAL INSTITUTE Arturo MALIGNANI
Ville:	Udine
Pays/Région:	Friuli-Venezia Giulia
Pays:	IT-Italie
Type d'organisation:	Autres
Site Internet:	http://www.malignani.ud.it

Partner 4

Nom:	STENUM Environmental Consultancy and Research Company Ltd.
Ville:	Graz
Pays/Région:	Styria
Pays:	AT-Autriche
Type d'organisation:	Entreprise de petite et de moyenne taille (jusqu'à 250 employés)
Site Internet:	http://www.stenum.at

Partenaire

Partner 5

Nom: European Institute for Energy Research (EIFER)
Ville: Karlsruhe
Pays/Région: Baden Württemberg
Pays: DE-Allemagne
Type d'organisation: Institution de recherche
Site Internet: http://www.eifer.org

Partner 6

Nom: Higher technical College - Wolfsberg
Ville: Wolfsberg
Pays/Région: Carinthia
Pays: AT-Autriche
Type d'organisation: Autres
Site Internet: http://www.htl-wolfsberg.at

Partner 7

Nom: Jelgava 1. Gymnasium
Ville: Jelgava
Pays/Région: Latvija
Pays: LV-Lettonie
Type d'organisation: Autres
Site Internet:

Partner 8

Nom: Fachhochschule Karnten Studienbereich Wirtschaft
Ville: Villach
Pays/Région: Carinthia
Pays: AT-Autriche
Type d'organisation: Université/école supérieure spécialisée/academie
Site Internet: http://www.fh-kaernten.at

Partenaire

Partner 9

Nom:	University of Florence – Dept. of Mechanics and Industrial Technologies
Ville:	Firenze
Pays/Région:	Toscana
Pays:	IT-Italie
Type d'organisation:	Université/école supérieure spécialisée/academie
Site Internet:	http://www.dmti.unifi.it

Partner 10

Nom:	HARRY FLOSSER STUDIOS
Ville:	Munich
Pays/Région:	Bayern
Pays:	DE-Allemagne
Type d'organisation:	Entreprise de petite et de moyenne taille (jusqu'à 250 employés)
Site Internet:	http://www.harryflosser.com

Partner 11

Nom:	ACC Austria Gmbh
Ville:	Fürstenfeld
Pays/Région:	Styria
Pays:	AT-Autriche
Type d'organisation:	Grande entreprise (plus de 250 employés)
Site Internet:	http://www.the-acc-group.com

Produits

1 Public part of the Progress Report

2 The TRIZ tales

3 TETRIS educational requirements report

4 TETRIS web site

5 TeTRIS handbook (complete with instructions for use and case studies)

6 Guide: 'How to use TETRIS Handbook'

7 Guide on introducing Triz at School

8 Siemes examples

9 TETRIS leaflet

10 Public Part of the Final Report

Produit 'Public part of the Progress Report'

Titre:	Public part of the Progress Report
Type de Produit:	Autres
Texte marketing:	
Description:	This is the public part of the progress report delivered by the consortium to the EACEA regarding the project's first year (2008)
Cible:	Public
Résultat:	
Domaine d'application:	
Adresse du site Internet:	www.tetris-project.org
Langues de produit:	anglais

product files

Public part of the progress report

2007_3110_PR_TETRIS_Public_Part.pdf

http://www.adam-europe.eu/prj/3759/prd/1/2/2007_3110_PR_TETRIS_Public_Part.pdf

Produit 'The TRIZ tales'

Titre:	The TRIZ tales
Type de Produit:	Matériel d'apprentissage
Texte marketing:	A series of multimedia animations that introduces the key concepts of TRIZ (theory of invetive problem solving. They are available for free use on TETRIS web site.
Description:	The 5 animations (each about 3 minutes long) introduce the viwer to the key concepts of TRIZ. They could be used as an introduction before training or as a support for training in class.
Cible:	Trainers teachers and everyone interested in learning what TRIZ is. Thay can be used both with schools and companies.
Résultat:	
Domaine d'application:	Teaching of TRIZ, creativity, problem solving skills
Adresse du site Internet:	www.tetris-project.org
Langues de produit:	letton italien roumain anglais allemand français

Produit 'TETRIS educational requirements report'

Titre:	TETRIS educational requirements report
Type de Produit:	Autres
Texte marketing:	
Description:	This report analize previous experiences in TRIZ training and the educational requirements of schools and companies. It provides hints and suggestions for planning TRIZ courses.
Cible:	Trainers and VET centres interested in teaching TRIZ
Résultat:	
Domaine d'application:	
Adresse du site Internet:	www.tetris-project.org
Langues de produit:	anglais

Produit 'TETRIS web site'

Titre:	TETRIS web site
Type de Produit:	Site Internet
Texte marketing:	Registered users can watch for free the TRIZ tales and download all project training materials and reports.
Description:	The project web offer to visitor useful information, links and documents on teaching and learning TRIZ.
Cible:	Anyone interested in TRIZ, creativty and problem solving.
Résultat:	
Domaine d'application:	
Adresse du site Internet:	www.tetris-project.org
Langues de produit:	allemand italien letton anglais français

Produit 'TeTRIS handbook (complete with instructions for use and case studies)'

