

Skillman: finalizing curricula



Big news in the Skillman project: all of piloting activities have been successfully carried out in Italy, Denmark and UK. Almost 100 participants involved, of which 40 through international exchanges, for a total of approximately 200 hours of training. Participants from many European countries: Sweden, Malta, Croatia, Germany, Romania, Spain, Denmark, Bulgaria, Latvia, Cyprus, Macedonia.

At the moment, the analysis of the results for the consolidation of the curriculum is ongoing. Official presentation of results in November 2017 at our international conference...!



<u>Celebrated in Pistoia the European Alliance for Apprenticeship awarding the participants of the skillman piloting courses.</u>

In collaboration with the local Incubator, Skillman has promoted in Pistoia, the Italian capital of culture 2017, the celebration of the European Alliance for Apprenticeship. The event took place the 26th of May and was an opportunity to talk about the apprenticeship schemes and the mobility for learning opportunities including the presentation of the Erasmus Program for Young Entrepreneurs done by the Intermediary Organisation 'EM – Entrepreneurs Mobility'. The event, with a large participation of apprentices, companies, schools and other social partners, envisaged speeches by the Deputy Mayor, the company representatives and the apprentices and ended with the delivery of the award certificates and the gadgets to all the students and apprentices participants to the Skillman pilotings held in Italy.

One of the SKILLMAN PILOT TRAINING Course on Industry & Production 4.0 Manager has been held on May 24th in Italy.

The training was addressed to test a unit aimed to provide participants with basic knowledge and skills on Business Process Modelling principles and the related ICT solutions. The students have gained basic



information about the project management graphic representation and learned how to define the tasks that compose a generic project.

Through a concrete case, each student has been involved in the definition and representation of a real workflow and then in the understanding of the way how a relational databases manages and organises the correspondent data necessary to represent a flowchart or the tabular, kanvas or any other view. In this way, observing a concrete erp software, they have therefore seen and experimented the relation among their own data and some ICT solution available nowadays for business process modelling.

The piloting training activities have been organised thanks to the commitment of the Italian Partners: CNR – Italian National Research Council, CRF – Fiat Research Center, CSCS – Centro Studi Cultura Sviluppo and CEPAS.



Developed competences:

 Define activities, responsibilities, critical milestones, resources, skills needs, interfaces and budget, optimise costs and time utilisation, minimise waste and strives for high quality.

Knowledge:

- a project methodology, including approaches to define project steps and tools to set up action plans
- structured project management methodologies (e.g. agile techniques)

Skills:

- define a project plan by breaking it down into individual project tasks
- delegate tasks and manage team member contributions appropriately



PILOT TRAINING on Composite materials in Denmark

Technical Education Copenhagen is representing the Vocational Education Training VET school sector (Automotive and aerospace sector) as a partner of the SKILLMAN PROJECT – Erasmus+ Programme. In cooperation with the SKILLMAN partners, TEC is identifying skills and training demands, and designing Joint Curricula programs and VET programmes (in the field of Composite Structure Repair Technician) based on learning outcomes approach and quality assurance framework (European VET system and transparency tools – EQAVET, ECVET and EQF). The Training Piloting Program for Trainers has been hosted on 10-11 May at the Aviation department of TEC in Copenhagen.



During the Training of Trainers Program took places a presentation of Skillman course curriculum (Advanced Composite Repair Training) with open discussion in order to get feedback from trainers on Composite repair issues and Trends.

A full program of activities for the 3-day training course on 'Industry & Production 4.0 Manager' hosted in Italy at CNR and CR Fiat.

3-day intensive training course on 'Industry & Production 4.0 Manager' in the Automotive sector has been held from 3 to 5 April, 2017 at CNR

Research Centre, Florence. Piloting training activities have been organized thanks to the commitment of the Italian Partners: CNR – Italian National Research Council, CRF – Fiat Research Center, CSCS – Centro Studi Cultura Sviluppo and CEPAS.

The 27 selected students participated in different training activities, presentations and visits



addressed to improve knowledge and skills related to emerging technologies in the Automotive sector, including: Virtual Reality applications for the automotive sector; ICT solutions for fast train/railways; Risk Management; Energy performance in automotive production; Relationship management, Interpersonal Skills.

Participants in the training course on "Industry & Production 4.0 Manager" also visited the Fiat Research Centre (Powertrain, Vehicle product, Materials, Manufacturing) and the main Maserati plant in Turin. The visit to the Fiat Research Centre offered an interesting opportunity to learn more about innovation in developing power units, vehicle systems, materials, methods and processes and to know the latest trends of automation and data exchange in manufacturing technologies.



A full Skillman mobility training on Robotics on 7 and 8 June in Birmingham

The intensive 2-days piloting have been organized by BMET College in cooperation with Jaguar Land Rover under the Skillman project.

The 8 participants have been selected from a largest group of applicants. Some of them are university students in mechanical or managerial engineering, others have an high



school level in some industrial sector. At the end of the course learners will be able to read, understand and safely edit programs used to control an industrial robot and to create new software to safely operate an industrial robot.

