



DEVELOPMENT OF SUSTAINABLE URBAN CENTRES WITH ACTIVE INVOLVEMENT OF VOCATIONAL EDUCATION AND TRAINING (VET)

Good Practices

Intellectual Output 1

“Local cooperation on development of urban centres, including VET”

Presentations of examples by partners



Second version
Bergen, Hordaland 10.12.2018



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CARD FOR THE COLLECTION OF GOOD PRACTICES

SUMMARY SHEET FOR THE DESCRIPTION OF THE GOOD PRACTICE

All partners in the project “VET in Urban Centres” will identify at least one project, experience/ practice, related to Intellectual Output 1, and describe it as Best/Good Practice. The format to be used to describe Best/Good Practices is “Card for collection of good practices”, a format developed by the partnership.

This document presents projects from the partners on IO 1.

Barcelona Activa, Catalonia, Spain

Title	<i>Fem ocupació per a joves “We make employment for young people”</i>
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Section 1 - Summary

Date	<i>September 2018</i>
Name of the author/ s	<i>Sara Casas Torrens</i>
Abstract	<i>Coordinator of the project for 4 years and is actively involved in the design and evaluation of the project</i>

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	<i>Barcelona Activa, VET Managed by Economic Development Agency of the city of Barcelona</i>
City and country	<i>Barcelona. Catalonia. Spain</i>
Topic	<i>Within the framework of the program different training specialties are based on the needs of the company: commerce, electrical maintenance, mechanics</i>
Discipline	
Budget (if applicable)	<i>Funded by Spanish Ministry for Social Security and the Catalan Government. To 2013 and 2015 funded by co-financed by the youth employment initiative and the European social fund</i>
Organisation type and characteristics	<i>Economic Development Agency of the city of Barcelona</i>

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	<i>It is an annual program that lasts 15 months</i>
GENERAL AND SPECIFIC OBJECTIVES	<p><i><u>General Objective:</u> Facilitate the entry or re-entry of unemployed young people in the labor market and to reduce the impact of juvenile unemployment among youth.</i></p> <p><i><u>Specific Objectives:</u></i></p> <ul style="list-style-type: none"> - <i>Facilitate the labor insertion of unemployed young people aged 18 - 29,</i> - <i>Take point the real needs of the company as a starting</i> - <i>Ensure professional experience through a minimum 6 months labor contract</i> - <i>Facilitate the specific training required for existing vacancies</i> - <i>Orientation and accompaniment in the recruitment and training process</i>
RECIPIENTS	<ul style="list-style-type: none"> - <i>This call is aimed at 100 young people</i> - <i>targeted young people, those aged 18 to 29,</i> - <i>boys and girls</i> - <i>They have completed and passed the compulsory studies or studied undergraduate or middle-level vocational training courses</i> - <i>Recipients are not studying or working</i>
SIGNIFICANT PROJECT	<p><i>The objective of this program is the labor insertion of young people aged 18 to 29, in situation of unemployment and priority with professional experience, providing them, among other resources, the necessary training to occupy a certain place of work. This policy It is addressed to young people who have the Compulsory Secondary Education diploma or bachelor or a Medium Level of Vocational studies.</i></p> <p><i>Other part important of this program it's the enterprises who will collaborate with the program. We need that they accept young people like an apprentice and assign a person as a tutor. This requirement is very important to achieve the most important goal of the program: learning at the workplace and subsequent insertion of the participants.</i></p> <p><i>When the enterprise is select, we design jointly a training plan for the work place and the calendar for the incorporation. Sometimes the young people first they carry out the training and then they are incorporated at the work place and sometimes they do both actions at the same time, combine some time to work and some time to study.</i></p>
SHARES	<i>The most important actions within the framework of the program are training actions adapted to the workplace that the young person must occupy. This year the specialties are customer service, restaurant waiters and electrical maintenance. Last year we prepare 10 guys to work in a innovative</i>

	<p>enterprise with electric motorbike and prepare 10 more for incorporate in the enterprise it manage the service municipality bikes in the city and the others too.</p> <p>Another fundamental point is the tutoring. The participants has a tutor in the enterprise and with us. This figure of a tutor has a support for the incorporation in the work place, in the relations with his companions and with his senior responsible.</p>
DIDACTIC APPROACH AND METHODOLOGY	<p>Eminently practical method, respecting the indispensable theoretical part according to the speciality of the workstation.</p> <p>One of the key features is that the program is very adapted to the workplace occupied by the person, so that the workplace is also a experiential learning.</p>
CHALLENGES / CRITICAL	<ul style="list-style-type: none"> - Actual adaptation of the training contents with the workplace - Collaboration by the company in the training description - In the case that training and work are parallel, fit both seamlessly - Selection of young people, especially by skills level and to become competent
TERRITORIAL SCOPE AND INTERVENTION AREA	<p>Local area of intervention: Barcelona city and metropolitan area</p>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<p>Training providers (training centres of different specialties)</p>
DOCUMENTATION	<ul style="list-style-type: none"> - Record of periodic tutorials of the tutor with the young person (standard model) - Record of periodic tutorials by the tutor with the enterprise tutor (standard model) - Record of attendance at courses and group activities (signature collection)
EXPERIENCE / PROJECT RESULTS	<ul style="list-style-type: none"> - Number of participants - Degree of attendance at activities - Duration of the employment contract - Number of renewals - Number of insertions in other companies <p>Number of young people returning to the official educational system</p>
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<ul style="list-style-type: none"> - Collaboration agreement is established a partnership agreement with the Catalan public employment service (SOC) - Collaboration agreements are established with each of the contracting enterprises
EVALUATION SYSTEM AND TOOLS	<p><u>Student satisfaction</u></p> <p>The degree of student global satisfaction with the program are collected during the tutoring process. In addition, the youngsters respond a evaluation questionnaire at the end of the training, which they value the degree of satisfaction with training (questionnaire is attached)</p> <p><u>Training</u></p> <p>Throughout the training, students are subject to continuous evaluation. At the end, the final evaluation is "suitable" or "not suitable"</p> <p><u>Development in the enterprise</u></p> <p>Enterprise tutors respond a questionnaire that values the development of the young person in their workplace, at least 3 times during the contract.</p>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<p>The key point of the project is the possibility of being able to adapt to the needs of the contracting companies. As much about the required training as the necessary attitude. Another strong point is that it makes it possible for the young person to achieve the appropriate profile in the workplace by working and forming at the same time.</p> <p>One aspect to improve would be raising the awareness of the companies regarding the profile of the young participant in the program and what their participation implies, focusing on the figure of the tutor in the company and its functions to encourage the development of this such a relevant task.</p> <p>Another aspect would be to avoid excluding those people who are completing training to improve employability.</p>
PORTABILITY	<p>Completely</p>
SOURCES AND INTERNET SITE	<p>https://treball.barcelonactiva.cat/porta22/es/assetocupacio/programes/pagina34834/fem-ocupacio-per-a-joves.do</p>
HIGHLIGHT SUCCESSFACTORS	<p>The key element that makes all the processes improve is the full collaboration of the companies. That they understand to one hundred percent the philosophy of the program. If you share with the technical team of the program the definition of the profile of the person to select and the preparation</p>

	<i>of the training plan can be done jointly with the company, the selection process is more accurate, the adaptation to the place of work is more accompanied, and so everything works better.</i>
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Knarvik Upper Secondary School, Hordaland, Norway

Title	TAF – Technical/vocational and general studies
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Section 1 - Summary

Date	<i>School start august 1992 -</i>
Name of the author/ s	<i>Rune Nesse</i>
Abstract	<i>Upper secondary education in Norway – Two alternatives: Three years of general studies, preparation for universities, or two years at school and two years in apprenticeship/craftsmanship Our alternative: Four years alternating teaching/training: school – enterprise, operational from day one.</i>

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	<i>Knarvik upper secondary school, Hordaland County Council and municipalities in Hordaland. There are also several companies involved in this education Website https://taf.no/</i>
City and country	<i>Hordaland County Council, Lindås municipality, Norway</i>
Topic	<i>Four year education: Crafts certificate and general university admissions certification</i>
Discipline	<i>School management, teachers industry leaders, industry trainers, craftsmen, skilled workers, leaders in municipalities</i>
Budget (if applicable)	<i>Ordinary education budget, approximately 200 students are in training at any time</i>
Organisation type and characteristics	<i>Knarvik upper secondary school with it's TAF Coordinators and Co-operative Training Coordinator coordinates education at school and with companies.</i>