Titre:	TeTRIS handbook (complete with instructions for use and case studies)
Type de Produit:	Matériel d'apprentissage
Texte marketing:	A training tool created with a multidisciplinary approach by the partners of the TeTRIS consortium to cater for the specific requirements of trainers and learners for the introduction of TRIZ in schools and companies. The handbook, available in five European languages and freely downloadable from the project's website, comes with a guide for its use in training activities and/or individual study and a set of case studies presenting problem situations and problem-solving procedures implementing TRIZ principles and tools.
Description:	
Cible:	Secondary school teachers and trainers developing training activities for enterprises interested in introducing the TRIZ methodology, principles and tools as an innovative, comprehensive approach to problem-setting and problem-solving. The materials are also an excellent self-study tool for distance learning, addressed to those who have an interest in TRIZ and an incentive for further,in-depth analysis of the issues related to creativity and structured problem-solving.
Résultat:	
Domaine d'application:	Training activities in secondary schools and companies. Self-study - distance learning.
Adresse du site Internet:	http://www.tetris-project.org/
Langues de produit:	letton italien français allemand anglais

product files

English

EN.zip

http://www.adam-europe.eu/prj/3759/prd/5/2/EN.zip

French

FR.zip

http://www.adam-europe.eu/prj/3759/prd/5/6/FR.zip

German

DE.zip

http://www.adam-europe.eu/prj/3759/prd/5/4/DE.zip

product files

Italian

IT.zip

http://www.adam-europe.eu/prj/3759/prd/5/3/IT.zip

Latvian

LV.zip

http://www.adam-europe.eu/prj/3759/prd/5/5/LV.zip

Produit 'Guide: 'How to use TETRIS Handbook''

Titre:	Guide: 'How to use TETRIS Handbook'
Type de Produit:	Matériel d'apprentissage
Texte marketing:	The guide is provided in English, German, French, Italian, Latvian
Description:	
Cible:	Companies, researchers, teachers, secondary schools, stdents, Educational Authorities
Résultat:	
Domaine d'application:	
Adresse du site Internet:	
Langues de produit:	anglais

product files

Guide on introducing TRIZ at school.pdf

http://www.adam-europe.eu/prj/3759/prd/6/1/Guide%20on%20introducing%20TRIZ%20at%20school.pdf
Siemens examples

Produit 'Guide on introducing Triz at School'

Titre:	Guide on introducing Triz at School
Type de Produit:	Matériel d'apprentissage
Texte marketing:	The guide is provided English, German, French, Italian and Latvian
Description:	
Cible:	Teachers, students,secondary schools, Educational authorities
Résultat:	
Domaine d'application:	
Adresse du site Internet:	
Langues de produit:	anglais

product files

Guide on introducing TRIZ at school.pdf

http://www.adam-europe.eu/prj/3759/prd/7/1/Guide%20on%20introducing%20TRIZ%20at%20school.pdf

Produit 'Siemes examples'

Titre:	Siemes examples
Type de Produit:	Matériel d'apprentissage
Texte marketing:	A set of examples of Siemes Innovation Tool Accademy
Description:	
Cible:	Companies, Researchers, Teachers, Triz trainers, students
Résultat:	
Domaine d'application:	
Adresse du site Internet:	
Langues de produit:	anglais

Produit 'TETRIS leaflet'

Titre:	TETRIS leaflet
Type de Produit:	
Texte marketing:	
Description:	
Cible:	
Résultat:	
Domaine d'application:	
Adresse du site Internet:	
Langues de produit:	anglais

product files

TETRIS Conference EN.pdf
http://www.adam-europe.eu/prj/3759/prd/9/1/TETRIS%20Conference%20EN.pdf

Produit 'Public Part of the Final Report'

Titre:	Public Part of the Final Report
Type de Produit:	
Texte marketing:	
Description:	
Cible:	
Résultat:	
Domaine d'application:	
Adresse du site Internet:	
Langues de produit:	anglais

product files

Public Part of the Final Report

2007_3110_FR_TETRIS_public part.pdf
http://www.adam-europe.eu/prj/3759/prd/10/2/2007_3110_FR_TETRIS_public%20part.pdf

Événements

TRIZ: Systematizing Innovation and Creativity

Date	10.11.2009
Description	Project final conference
Cible	Secondary schools, teachers, headmasters, Educational authorities,companies, researchers
Public	Événement public
Informations de contact	How to register You can register online on the project's website at: www.tetris-project.org or you can fax your application (download the form on the TETRIS website) to: +39 040 3755320 For further information, please contact: +39 040 375 5297/5252 or by e-mail at: info@tetris-project.org Location The venue chosen for the conference is the Congress Centre at AREA Science Park POLO CONGRESSUALE AREA SCIENCE PARK PADRICIANO, 99 TRIESTE - ITALY
Date et lieu	FINAL CONFERENCE: NOVEMBER 10th, 2009 - 9.00 a.m. CONFERENCE HALL - AREA SCIENCE PARK CONGRESS CENTRE AREA SCIENCE PARK – PADRICIANO, 99 TRIESTE - ITALY

Project Tags

The project belongs to the following group(s):

Best Projects (http://www.adam-europe.eu/adam/thematicgroup/MMVII)