Main Learning Outcomes:

- The learners will be able to read, understand and safely edit programs used to control an industrial robot
- Learners will be able to create new software to safely operate an industrial robot



The rise of Robots put at risk nearly a third of jobs in Britain

Automation from robotics and artificial intelligence put at risk middle-skilled and routine jobs. The institute of Labour Economics in Germany foresees that nearly a third of jobs in Britain could be lost by the early 2030s. The advent of cheap, powerful computers and greater access to data will reduce mainly the number of jobs focused on routine information processing, calculation and decision making.

On the contrary jobs that require an high level of creativity and social attributes such as management and leadership are difficult to automate. Likewise low-skilled jobs that required dexterity, teamwork or interaction with customers are more tricky for machines to replicate.

In this context the education sector need to focus on teaching creativity, social and communication skills and prepare people for jobs that are estimated to face lowest risk.

Although a third of jobs could be lost to robotics and artificial intelligence in the next years, related technologies could also boost the creation of new jobs elsewhere in the economy.



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Energy Efficiency Trends in the Automotive industry

According to the report "EU Reference Scenario 2016 – Energy, transport and GHG emissions – Trends to 2050" energy efficiency improvements are expected to be driven especially by policy up to 2020 and then by market/technology trends post-2020.



Transport activity shows significant growth, with the highest increase during 2010-2030, driven by developments in economic activity. The decoupling between energy consumption and activity is projected to continue and even to intensify in the future.

For the CO2 standards for cars and vans, it is assumed, based on current reduction trends, that the 2020/21 CO2 targets for the fleet of new vehicles set

out in the Regulations will be achieved and remain constant afterwards.

Marketing vehicles equipped with hybrid system on their power train will become more appealing to consumers thanks also to their lower additional costs.

In addition electrically chargeable vehicles (EVs) will emerge around 2020 as a result of EU and national policies as well as incentive schemes aiming to boost their penetration. Strong incentives as for instance tax exemption or subsidization will make their acquisition more attractive to the market segment of urban commuters and the early adopters.

Plug-in Hybrid Electric Vehicles (PHEVs), equipped with an internal combustion engine, will not pose range limitations to the travelers and will be relatively less capital intensive than Battery Electric Vehicles (BEVs).

Complementary, the Directive on alternative fuels infrastructure will support the uptake of other alternative fuels (e.g. liquefied natural gas in road freight and shipping) in the Reference Scenario.

More generally, all policies already adopted can have long-lasting implications, such as for instance the influence of the CO2 for cars and vans Regulations on the EU vehicle fleet characteristics.

Skillman contribution to the EAFA conference 2017

The European Commission, Directorate General Employment, Social affairs and Inclusion, Unit E.3 – VET, Apprenticeships & adult learning, has organised the High-Level Meeting of the European Alliance for Apprenticeships (EAFA) on 30 and 31 May 2017 at the Malta College of Arts, Science and Technology (MCAST), Paola PLA, Valletta in Malta.

The event, aimed to celebrate four years of the European Alliance for Apprenticeships was available on webstreaming and was participated by stakeholders from all over Europe.

The two days meeting was enriched by many speakers from the European Social partners and by Mr James Calleja, Director of Cedefop and Mr Joao Santos, Deputy Head of Unit, DG EMPL. The programme was expecting to identify and design the targets of the Alliance for the next period analysing the state of the art of EafA after four years from Leipzig to Valletta. The highlights about the Alliance experiences and wishes given by the participant stakeholders were full of interesting topics as the conclusion that the apprenticeship has a value for both excellence and inclusion. The ceremony ended with the signature of new pledges.

The article 'Partnerships for effective training to work transitions: a case study of the Skillman Alliance' has been published

The article 'Partnerships for effective training to work transitions: a case study of the Skillman Alliance' has been published on the Journal 'Educational Research for Policy and Practice'.

Educational Research

for Policy and Practice

The article presents the Skillman project analysing challenges associated with skills mismatch and solutions proposed to help transitions to work after training.

It clarifies also the processes behind the Alliance creation, its aims and nature, the strategic tools implemented, as well as its challenges and first results.

The article is available by clicking this link: https://goo.gl/DUJEvr



The Second Skillman International Conference has been held at the Jaguar Experience Centre, Castle Bromwich, Birmingham on the 23rd March 2017.

It offers a unique opportunity to hear insights from key automotive industry leaders on skills challenges and opportunities, and to find out about the new courses and qualifications being developed in robotics and composite materials by our UK and international partners in collaboration with industry. The day will also include information on how to access the courses and materials developed at no cost, and we close the day with a tour of the F TYPE Jaguar factory.

Run by the UK educational partner Birmingham Metropolitan College, this event will be of particular interest to schools, colleges, universities and training providers who currently deliver, or would like to deliver in these areas.

Participation will be offered at zero cost as the Skillman Project is co-funded by the Erasmus+ project of the European Union. However places are limited and will be allocated on a first come basis, so booking them in advance is recommended.



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