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	<i>Four years of schooling, containing school and in business/industry</i>
GENERAL AND SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> - <i>To establish early contact between industry and young students.</i> - <i>To promote technology subjects and work in modern industry.</i> - <i>To recruit more engineering students with background from vocational schools.</i> - <i>To recruit engineers and other employees with university background and with experience from industry.</i> - <i>To improve the status for work in industry.</i>
RECIPIENTS	<i>Students start at the year they reach 16 and finish the year they are 20 years old. The pupils have relatively high grades from secondary School, especially in mathematics and science.</i>
SIGNIFICANT PROJECT	<i>Motivate young people with good academic skills to apply for a vocational education, take a certificate of apprenticeship and then apply to colleges and universities.</i>
SHARES	<i>The education goes over four years, where the student goes 2-3 days in school and 2-3 days in business every week. Students only have 5 weeks of vacation a year.</i>
DIDACTIC APPROACH AND METHODOLOGY	<i>Academic subjects and theoretical part of vocational subjects in school and practical parts of the subject are in business.</i>
CHALLENGES / CRITICAL	<p><i>Indicate what were the main challenges faced in the course of the experience, the problems encountered and how they were addressed and eventually resolved, trying to distinguish among:</i></p> <ol style="list-style-type: none"> a) <i>Large workload for students in academic subjects such as mathematics and physics. The school puts in additional resources when needed</i> b) <i>Young workers who must be followed up especially when we consider Health, Environment and Safety Challenges</i> c) <i>Before students start this education, they will be employed by the company for a four-year period</i> d) <i>The companies interview the students and together the students and the company agree that we are doing this.</i>
TERRITORIAL SCOPE AND INTERVENTION AREA	<i>To our school, students are recruited from secondary schools in our county.</i>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<p><i>This way of pursuing education is proven in our region. We are now applying the same type of thinking without focusing on high-level science.</i></p> <p><i>Trying to add more of the practical part of the program to a company.</i></p> <p><i>This has been initiated through this project and through our cooperation with local businesses.</i></p>

DOCUMENTATION	Website: https://taf.no/
EXPERIENCE / PROJECT RESULTS	<i>The education has recruited highly trained and competent engineers back to companies and other companies not included in the TAF.</i>
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<i>The education comprises municipalities within the health profession, companies in the fields of mechanical engineering, electrical engineering and construction.</i>
EVALUATION SYSTEM AND TOOLS	<i>The education is assessed in the same way as general studies and vocational education in Norway</i>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<i>Strength: We educate students to higher education with a very good vocational understanding Weakness: We do not have any written agreement on the number of students for each year. It is the whole time an uncertainty in relation to the job market</i>
PORTABILITY	<i>Since 1992, several companies in Norway have embraced the idea and entered into similar agreements with their local businesses</i>
SOURCES AND INTERNET SITE	Website: https://taf.no/
HIGHLIGHT SUCCESSFACTORS	<i>Knarvik uppersecondary school has this education on four education programs and the main success factor is that the school has 4 coordinators, one for each program area The coordinators' task is to ensure that the student, school and company follow the curricula and help all parties facing challenges</i>
COMMENTS	<i>Write any comments you have, or reflections related to the actual Best Practice, and/or to the intended model for IO 1.</i>

Austrheim Upper Secondary School, Hordaland, Norway
(a school closely cooperating with Knarvik Upper Secondary School)

Title	Wooden Bridge Project
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Section 1 - Summary


Date	03.12.2015
Name of the author/ s	Tore Reigstad and Roy Asle Tunland
Abstract	A wooden bridge design by an art school, made by student at Austrheim secondary school

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	Teacher and student from an interior architecture and designed art school, Austrheim upper secondary schools and Austrheim municipality
City and country	Austrheim municipality - Norway
Topic	Design and construction - Bridge project
Discipline	Art and design students, teacher at the art school, teacher and students at Austrheim uss, an engineer at Austrheim municipality, a building company; Markhus Bygg AS, "building office" in city of Bergen, and a local art designer as leader of the project.
Budget (if applicable)	The Company Markhus bygg AS paid all the materials. The working hours were done by students at no cost.
Organisation type and characteristics	Meetings attended by all partners to get the idea from drawing, locating, materials and making.

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	Five weeks in October/November in 2015.
GENERAL AND SPECIFIC OBJECTIVES	An idea from art students in Bergen – they had built a big bridge, now they tried it out in a smaller concept. Tove Veidung, artist living at Austrheim was the collaborator between all partners. Wooden Company, Markhus Bygg AS, where willing to pay for the costs. Teachers at Austrheim had the knowledge. The students had an opportunity to make something extravagant.
RECIPIENTS	One class with 15 students in the age of 16 One class with 12 students in the age of 17 Two teachers One art designer The head of the building firm One teacher and on student from the art school (interior architecture and design architecture)
SIGNIFICANT PROJECT	The idea came from a big bridge that was built in Bergen city. The community Austrheim has many bridges nearby and wanted to symbolize this with a bridge outside their community house.
SHARES	Started from drawings of the original bridge, and then made smaller to fit the place for the new bridge. The director of art, the students and the art designer had a meeting with the student to get them interested in the project. The teachers had to be committed too.
DIDACTIC APPROACH AND METHODOLOGY	Reading drawings, making the bridge step by step. Making the stairs and the side "wings", learning by doing, the teachers introduce new techniques.
CHALLENGES / CRITICAL	Indicate what were the main challenges faced in the course of the experience, the problems encountered and how they were addressed and eventually resolved, trying to distinguish among: a) Challenges in terms of the content of the course b) Get everyone interested, finding different work to everyone. c) By the project the students can show their experiences to coming employers in terms of a rapport terms, documented by pictures. d) Challenges in finding the right course
TERRITORIAL SCOPE AND INTERVENTION AREA	The bridge were built outside the school and in a plastic hall nearby, hired from a local entrepreneur.

AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	---
DOCUMENTATION	<p>The project has been documented in a magazine for buildings firms, also sent to other schools for an example of "best practice". The company that were involved and the secondary school got a prize, 10 000 Norwegian Kroner in June 2017, in the open class, by the Bergene Holm AS.</p> <p>https://www.youtube.com/watch?v=VNMyI4Dg3Bo</p>  <p>Skulpturell m</p>
EXPERIENCE / PROJECT RESULTS	---
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<p>Local private designer. The designer school in Bergen Community Building company The secondary school The teachers at secondary school Building office in Bergen (construction authority by municipality)</p>
EVALUATION SYSTEM AND TOOLS	---
STRENGTHS AND WEAKNESSES OF THE PROJECT	<p>Strengths: Local commitment and dedicated teachers.</p> <p>Weakness: The students have very various interest in doing project like this. You have to motivate them thru the whole project.</p>
PORTABILITY	<p>The student at Austrheim have had several similar projects since 2015. Together with the local community. Example; building a boat house for the local community, building a cottage at the seaside for the local community, used for storing equipment like paddling board and so on. This Autumn the students are building a "lavo" (a simple house shaped like a cone) for the local kindergarten.</p>
SOURCES AND INTERNET SITE	<p>We have no web site, but the result is standing outside the community hall, and reminds everyone about the contents in the project.</p>
HIGHLIGHT SUCCESSFACTORS	<p>Process before starting with the students, meetings with everyone involved. The local communities positivism help, have the same target, to get real project for the students an give they something to be proud of.</p> <p>Describe element which have functioned well, contributed especially to good results in various ways: achievements, motivation, competence, economy, cooperation, faster processes etc.</p>
COMMENTS	---



Sotra Upper Secondary School, Hordaland, Norway

Title	Vocational coordinator
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Section 1 - Summary

Date	10.09.2018
Name of the author/ s	Ingrid Beate Læg Reid - Vocational coordinator at Sotra Upper Secondary School
Abstract	Through the work of the vocational coordinators, the project will put in place lasting structures and working methods that increase communication with businesses, industry and service providers. Successful methods and structures might be transferred to other schools in the county.

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	Sotra Upper secondary School and Hordaland County Council
City and country	The region of three municipalities; Fjell, Sund and Øygarden, within Hordaland County, Norway
Topic	After the project period is over, one should have developed a clear strategy for how to work with individual youth who start a vocational education: a comprehensive 4-year education for all those who choose vocational subjects
Discipline	Vocational programs like construction and engineering, design and crafts, electrical subjects , health and upbringing, restaurant and food - industry, service and transport, technology and industrial production
Budget (if applicable)	---
Organisation type and characteristics	The project is approved by the county council and has a management group, project management, school management and vocational coordinator.

