

## GREEN STAR: GREEN skills for enterprises Sustainable Training for Automotive suppliers cluster

### NEWSLETTER n.3 - September 2015

#### GREEN STAR FINAL EVENT

#### ★ Conference “Eco-innovation and Sustainability: Competitiveness, Employment, Skills” (22. September 2015, A.P.I. Spa – Mussolente, Vicenza, Italy)

Eco-innovation and Sustainability are the two key words of the Green Star project, an European initiative addressed to professionals and apprentices of sub-suppliers companies of the automotive sector, and in particular SMEs, in order to stimulate them to innovate their productive processes for a greater environmental sustainability. The purpose of the initiative is indeed to transfer the skills for operating with more attention on environmental sustainability, and to put the basis for a future reduction of the environmental impact of productive activities and services, and for a better management of available resources, namely energy and materials. The conference, organized at the headquarters of API, an industry located in Mussolente, Vicenza, Italy, that since several years adopts sustainable innovation to its products in bio-plastic and project partner, has represented the public conclusion of the Green Star activities and the opportunity to spread the project final results and to open a window to future perspectives. The 3 companies that have joined the project, in Veneto, in the Basque Country and in Romania, have experienced, with their employees, a training program aimed to develop the so called ‘green’ knowledge, as part of the automotive production processes. The training model, elaborated by the University of Dortmund and already successfully developed in Europe in the steel industry, has been also tried and tested with students of a Technical Institute of Mechatronics and within an Apprenticeship training course. The event was also attended by the regional minister of training, education and labour, Elena Donazzan, who emphasized that business, schools, universities and public administrations, by comparing experiences and projects of eco-innovation and of environmental sustainability, they work with a view to strengthening the production system and the strategic sectors of the current market. She also stated as the higher technical education and the opportunities offered by the alternation between school and work are confirmed as the milestones of the innovation and training processes.





# GREEN STAR

GREEN skills for enterprises Sustainable  
Training for Automotive suppliers cluster



Programma di  
apprendimento  
permanente



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## GREEN STAR RESULTS

### Sustainable Innovation and work-based learning. Experiences from companies

✿ **API Industrial Plastic Applications**, in cooperation with Consorzio Venezia Ricerche and Confindustria Veneto Siav, developed the training module on LCA , Life-cycle Assessment, a methodology for evaluating all the environmental impacts associated with a product, considering its entire life cycle from the extraction of raw materials to its final disposal.

The company tested the LCA module in the training of managers and technicians of the company from October 2014 to May 2015. From the direct experience realized by the company are emerged many benefits of conducting an LCA.

LCA can help decision-makers to select the product or the process that results in the least impact to the environment, but it can also evaluate cost and performance data. Furthermore an LCA can help the strategic re-positioning of the product, the communication of environmental information that can be used to enhance the product, the obtainment of eco-labeling (es. Ecolabel, Carbo footprint), the release of Environmental Product Declarations (EPD), and also the elaboration of technology strategies.

✿ The training program developed by **BRUSS Juntas Técnicas** for waste management at the shop-floor level has supposed an opportunity not only to transmit to the different teams the importance of the correct waste management in the company, starting from the point where the waste material is produced, but to positively identify that green skills/competences are of the interest of a major number of the people who has been involved in the training modules.

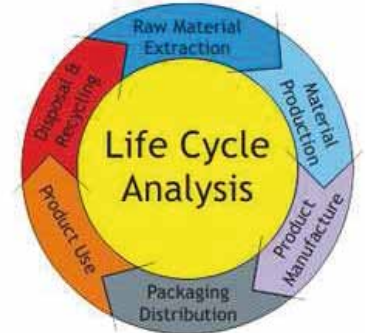
The training program has been divided in 4 different complexity levels, starting from “what we generate at the work-place”, going through “how to treat the waste generated” and “how to manage it”, till we arrive to the key question “what could be improved”.

Following indications of the people who took part in the pilot trainings developed as first step to define the final content of the training modules, the content of the modules was adapted to the main indication received from the participants: Training modules should combine a basic theory description of the activity with practical exercises at the work places.

From the point of view of the environmental management system a short term effect is expected from this kind of activities: an improvement in the day to day handling and management of waste. However this is not the main target of the project. The main target of the project is to start generating in a broad number of members of the company a sensibility regarding the impact of the actions of each individual in the general environmental performance of the company. This sensibility, together with the knowledge about the meaning and rating of environmental aspects of the industrial activity of the company (training module last step), should allow Bruss Juntas Técnicas to implement, middle term, relevant improvement actions in the mentioned environmental aspects.