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	The project period is from 01.06.2017 to 31.12.2019
GENERAL AND SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> - Systematize and develop business and school collaboration - Information activities towards students and businesses - Connect with current businesses in the region - Get more companies that will train apprenticeships in the region - In cooperation with the school, arrange for students to be deployed for practical work in companies - Support and assist students in transition from being a student at school to apprenticeship - Participation in a project group led by the vocational training office - put in place lasting structures and working methods that can be transferred to other schools in the county
RECIPIENTS	An average of 420 pupils per school year both in first and second year at school, also students who do not get an apprenticeship after graduation and are entitled to an education offer (may vary from year to year). Usually young people from 16 to 18 years old.
SIGNIFICANT PROJECT	The vocational education in Norway is organized as two years at school where they have a few weeks in practice at a company. Then, students complete their education with two practical years of working. Once they have completed the curriculum, they go to a practical exam and get their diploma. The challenge with this organization of vocational education is that the student is dependent on becoming an apprentice for completing his/her education. If they do not get an apprenticeship, they must wait one year to apply again or choose another education. Worst case is that they fall out of the education system and are unable to complete their education. In this project, the school aim at being able to offer apprentice for most of the pupil, so that the student is prepared and ready for the demands and expectations by employers, and a more attractive workforce. It is an aim to get companies to take more social responsibility and hire apprentices, even though they may have challenges, also even when there is a quiet period in the labour market.
SHARES	<p>An overview of the student's wishes and dreams, it is important to have good dialogue between teacher and student</p> <p>Contact with companies to give students real practice</p> <p>Pupils are in practice both in first and second class, important to place students in companies that intend to have an apprentice</p> <p>Close follow-up of student if challenges are identified</p> <p>Plan to get more students as apprentices</p>

	<p><i>"Vocational days" at school to inform about the choices the students have, as well as focus on applying for an apprenticeship</i></p> <p><i>Arrange meetings with management, teachers, companies and public partners</i></p> <p><i>Training of teachers</i></p> <p><i>Develop a system to have an overview of students who get an apprenticeship and who does not get it</i></p>
DIDACTIC APPROACH AND METHODOLOGY	<p><i>It is important that school management, teachers, companies and the municipality have ownership and a positive attitude towards the project and wish to help all students who want to become an apprentice. Teachers must be encouraged and inspired by school management and companies to further motivate students to become good candidates for apprenticeship. We have developed a plan to help the school and the teachers with this; "Convey to apprenticeship plan"</i></p>
CHALLENGES / CRITICAL	<p><i>Lack of information and communication ☒</i></p> <p><i>Implementation and phasing-in of the project at the school ☒</i></p> <p><i>Cooperation between departments in Hordaland County Council and local and various players in the schools ☒</i></p> <p><i>Resistance from personnel at school</i></p> <p><i>Conflict of interested between this project and ongoing projects and work assignments in the Education Department of Hordaland County Council. ☒</i></p> <p><i>Time factor - The project is time-limited and things take time</i></p> <p><i>Economic factors</i></p>
TERRITORIAL SCOPE AND INTERVENTION AREA	<p><i>Locally based with regard to companies and municipalities we cooperate with, but also regionally relevant, as the project is part of the education department in Hordaland County Council.</i></p>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<p><i>Among other things, formal cooperation agreements is made for companies wishing to take students into practice. Agreements are registered at; www.utdanning.no</i></p>
DOCUMENTATION	<p><i>All information collected is stored in a database and different forms and routines are developed that have been / will be distributed to current users. When the project is completed, the idea is that we will be able to share the knowledge, forms, procedures and proposals (tools) for implementation with other higher education schools in Hordaland County Council.</i></p>
EXPERIENCE / PROJECT RESULTS	<p><i>At the start of this project in 2017, 54% of students applied for vocational education; in 2018 it was 64%.</i></p> <p><i>In 2017, 74% of the students who applied for an internship had received it, compared with 81% this year. In 2017, 46% of the pupils received apprenticeships in businesses where they had practice while they were students, compared with 64% this year (2018).</i></p> <p><i>We also have an increase in the number of students applying for vocational education. This we believe is partly a result of active promotion of vocational training by politicians and media, lifting the status of vocational education very much lately.</i></p> <p><i>But there are also many other changes as result of the project that are difficult to measure, such as team spirit, different activities, content in eviction, etc.</i></p>
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<p><i>Politicians, school owners, public and private companies within all the different subjects we have at school, public offices, offices that manage apprentices, principal and staff at school.</i></p>
EVALUATION SYSTEM AND TOOLS	<p><i>The project will be evaluated quantitatively and qualitatively. The project must be evaluated and measured against the project objectives that are in the plan and measured against figures that originated initially when the project started. Sub-goals have been set to be assessed along the way.</i></p>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<p><i>The strength is having a good and integrated system and to look at the context of the four-year vocational education and to provide the school and teachers with "tools" to help and provide all students who want vocational education. The project also creates new and better contacts and agreements with companies.</i></p> <p><i>The weakness is that the school does not have the feeling of ownership of the project, and that the "tool" that the project makes is not used by management and teachers at school after the project is finished and the vocational coordinator no longer is a resource at school.</i></p> <p><i>Another weakness is fluctuations in the labour market and changes in labour demand. Companies are also not required to take apprentices and can "stop" a youth's ability to complete their education. Regardless of how much the public school system facilitates, we are completely dependent on companies and their need for students, to allow students complete their vocational education.</i></p>
PORTABILITY	<p><i>The gain and effect of introducing a vocational coordinator may not be able to measure so soon in the project. An overall goal is to establish permanent structures that can be used in schools other</i></p>

	<i>than those selected in the project. The results of the project is easy to share and transfer to other regions and schools, but how the work is carried out will depend on the cooperation within the school and between the schools and businesses in the different regions.</i>
SOURCES AND INTERNET SITE	<i>At the moment, there is no source or web page for the project. But up till now we have had some activities, experiences and concrete episodes where we see that the “tools” works and that the project has an impact.</i>
HIGHLIGHT SUCCESSFACTORS	<i>Throughout the project we developed a Convey to apprenticeship plan where we have emphasized some success factors:</i> <ol style="list-style-type: none"> <i>1. Mapping and guidance of the students</i> <i>2. Systematic cooperation with companies</i> <i>3. Practice for students in a company approved for training students (who intends to take an apprenticeship)</i> <i>4. Apprenticeship conference (both in first and second year at high school)</i>
COMMENTS	<i>It is clear from the project that there is a need for a person at the schools that is a link between schools, vocational training and business. It is important to have a resource that motivates and arranges activities, within program areas at the school and across the program areas, as well as cooperation between schools and close collaboration with business life. The project has shown to give an improved result on the number of students who get an apprenticeship; these are goals and results that are easy to measure. Other effects will be harder to measure and will take longer to establish. Experience in other counties, who have established a vocational coordinator in all their vocational schools, reports that they first saw results after 4 years.</i> <i>However, there is no doubt that the project is performing well and should be continued, either by providing the school with a resource to continue the work, or that jobs are created as a vocational coordinator at the vocational training office in Hordaland County Council, who will cooperate and work towards all the upper secondary VET schools in the county.</i>

Agencia Umbria Recherche, Italy

Title	A Business School “A scuola d’impresa” – EBG European business game
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Section n. 1 – Summary

Date	27/04/2018
Name of the author / s	Daniele Adanti – AUR Agenzia Umbria Ricerche
Abstract	The project “A business school” took place for three editions, three school years, from 2012 until 2017. Promoted by the AUR, it was managed in collaboration with the Regional Scholastic Office for Umbria and was realized with the technical support of an external training body (Ecipa Umbria) and other entrepreneur organizations such as Ecipar Ravenna. Purpose of the project, financed by the POR Region Umbria FSE was to contribute to the cooperation between schools and businesses through the definition of experimental actions aimed at supporting integrated training courses in favor of high school students oriented to the promotion of the culture of enterprise and entrepreneurship, also through comparison with other national and European companies.

Section n. 2 - General information on the experience / project

Name of the school / organization	AUR – Agenzia Umbria Ricerche
School order	<input type="checkbox"/> Primary school <input type="checkbox"/> First level secondary school <input checked="" type="checkbox"/> Secondary secondary school
School size	900
City and country	Umbria region - Italy
Topic	Business culture, development of entrepreneurial ideas also linked to sustainable development, creativity, entrepreneurship
Discipline	All school disciplines, in particular according to the participating institutions: "Business Economics", "Graphics and Advertising Technique", "Italian", "Mechanics", "Psychology and Communication Techniques" etc.
Budget (if applicable)	FSE – European social fund POR Regione Umbria 2007-2013 e 2014-2020

Section n. 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	Scholastic years 2012-2013; 2013-2014; 2016-2017
GENERAL AND SPECIFIC OBJECTIVES	Among the main objectives of the project, spread the business culture in schools and develop the entrepreneurial spirit by providing the skills necessary for business creation, also through comparison with other national and European companies. The students, divided into teams, following a targeted training and activation of simulation games, realize a real business project starting from an idea identified by them. Organized as a game, "business simulation" has developed knowledge of doing business and business
RECIPIENTS	900 students of the fourth year of high school with an age between 17-19 years. A total of 36 high school institutions participated in the three years for a total of 36 classes and about 300 teams. Students with disabilities, dyslexia and dyscalculia also participated.
SIGNIFICANT PROJECT	Led by their teachers and supported by the intervention of external consultants / experts the "student-entrepreneurs" have "played" by simulating the creation of their own business. Over 150 business ideas have been developed, many of which are linked to sustainable development, including the historic centers and areas of tourist interest of the Umbria Region (Lake Trasimeno, Amelia, Foligno, Gubbio, Amelia, Terni, Città di Castello, etc.) . The training course includes a training phase in the classroom, competitions at regional, national and European level. A web platform was created www.scuolaimpresa.net which was structured in four fundamental areas: administrative, Social, Project Groups and Community Managers. The site lists the schools, the teams involved and the summary in English of all the projects completed is available. In addition to the social area (made up of the blog), the ad hoc platform allowed to simulate joint-ventures, sales agreements, technological research cooperations, etc. The young people on the web were able to see the business ideas of the other countries at stake (EBG), thus opening up to Europe, seen as a field of action / future relation and as a real context of belonging.

SHARES	In each school a training course of a total duration of 80 hours was held during the school year, divided into 3 actions: theoretical classroom training on management and business subjects (32 hours); Business plan workshop (40 hours); case studies, visits, testimonials (8 hours). At the end of the training course, a series of competitions were held (at regional, national and European level) with the aim of selecting and rewarding the best business ideas. the project is linked to the EBG - European business game network, comprising 11 participating countries: Italy, Scotland, Denmark, England, Faroe Islands, Greenland, Czech Republic, Slovakia, Croatia, France and Latvia, South Tyrol and French Guiana . EBG ends each year with the European meeting and with the competition of young students taking place in one of the countries belonging to the network. In 2014 the European final was held in Umbria at the beautiful Polvese island - Lago Trasimeno.
DIDACTIC APPROACH AND METHODOLOGY	To spark the interest of young people, "A scuola d'impresa" proposes an interdisciplinary pedagogical approach, focused on laboratory activities and practical experience. The success of the "A scuola d'impresa" project is based on a number of characteristics that can be considered typical of all initiatives aimed at spreading an entrepreneurial spirit. Among the main strengths: <ul style="list-style-type: none"> - The game as a learning dimension: business game and learning by doing; - connection and collaboration with businesses and the local community and with the development needs of a territory; - adaptability of the route to the various types of teaching; - the enthusiasm found among students, even among those who usually show little motivation to study the subjects proposed through traditional teaching; - experimenting with teamwork in order to achieve a common goal; - the importance given to creativity, to the spirit of initiative and innovation of young people.
CHALLENGES / CRITICAL	In deciding and doing, children also make mistakes. In this way they take on responsibilities, learn and reflect on new issues and, not to mention, sometimes, working together and in a different way, they can also have fun. On the other hand, learning is a process that can not neglect motivation, interest, curiosity and the pleasure of learning. Through a process that favors the dimension of collaborative learning, attitudes and skills revolve around a shared entrepreneurial idea, intensifying interpersonal relationships. In order to better reach the students, in order to make the transmission of knowledge, emotions and experiences more effective, "At the business school" has also introduced peer education.
TERRITORIAL SCOPE AND INTERVENTION AREA	The aim of the project is to develop skills in creativity, group spirit and entrepreneurship, as well as making sure that young people contribute to the conception and development of business ideas for local territories. By competing at regional, national and European level, the project intervenes on several levels: local, national and international.
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	The design actions of "A scuola d'impresa", managed by the AUR in collaboration with the Regional Scholastic Office for Umbria, the Umbria Region and business associations have been formalized in a memorandum of understanding.
DOCUMENTATION	The platform has allowed to simulate joint-ventures, sales agreements, cooperations, etc. The young people, through the network, were able to see the entrepreneurial ideas of the competing teams. The competing teams received a password to access the platform and to fill out some online forms useful for the preparation of their business plan. The guys at stake were able to independently consult all the material prepared to support the performance of their activity, always assisted remotely by a facilitator and animator of the virtual community. The platform was also used to test the approval of the activities (intermediate monitoring), as well as to collect all the processed products. Specifically, the www.scuolaimpresa.net platform is divided into the following sections: <ul style="list-style-type: none"> - the description of the PROJECT; - the SCHOOLS AND TEAMS participating with all the projects carried out; - the DOCUMENTS (training modules, a student manual and a student questionnaire to evaluate the activities); - a SUPPORT to discuss remotely on topics related to the project and to request and receive information; - a section of the ACTIVITIES carried out and planned, in order to document the progress of the work; - the GALLERY of photos and videos made during the activities, including some spots created by the guys to advertise their business.
EXPERIENCE / PROJECT RESULTS	Around 900 students, 100 teachers and 36 high school institutions were involved

SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	Umbria Region (local authority), AUR (regional development agency), Ecipa Umbria (associates zones of entrepreneurs), Regional Education Office (public sector education sector), schools, local companies. The figure of the godmother company was also envisaged, ie each project was associated with a company in the implementation phase of the project that sought to advise and support young people in the development of the business idea. The importance of how much the System (school-enterprise-local community) has managed to achieve is confirmed by the fact that the schools that have experienced the experience would like to participate again, more and more schools ask the AUR to take action for the development of other editions and, not secondary, other and new transnational interventions have been promoted on the basis of what has been achieved in Umbria.
EVALUATION SYSTEM AND TOOLS	<p>"At business school" has always paid particular attention to the planning and execution of the monitoring activity. The monitoring allowed a systematic collection of information regarding the progress of the work, highlighting the critical issues and any deviations between what was being achieved and what had been budgeted.</p> <p>The main control and evaluation actions were:</p> <p><u>Direct observation.</u> Important information was collected through direct observation of the activities. In observing, an active listening of the participants was carried out regarding the experience they were experiencing, noting their degree of satisfaction.</p> <p><u>The constant listening and comparison of the coordinators with the experts / consultants</u> involved in the laboratory activity. All the experts who worked with the boys were involved in a continuous and reasoned reporting of the activity carried out.</p> <p><u>The meetings.</u> Meetings were held every two weeks. Most often, the comparison took place on the following topics:</p> <ul style="list-style-type: none"> - adequacy of the teaching method used - interest in the topics covered - adaptation and level of response to the needs of the students - examines the requests of school representatives (IPC) - work progress
PORTABILITY	<p>The Umbrian model has achieved a high degree of flexibility. It turns out to be a repeatable proposal of intervention able to adapt to different school contexts, bringing - if necessary - corrective measures even during construction: it knows how to question itself, when it is needed.</p> <p>The corrective measures implemented during the three editions, on the other hand, have allowed the Model to grow, to become increasingly effective.</p>
SOURCES AND INTERNET SITE	Publication "Business culture and entrepreneurship in the school - The good practice of the project At the business school". Website www.scuolaimpresa.net

Instituto Orfini Foligno, Italy

Title	"Pedibus for Foligno" – P.f.F.
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Section 1 - Summary

Date	24 th of April 2018
Name of the author/ s	Roberta Camilli, Catia Piermarini, Mariarita Trampetti (I.P.I.A. "E.Orfini"- Foligno)
Abstract	Safe home-school-home routes for wellness and environmental sustainability are those proposed by "Piedibus for Foligno", a project that allows 25 "Santa Caterina" primary school children to reach the school building on foot following a pre-established path, led by volunteers. The initiative is also a way to oppose the sedentary nature of children, to give the opportunity to familiarise themselves with the city and the rules, to experience a different mobility in the city centre and to have an additional educational opportunity for growth, by adopting a healthy lifestyle . It is a project that aims to improve the quality of healthy life, as well as to taste and know the city.

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	ISTITUTO COMPRENSIVO "FOLIGNO 1"
City and country	Foligno - Italy
Topic	Road safety
Discipline	Science, geography, citizenship education
Budget (if applicable)	Not provided
Organisation type and characteristics	The "Istituto Comprensivo Foligno 1" is a state school. It is composed of seven schools situated in different parts of the city of Foligno and its outskirt. There are three nursery schools, two primary schools, one middle school. They are all managed by the same principal.

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	It started in 2010-2011 and it still continues.
GENERAL AND SPECIFIC OBJECTIVES	Health: Piedibus offers everyone the opportunity to do healthy exercise Safety: children who go to school by "Piedibus" are part of a large and visible group supervised by adults and volunteers Citizenship: Piedibus helps children acquire "pedestrian skills", making them able to cope with everyday traffic Socialization: children develop a strong sense of integration and sharing The environment: using Piedibus helps to reduce traffic around schools and air pollution, thus improving the environment for the benefit of all the people Breathe better: car running causes much more air pollution than walking.
RECIPIENTS	25 children from " Santa Caterina" primary school in Foligno , from the first class to the fifth grade (6-10 years) both male and female, led by volunteers of the AUSER (Voluntary Association).
SIGNIFICANT PROJECT	PIEDIBUS is a project that allows 25 "Santa Caterina" primary school children to reach the school building on foot following an established path. Children, led by volunteers of the AUSER association , go to school in groups starting at 7.50 a.m. from a decided place and then return back to the same point at around 4 p.m. in the afternoon. Children are divided into two groups: the red line, 12 children, including those between the first and third grade, and the blue line, consisting of 13 children, which includes those between the third and fifth grade. Piedibus is therefore a moving "human bus" formed by a group of more or less numerous children, accompanied by two or more adults, with stops, timetables and an established path. Adults have, respectively, the role of "drivers", if they are at the head of the line, and "controllers" if they are at the end. Children are supposed to go to school in groups, following an established path and collecting "passengers" at the "stops" arranged along the way. Piedibus always travels, with all weather conditions: each component wears a reflective vest and, if necessary, a rain-resistant cape supplied by the organization. It is therefore a project that aims to improve the quality of life, tasting and knowing the city as well. The project emphasizes health and a different way to live the city and especially the historical centre. The main aims of Piedibus project are: -To encourage children to walk,

	<ul style="list-style-type: none"> -To teach young children to orientate -To explore neighborhood -To reduce traffic and pollution -To encourage students to socialize and get fun -To encourage children self-confidence -To give good lifestyle examples
SHARES	Check the description of the project in "Significant project"
DIDACTIC APPROACH AND METHODOLOGY	Check the description of the project in "Significant project"
CHALLENGES / CRITICAL	The main issues was organizing children at the beginning of the project; after the start everything was more fluent and easily achievable. The project was very successful because it had the contribution of different authorities of the Municipality. He also emphasized healthy urban lifestyles.
TERRITORIAL SCOPE AND INTERVENTION AREA	City of Foligno
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	The agreement promoted by the project is among the Municipality of Foligno (councilor for children's policies, policies for education and training and economic, urban and environmental development), Asl 3 (Local Health Authority), Auser (voluntary association) and Comprehensive Institute "Foligno 1".
DOCUMENTATION	The process has been regularly documented in the school diary.
EXPERIENCE / PROJECT RESULTS	The success of the project is evident from the constant participation of children: the number of the participants vary from 22-23 to 25 students every day any season of the year. Some parents support the project and regularly meet other parents to persuade them to make their children participate in the initiative.
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	Municipality of Foligno (Departments for Children's Policies, policies for education and training and economic, urban and environmental development) in collaboration with Asl 3 (Local Health Authority), Auser (voluntary association) and Foligno Comprehensive "Institute 1".
EVALUATION SYSTEM AND TOOLS	Questionnaires regularly provided to families and pupils and formal interviews show the complete satisfaction of families and students.
STRENGTHS AND WEAKNESSES OF THE PROJECT	Main strength of the project is improving children self-confidence and orientation skill. Main weakness is the difficulty of implementing the initiative in the city of Foligno in other schools because of the lack of voluntary staff that can be used at purpose.
PORTABILITY	The project can be transferred to other urban centres.
SOURCES AND INTERNET SITE	Previous experiences of teachers working at Istituto Professionale "E. Orfini" in Foligno.
HIGHLIGHT SUCCESSFACTORS	Good results have been achieved because of the great motivation of the pupils and staff involved in the initiative and the cooperation among the institutions taking part in the project.
COMMENTS	The actual best practice need to be implemented and repeated in other cities and environments.

Instituto Orfini Foligno, Italy

Title	"MY SCHOOL LOOKS SMART "
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Section n. 1 – Summary

Date	24th April 2018
Name of the author/s	ISTITUTO ORFINI FOLIGNO
Abstract	<p>"MY SCHOOL LOOKS SMART":</p> <p><i>"Functional spaces" are a pedagogical concept and strongly contribute to the formation of thought. The creation of functional spaces for learning allows the remodeling of "school time", by making the stay at school more flexible and pleasant, both in moments of learning and in relaxation or socialization, and contributes to increase students well-being during "curricular" and "extra-curricular" activities. A welcoming school is a place where the space becomes ethical and enhances socialization, respect and reciprocity. It involves the direct participation of pupils and concerns activating active citizenship practices because their involvement stimulates their responsibility and care towards school environment. The project "My school looks smart " is a network project of two educational institutions and it aims at reorganizing and modernizing a school building built in 1977 where maintenance and redevelopment works are needed.</i></p>

Section n. 2 - General information on the experience / project

Name of the school/organization	ISTITUTO ORFINI FOLIGNO																	
School Order	Secondary High School																	
School size	About 570 students																	
Town and Nation	FOLIGNO-ITALY																	
Item	<p>The project "My School Looks Smart" wants to make school spaces more attractive and flexible, according to the variability of the educational methods and the needs of the school community such as information, training activities, laboratories . It can also be intended for citizen participation. Therefore, the co-planning of the school and the citizens community favors the matching of their needs, guaranteeing the enhancement of specificity, attitudes and creativity.</p>																	
School Subjects Involved	Transversal to all disciplines																	
Budget (se previsto)	<p>Economic framework of expenditure</p> <table border="1"> <thead> <tr> <th></th> <th>Type of eligible expenses Expected expenses (€)</th> <th></th> </tr> </thead> <tbody> <tr> <td>A</td> <td>general and technical expenses (design, consultancy, testimonials, etc.)</td> <td>6.000</td> </tr> <tr> <td>B</td> <td>furnishings or any building work</td> <td>25.000</td> </tr> <tr> <td>C</td> <td>purchase of goods and equipment;</td> <td>19.000</td> </tr> <tr> <td>D</td> <td>Total eligible direct costs (= A + B + C)</td> <td>50.000</td> </tr> </tbody> </table>				Type of eligible expenses Expected expenses (€)		A	general and technical expenses (design, consultancy, testimonials, etc.)	6.000	B	furnishings or any building work	25.000	C	purchase of goods and equipment;	19.000	D	Total eligible direct costs (= A + B + C)	50.000
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C	purchase of goods and equipment;	19.000																
D	Total eligible direct costs (= A + B + C)	50.000																

Section n. 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	School years 2015-2017
GENERAL AND SPECIFIC OBJECTIVES	<p>To encourage students to develop active, critical and constructive citizenship.</p> <p>To prevent and / or to reduce school dispersion through the redevelopment of environments, by developing the protagonism and empowerment, by promoting the</p>

	<p>elimination of the risk of exclusion and expulsion, sometimes at the base of conflictual dynamics generating demotivation, anxiety, withdrawal and abandonment.</p> <p>To create a peaceful and welcoming, motivating, socially active and integral environment.</p> <p>To boost up social relations, the sense of belonging and interdependence, the help, the value of diversity, even multicultural.</p> <p>To involve parents in collaboration to achieve the objectives of common interest, sharing their "strategic plans", encouraging the development of a sense of identity as members of the school.</p>
RECEIVERS	Students of the involved Institutes (about 1100), aged between 14 and 20, of both genders; students with special needs
SIGNIFICANT PROJECT	<p><i>The project stems from the idea of creating spaces that are functional to learning, allowing the "school time" to be remodeled, making students stay more flexible and pleasant, both in moments of learning and in relaxation or socialization. The welcoming school is a beautiful school where the space is ethical and enhances socialization, respect, reciprocity; it is equipped and allows everyone to work peacefully and to the best of their ability; it is a promoter of students' creativity, of their motivation to study and of their vocations, of the ability to perceive beauty understood as a true form of aesthetic intelligence that enriches knowledge through its ability to read reality in terms of equalities, differences, originality and surprise. The participation of pupils in this idea of a welcoming school allows activating active citizenship practices, as their involvement stimulates the sense of responsibility and care towards the school environment, prevents forms of indifference, educates to the pleasure of keeping spaces in good condition, to embellish them and personalize them. It also means sharing objectives, collecting ideas, critical issues, suggestions and being available. These objectives are meant to adapt and integrate the changing needs of the use of shared spaces by recovering and redeveloping them. The school spaces that we want to redevelop belong to a structure built in the '70s:</i></p> <p>External space belonging to the two educational institutions</p> <p>Area of the courtyard facing the fashion lab characterized by a Roman bridge that a class of the "Istituto Professionale" is studying. The class is examining its history, characteristics, and everything else that can (re) build a strong link between knowledge and cultural protection.</p> <p>A common atrium formed by a large space where bulletin boards and work stations will be placed to show "on continuity actions" with the 1st grade secondary school and with the postgraduate orientation co-managed by the students.</p> <p>Classroom currently intended for students during the lunch break, but lacking adequate and pleasant furnishing. This large space can become multi-purpose, a place for learning in the morning, socializing and relaxing during break time. This space can be used by the students of both schools and will be a reference point for the pupils' representatives and will be open to the territory.</p>
ACTIONS	The redevelopment of school spaces is characterized by order, functionality, differentiation, attention to detail and communication that develops sensitivity towards the themes of quality, including aesthetics, of spaces.
DIDACTIC APPROACH AND METHODOLOGY	The students of both Institutes have been involved from the early planning stages of this design action. The first phase concerned the analysis of the context and its needs from a participatory planning perspective, the pupils were involved in three focus groups. In the first group, the class and the institute representatives gathered in their respective assemblies, read the announcement and collected useful elements through a discussion that saw them actively participating. In the second focus group the representatives became spokesmen in their own classes of the action to be undertaken starting discussions in the assemblies and collecting other useful elements. They presented these elements in a summary document in the Assembly of the Institute., third focus group. In the second phase the ideas allowed to build the project of a welcoming and beautiful school. The students' participation from the early planning stages has allowed to stimulate the comparison and participation, to promote accessibility and sharing of information, responsibility and motivation, debates on the "substance" of the issue; has promoted participation as a gym for active citizenship and an experience on the functioning of the system (strengths and weaknesses). In the implementation phase, the students "have acted" actions of citizenship, conceived and designed by them and have given life to creative "building sites" for the redevelopment of the school in which the ideas and proposals resulting from the previous analyzes have been realised. This phase was managed during school time and after school time. This action starts from the territory-school and returns to the territory-school as responsible citizens. School as a starting point and point of arrival.
CHALLENGES/CRITICAL ISSUES	The critical issues are always linked to the economic-bureaucratic part

TERRITORIAL SCOPE AND INTERVENTION AREA	Scope of local intervention
AGREEMENTS AND / OR PROTOCOLS OF INTESA	Province of Perugia ViaIndustriae Association – Foligno Ariel Social Enterprise - Foligno Italian Environment Fund Delegation of Foligno
DOCUMENTATION	Video that incorporates some phases of the work
EXPERIENCE / PROJECT RESULTS	Results achieved compared to initial expectations, described with reference to measurable and concrete parameters (number of participants, products and actions carried out, etc.)
<i>SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)</i>	Province of Perugia ViaIndustriae Association - Foligno Ariel Social Enterprise - Foligno Italian Environment Fund Delegation of Foligno te 1
<i>EVALUATION SYSTEM AND TOOLS</i>	Not provided
PORTABILITY	Transferable to other schools
SOURCES AND INTERNET SITE	Our project

Nordhordland næringslag, Hordaland, Norway

(Co-partner of Hordaland County Council)

Title	<i>Apprenticeship guaranteed</i>
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Section 1 - Summary

Date	10.09.18
Name of the author/ s	Vivian Kårbø
Abstract	<i>A promise to the student; If you choose the local school we will provide a relevant apprenticeship.</i>

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	<i>This is a cooperation between Knarvik, Austrheim and Osterøy upper secondary schools, municipalities and companies in our district.</i>
City and country	<i>The region of Nordhordland, Norway</i>
Topic	<i>To guarantee apprenticeship</i>
Discipline	<i>Technical and industrial production, electrical subjects, health and upbringing, building and construction and service and transport.</i>
Budget (if applicable)	<i>Not available</i>
Organisation type and characteristics	<i>Legal binding agreements between school and company</i>

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	<i>The project starts in august 2019. Before starting we needed to inform a lot of people in the education system, in the municipalities and in the companies. However, we have been working on the plan for this project since September 2017. Most of the information will be given in 2018. We are now starting the process of agreement signatures with companies, municipalities (as employer) and schools.</i>
GENERAL AND SPECIFIC OBJECTIVES	<i>The objective of the project is to help the students to finish their education and increase the recruitment. After two years at school they also need two years of practice before they can have their certificate of apprenticeship.</i>
RECIPIENTS	<i>About 200 students at the age of 18, both male and female in vocational education in three upper secondary schools in our district. It involves 5 different disciplines and about 18 - 20 classes.</i>
SIGNIFICANT PROJECT	<i>The vocational education in Norway is organised as two years at school with some weeks in practice, and after that the students finish their education with two practical years by working. After this there is an exam. A big challenge is the uncertainty of the student if he or she gets a contract with an employer for two years after school. This project will set the education in a context of the full four years.</i>
SHARES	<i>Information and meetings with all the partners in this project:</i> <ul style="list-style-type: none"> - Municipalities and companies - Headmasters at the upper secondary schools - Teachers at the upper secondary schools - Headmasters in the secondary schools - Teachers and advisers at secondary schools - The students at upper secondary schools, first level and second level - The students and their parents at secondary schools
DIDACTIC APPROACH AND METHODOLOGY	<i>It is important that both secondary school and upper secondary school know about the project and the conditions underlying the Apprenticeship guaranteed. It is also important that the school uses companies known for accepting apprenticeships.</i>
CHALLENGES / CRITICAL	<i>NA</i>
TERRITORIAL SCOPE AND INTERVENTION AREA	<i>This is a local and regional project.</i>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<i>We have prepared a proposal for a cooperation agreement between the three upper secondary schools and local companies and municipalities.</i>
DOCUMENTATION	<i>Meetings, press, contracts</i>
EXPERIENCE / PROJECT RESULTS	<i>The project is not done yet, so we have not completed an evaluation.</i>

SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<i>Technical and industrial production, electrical subjects, health and upbringing, building and construction and service and transport.</i>
EVALUATION SYSTEM AND TOOLS	<i>To what extent do we succeed; goal is 100% guaranteed on all subject</i>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<i>The strength of the project is to see the context of the four-year vocational education. The weakness is that this mindset does not have legal requirements behind it, and that one depends on individuals doing their part of the job in the project.</i>
PORTABILITY	<i>The idea behind the project is easy to share and transfer to other regions, but how the work is carried out will depend on the cooperation between school and working life in the different regions.</i>
SOURCES AND INTERNET SITE	<i>It does not exist.</i>
HIGHLIGHT SUCCESSFACTORS	<i>The highlight of the success factor in this project is that there is already a lot of good cooperation in the region between school and education system. If everyone does what they already do and more, then we will succeed in our work.</i>
COMMENTS	<i>My Best Practice may not fit into the model of the project "Vocational Education and Training (VET) for Urban centres", but the subject we are working on is still important. The goal of each education system must be that the students who go through their education come out in society and can contribute their skills. Therefore, we consider it important to create a whole in vocational education in Norway.</i>

Hordaland County Council, Norway

Title	Increased completions – more apprentices (Auka gjennomføring – fleire ut i lære)
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Section 1 - Summary

Date	17 th September 2018
Name of the author/ s	Hillevi Elizabeth Runshaug
Abstract	In order to meet challenges of a skills mismatch in the labour market it was proposed to start a collaboration project in Nordhordland. This should ensure that provisions keep pace with the changing needs of the labour market/economy. It should as well meet governmental guidelines. The project will address and strengthen links between education and training, and the labour market.

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	Hordaland county council, Knarvik Upper Secondary School and Austrheim Upper Secondary School, Municipalities of Lindås, Radøy, Meland, Austrheim, and Nordhordland næringslag (umbrella organisation for businesses/industry)
City and country	Knarvik, Hordaland, Norway
Topic	<ul style="list-style-type: none"> • Collaboration on Regional development and further VET development • Relevance through attractive and innovative education and training within various training programmes needed in the region • Exchange of best practice • Develop new education and training models/teaching methods that can be tested (i.e dual education and training)
Discipline	<i>Specify any discipline (s) involved</i>
Budget (if applicable)	The «Competence Project» is funded by the municipalities in Nordhordland (50 %) and Hordaland County Council (50 %).
Organisation type and characteristics	A steering group is established for the project, where the county council, the municipalities and the business community are represented.

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	Project period: 2017 -2019
GENERAL AND SPECIFIC OBJECTIVES	<p>The aim/purpose of the «Competence Project» is to strengthen cooperation between schools and enterprises, to give students better knowledge about career choices and to ensure that local businesses get the skills and competences they need.</p> <p>In the project it will be looked at alternative ways to make vocational education and training more attractive, encourage pupils to choose vocational education, make it more relevant and interesting for more pupils to succeed and complete their education.</p> <p>In relation to the development of urban centres this kind of cooperation will hopefully have an impact on job opportunities offered (in the region) for the pupils who complete their education. If work opportunities are there for them, they would also want to stay (and settle) in the region.</p>
RECIPIENTS	<p>Students age 16-18</p> <p>Teachers in two upper secondary schools</p> <p>Local industries that are involved</p>
SIGNIFICANT PROJECT	Organizing practical training in industries to reach competence goals in different subjects. Strengthen motivation and support more students to complete vocational education.
SHARES	Experience and results from the project will be followed up and shared with other schools, the county government, and representatives from the labour market.
DIDACTIC APPROACH AND METHODOLOGY	Projectbased at each school in cooperation with local industries
CHALLENGES / CRITICAL	<p>Involve and commit the broader part of local industries over a longer period (some years)</p> <p>Effective models of collaboration between schools and industries that includes student assessment</p>

	Extremely teacher-dependent Changing curriculum / subjects according to needs and development in industries in the region
TERRITORIAL SCOPE AND INTERVENTION AREA	Region of Nordhordland
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	This collaboration project is based on decisions made in by the County Council in October and December 2016: <ul style="list-style-type: none"> > “Facilitate dialogue with local industry and business community in regards to new investments and to test new teaching and training methods where more of the practical teaching and training is conducted in the enterprises” > “Spring of 2017 will see the start up of a new collaboration between upper secondary schools in Nordhordland and the local business community. The aim is to test/try new teaching methods where more of the practical teaching is conducted in the enterprises”
DOCUMENTATION	Notes from meetings Agreements between schools and enterprises Periods of practical training in industries Evaluation based on e.g. inquiries Statistics – how many students complete their education / get a job
EXPERIENCE / PROJECT RESULTS	Over time, the competence project and other measures will have contributed to the strengthening of the cooperation between schools and the business community/sector (in regards to the education and training of future employees). Hence, it is important that the work in the new collaboration project build on the already established relations and existing meeting arenas for cooperation between schools and business community.
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	Hordaland County Council also continues their contact and cooperation with the Training Office. The headmasters at Knarvik Upper Secondary School and Austrheim Upper Secondary School are both on the Board of the Training Office (member and deputy member). (Practical teaching and training = education and training given in the enterprises or at school which is directly linked to their chosen profession. In the enterprises the students experience their profession in practical terms, by do actual work.)
EVALUATION SYSTEM AND TOOLS	Quantitatively evaluation: The number of students who complete their education Degree of student satisfaction Tools for evaluation will be developed during the school year 2018/19 Number of agreements between schools and enterprises Qualitatively evaluation: The motivation and skill development of our students The interest from local industry and public
STRENGTHS AND WEAKNESSES OF THE PROJECT	Strength: Building further on effective structures and good collaboration Engagement and strong interest in developing high quality and new teaching methods in schools Strong support in the local community Weakness: Difficult to include all students that might need more practical training Low budgets
PORTABILITY	<i>Specify the transferability conditions of the experience / project</i> Nordhordland has long traditions for cooperation between schools and the industry/business community related to education and training – through permanent cooperating bodies, in addition to well established contact between schools and enterprises. This has laid the foundation for good cooperation. It is natural that this collaboration project builds on the already established relations and existing meeting arenas. Participating in the Erasmus+ project strengthens the focus and outcome regarding VETs role in developing urban centres.
SOURCES AND INTERNET SITE	

<p>HIGHLIGHT SUCCESSFACTORS</p>	<p>The project is still ongoing, results are not yet documented. However, the ambitions of the project are referred under, and to some extent expected results are achieved.</p> <p>The collaboration project shall contribute to develop new models for education and training (teaching methods), look at other possibilities when it comes to the set up of education and training – how much of the education/training should be provided at schools and how much in the enterprises – how can we better teach and improve competences linked to their professional profiles. Also in regards to assessment – in today’s model the teachers at school have the main responsibility to assess and evaluate the students, it might be worth looking into alterative models where the enterprises/industry is more involved in the assessment and evaluation of skills and competences. This work will contribute to a platform of knowledge, which can be used to assess the need for future new investments.</p> <p>The project will, - through dialogue, develop a platform of knowledge in regards to what disciplines and educational programmes should be offered, future dimensioning, and the required skills, competences and qualifications that are needed in Nordhordland.</p> <p>The project shall follow up on the commitments, and thus contribute to strengthen links between education and training and the labour market in a systematic manner to provide competences needed in the future.</p> <p>The project will facilitate cooperation with actors within i.e Higher Education (Universities and University Colleges), various competence environments and Erasmus+ projects.</p>
<p>COMMENTS</p>	

Fjell Municipality, Norway

Title	Energy Fair «Energimessen»
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Section 1 - Summary

Date	<i>Yearly arrangement</i>
Name of the author/ s	<i>Andreas L. Nordeide</i>
Abstract	<i>Exhibition of ICT and technology-oriented student projects</i>

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	<i>Sotra Upper secondary School, Tranevågen Lower secondary School, Fjell Lower Secondary School, Knappskog Primary School, Sartor Storsenter and Vest Næringsråd</i>
City and country	<i>Region of Ytre Midthordland, especially Fjell municipality, Norway</i>
Topic	<i>Competencies within the 21st. century skills-paradigme in order to promote the development of our region</i>
Discipline	<i>Interdisciplinary</i>
Budget (if applicable)	<i>Primary volunteer work from everyone involved</i>
Organisation type and characteristics	<i>Projectgroup coordinates the exhibition</i>

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	<i>First exhibition in 2014 Yearly arrangement, lasts 2 days</i>
GENERAL AND SPECIFIC OBJECTIVES	<i>Promote competencies within the 21st. century skills-paradigme among our students Promote a practical approach to work with these competencies Promote intermingling among students from different schools and levels Promote contact and collaboration between education-sector and local industries Promote a spirit of innovation in our region Showcase to our local communities the possibilities of new technology in education</i>
RECIPIENTS	<i>Students age 10 to 20 from schools that participate Teachers Local community visiting the exhibition Local industries that are involved</i>
SIGNIFICANT PROJECT	<i><u>Energimessen 2018</u></i>
SHARES	<i>Projectgroup organizes Schools are invited to participate with projects Projects are exhibited at Energimessen at our local mall, Sartor Storsenter</i>
DIDACTIC APPROACH AND METHODOLOGY	<i>Projectbased at each school</i>
CHALLENGES / CRITICAL	<i>Trial and error in organizing, especially information to exhibitors and PR to the public Involve the broader part of local industry Extremely teacher-dependent Lack of a formal budget</i>
TERRITORIAL SCOPE AND INTERVENTION AREA	<i>Region of Ytre Midthordland, especially Fjell municipality, Norway</i>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<i>---</i>
DOCUMENTATION	<i><u>Video</u> <u>Media</u> <u>Planning tool</u></i>
EXPERIENCE / PROJECT RESULTS	<i>Increased number of participating schools Increased student motivation</i>
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<i>Interdisciplinary</i>

EVALUATION SYSTEM AND TOOLS	<p><i>Quantitatively evaluation:</i> <i>The number of schools wanting to participate: Started with Sotra Upper Secondary School in 2014, increased to 7 schools in 2018</i></p> <p><i>Qualitatively evaluation:</i> <i>The motivation and skill development of our students</i> <i>The interest from local industry and public</i></p>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<i>Briefly describe the strengths and weaknesses of the project</i>
PORTABILITY	Follow the <u><i>Innovation model from Nesta.</i></u>
SOURCES AND INTERNET SITE	<u><i>Vest Næringsråd</i></u>
HIGHLIGHT SUCCESSFACTORS	<p><i>Promoted competencies within the 21st. century skills-paradigme among our students</i> <i>Promoted a practical approach to work with these competencies</i> <i>Promoted intermingling among students from different schools and levels</i> <i>Promoted contact and collaboration between education-sector and local industries</i> <i>Promoted a spirit of innovation in our region</i> <i>Showcased to our local communities the possibilities of new technology in education</i></p>
COMMENTS	

Šolski center Kranj, Slovenija

Title	Poletni Festival inovativnih tehnologij FIT – Summer Festival of Innovative Technologies FIT
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Section 1 - Summary

Date	<i>November 2018</i>
Name of the author/ s	<i>Lidija Grmek Zupanc</i>
Abstract	<i>We are trying to promote enthusiasm for technology and the choice of Secondary Technical School within Kranj School Centre through the Summer Festival of Innovative Technologies FIT. The participants learn about innovativeness as well as entrepreneurship which are bound together by strengthening their social competences.</i>

Section 2 - General information on the experience / project

Name of the school / organization/ local authority	<i>ŠOLSKI CENTER KRANJ</i> http://www.sckr.si/tsc/
City and country	<i>The Municipality of Kranj, Slovenia.</i>
Topic	<i>Development of technical skills in primary school pupils connected with innovativeness, sustainable development and entrepreneurship.</i>
Discipline	<i>Electronics, computing, innovativeness, entrepreneurship, sport.</i>
Budget (if applicable)	<i>Finances mainly come from the Municipality of Kranj and partially from the parents of the participating pupils.</i>
Organisation type and characteristics	<i>Kranj School Centre comprises of a technical college, three secondary schools and a centre for inter-entrepreneurship education which takes care of connections between our school and companies.</i>

Section 3 - Detailed description of the experience / project

PERIOD OF SUBSTANCE AND OVERALL DURATION	<i>It is a one week programme which takes place in the last but one week before the end of summer holidays.</i>
GENERAL AND SPECIFIC OBJECTIVES	<p><u>General Objective:</u></p> <p>a) Education of young people in technology: there are two workshops available where they can make an Arduino application for the Android mobile applications. The participants make a product and take it home.</p> <p>b) Education of young people in entrepreneurship and a field trip to a chosen company in Kranj.</p> <p>c) Education of young people in innovativeness, a visit to Openlab laboratory (Faculty for Electrical Engineering)</p> <p>d) Socializing with other participants, social element and sports activities during breaks.</p> <p><u>Specific Objectives:</u></p> <ul style="list-style-type: none"> - They get familiar with Kranj School Centre and possible programmes of education so that they continue their technical education inside Kranj School Centre. - Promotion of technical education as well as encouraging those pupils who are really interested in technology to enrol in our school.
RECIPIENTS	<i>The participants are primary school pupils from 5th grade till the end of primary school. (12 to 15 year-olds) The Summer Festival is therefore meant for primary school pupils who would like to improve their knowledge in the field of electronics and computing. The festival was held during summer holidays and lasted for 5 days. The participants were able to choose between two workshops, they could either make mobile Android OS applications or Arduino applications. The participants learnt how simple it is to build their own application and how to connect it with sensors and actuators. They also learnt about the basics of the acquisition system and data processing which are acquired through sensors and an output unit, i.e. actuators, how they are calibrated and controlled, and how to form a backward regulation loop. This knowledge is enough for them to start developing their own applications.</i>
SIGNIFICANT PROJECT	<i>The project is important because both technical and entrepreneurial directions are involved with elements of innovativeness and sustainability, such as saving energy, care for the environment, etc.</i>
SHARES	<i>We are striving to inform as many pupils as possible about this programme so leaflets and posters are sent to primary schools at the end of the school year. The other important thing is a form of tutelage. Teachers do not only carry out an activity but they monitor and help the pupils to develop interest in technology, and through a visit in the OpenLab to become more interested in innovativeness while a visit to a company helps them learn about entrepreneurship.</i>
DIDACTIC APPROACH AND METHODOLOGY	<i>Interdisciplinary sciences, such as mechatronics, require teachers of different professions to cooperate to carry out their projects. It is necessary to supply the participants with quality contents and projects that bring theory into practice. Good results can only be achieved with team teaching plans, i.e. teachers of different subjects working together. Such education requires a well-equipped laboratory, which is during summer holidays when The Summer Festival takes place, available at Kranj School Centre. As the primary school pupils are also expected to produce a practical product at the end of the festival, some raw material needs to be supplied. Anyway, work with primary school pupils should turn theory into practice on their level of cognitive possibilities.</i>
CHALLENGES / CRITICAL	<i>The main challenge is to make The Summer Festival of Innovative Technologies as recognizable as possible among primary school pupils who show an interest in the subject matter as they finally become the most enthusiastic students in our Kranj Technical School.</i>
TERRITORIAL SCOPE AND INTERVENTION AREA	<i>Gorenjska</i>
AGREEMENTS AND / OR MEMORANDUM OF UNDERSTANDING	<i>The Partnership Contract has been signed between the Municipality of Kranj as well as the OpenLab laboratory (in collaboration with The Faculty for Electrical Engineering in Ljubljana) The association of Kranj School Centre with the companies is called Konektor.</i>
DOCUMENTATION	<i>The teachers who participate provide a plan of their work as well as a report on their visit of the OpenLab and a chosen company. There are products made by the participant pupils that they can take home but their ideas and draughts remain a part of the documentation. There is also material for promotion of the event, such as folders and posters.</i>
EXPERIENCE / PROJECT RESULTS	<i>The experience is good, especially when pupils really find themselves in the field of electronics or computing and choose these as their future career. Obviously, there are also some who find these things interesting but not enough to follow this path, which can be equally important.</i>
SUBJECTS INVOLVED (PARTNERSHIPS / COLLABORATIONS AND TERRITORIAL COOPERATION)	<i>The Partnership Contract has been signed with the Municipality of Kranj. Another Partnership Contract has been signed with OpenLab. Kranj School Centre cooperates with companies in Gorenjska in Konektor Association.</i>

EVALUATION SYSTEM AND TOOLS	<p><i>A quote from an executioner of the programme: "A feedback and analysis summary. The participants were asked to answer a questionnaire about their satisfaction. There were six questions: Work during the summer festival of innovative technologies is different from regular classes in school. Did you find it interesting? State your reasons. – Do you think you have learned a lot? –Did you take an active role? – What were the obstacles that prevented you to be more active? Was the mentor's explanation satisfactory? What was good and what bad? How would you grade the work of your mentor?</i></p> <p><i>An encouraging answer already popped out with the first question, when the majority of the participants said they liked that kind of work. Their reasoning was that that sort of work "dissipated" the routine school work during the school year and that they liked practical work much more than learning theory, and that they were also able to work in groups and be creative.</i></p> <p><i>The proportion can also be supported by the participants' claim that the knowledge to successfully finish their project came from their teachers. All of them also said that they actively cooperated with their mates and learnt from one another, strengthening their social skills which were also defined as one of the important goals of the project.</i></p> <p><i>The reason why some of them were not as successful as the others could be found in the explanation where Van Thienen establishes that the reluctance of an individual or a group to accept new concepts rises from the fact that they feel new situations as a threat to the current routine or competence (Van Thienen, 2006). The summary of their answers shows that such attitude increased the pupils' satisfaction.</i></p> <p><i>The effort of the teachers' team for mechatronics that carefully planned all the activities and goals also proved excellent.</i></p> <p><i>7. Conclusion: The satisfaction of the pupils could be demonstrated with a statement of one of the pupils, "By participating in the project I have learnt a lot of new things. As I was making a robot, I found about the importance of development, prototyping and programming. What I especially like about the project is that I will be able to use the newly-gained knowledge for my own project."</i></p> <p><i>Interdisciplinary sciences such as mechatronics require interaction among teachers of different professions for the projects to be successfully carried out. The participants should have access to good quality lessons and practical projects which translate theory into practice. It is extremely important for teachers/mentors to offer such projects to pupils, which provides them with knowledge and valuable experiences. We think that practical work should be the result of theoretical knowledge and not vice versa. In this way a practical project increases the inner motivation and gives sense to theory. We are planning to add a workshop with Bluetooth wireless connection so the participants will be able to control the robot using their smart phones. We think this will encourage young people to be even more creative. We have all benefitted by the project. On the one side, the interested participants learnt a lot and on the other side, their mentors acquired new skills in professional work as well as in education science.</i></p>
STRENGTHS AND WEAKNESSES OF THE PROJECT	<p><i>Summer Festival FIT has taken place twice now, and the feedback was good as some of the primary school pupils as well as their parents were extremely enthusiastic about it. The weak point of the project, as far as we can see, is that it is fairly new and as such not very recognizable. We would like it to become traditional. A decade ago, there was not much talk in primary schools about programming let alone teach such topics. It would have helped them to choose a technical profession as they would get enough information to know whether they were interested in such a profession in the first place. Such projects also reveal that primary school teachers do not have suitable competences and professional knowledge to carry out such topics.</i></p>
PORTABILITY	<p><i>Completely</i></p>
SOURCES AND INTERNET SITE	<p>http://fit.sckr.si/</p>
HIGHLIGHT SUCCESSFACTORS	<p><i>Key element for success lies within very carefully selected stakeholders that the pupils meet – Kranj School Centre as the educator, OpenLab laboratory as an innovative institution connected with the Faculty for Electrical Engineering in Ljubljana and an entrepreneurial company in Kranj.</i></p>
Discipline	<p><i>Electronics, Computing, Innovation, entrepreneurship.</i></p>
Budget (if applicable)	<p><i>FIT festival is mostly financed by the Municipality of Kranj and partly by the pupils' parents.</i></p>
Organisation type and characteristics	<p><i>The groups of pupils are formed according to their applications. They were offered several different workshops, namely designing mobile applications for Android OS, designing and controlling a robot with a smart phone, designing an OTO robot, etc.</i></p>