✿ Thanks to Green Star, **SINTEROM** has realized training actions concerning ‘energy’, in order to raise up the level of consciousness of workforce in ecologic ability. The existing production processes have been approached in a new view, considering the different types of used energies. According to this approach, the involved workers were informed about the consumed quantities of energy, their costs, the importance of saving energy and were oriented towards the search of possibilities to reduce them, both in the production process, as well as in maintenance. It has been also highlighted the quantity of saved energy for getting the same product, the difference of the energetic costs, the impact upon the environment. Sinterom detains an own programme for the reduction of the energetic consumptions, to be implemented in 2015, that has been improved with new measures after joining at Green Star project, using the new LCA approach and the skills from the GT-VET programme. The new energy programme has been

presented and shared to the involved workers, who understood and accepted it, offering their personnel contribution in the achievement of its objectives. The total reduction of energy costs, in 2015, with the foreseen measures, will represents around the 9% from the total energy costs occurred in 2014. The most important project result is that after the 'GT VET' learning programme the workers understand in a more clear way the relevance of their contribution in elaborating and implementing the cost reduction plans, in order to guarantee to the company the competitive vantage on the market.



### Sustainable Innovation and work-based learning. Experiences from companies

Within the project **ITS Mechatronic** has co-designed a pilot training module on LCA - Life Cycle Analysis. The module has been composed by the illustration of the principles and rules for the LCA application, with exercises on the life cycles of different products and examples from the business practice, by the transfer of technical elements on certification and environmental control, and by the analysis of different cases. To the students were asked to apply the information gathered to their laboratory activities, in designing and realization of mechatronic equipment. They were able to learn the basic concepts of LCA and have obtained an overall idea of the possible application; the module has been accepted with interest, although the practical application of acquired knowledge has been partial and essentially linked to the sensitivity of individuals. Experimentation has shown that training modules on LCA can be successfully incorporated in the education / training systems and that school-company interaction is a winning proposition in issues related to sustainable development. On the other hand, experience has also shown how the application examples, to be effective, must necessarily be related to the productive sector of the educational curriculum. It has highlighted also the need to strengthen the school-company relationship, not yet sufficiently consolidated, and the involvement of qualified teachers, with company experience. In conclusion, the perspective is to enter in the design of ITS courses, stably, elements of eco-innovation and sustainability, extending the experience to the entire chain of technical and vocational training; it is to also to design and implement interventions related to various technological and production reality and to intensify relations school-company in order to connect the design and implementation of interventions to production reality.

The "green" skills in the training system for apprentices have been introduced experimentally in a training module of 40 hours titled "Social and civic competences", occurred in Padua in a class group of 17 apprentices. The contents in terms of energy, waste and life-cycle analysis were positively perceived by participants; however, according to the opinion of apprentices, the direct implementation of the green approach in the own workplace should regard the corporate decision-making level. Finally, during the future training programming, the Region of Veneto will conduct a awareness action towards the social partners for the dissemination of positive results of the Green Star project.

### GREEN STAR RECOMMANDATIONS: A BRIDGE TOWARD THE FUTURE...

Against the background of the European Commission focus on competency gaps to be filled, on the anticipation of change, on the transaction and promotion of mobility, on the incentive to create new jobs, the GREEN STAR experience fosters and underlines the following, mainly existing, policy recommendations:

- The relevance of cross-sector cooperation between big companies and SMEs;
- The relevance of regional clusters and partnerships, within and beyond single industry sector clusters, not only in form of the so called Triple Helix, public authorities, companies, research institutions, but also by integrating the customers, civil society in a common social innovation process and eco-system;

- The given possibility and added value of transfer of innovation processes;
- The need to combine technological improvement for greener production processes and products with human resources improvement of green skills;
- The need to involve committed, concerned and capable stakeholders, coherently with the objectives, in order to achieve impact results. Therefore, not only direct target groups, e.g. companies, shall be implicated, but also stakeholders of the learning chain (schools, apprenticeship, institutions);
- The relevance of the work-based learning approach to facilitate the transfer of knowledge immediately applicable to production processes.

The results of GREEN STAR and the personal experience of the involved project partners underline the necessity of funding for innovation development and transfer activities based on regional and cross-sectoral cooperation in Europe, embedding all the relevant regional actors and stakeholders, a European platform for exchange, research and development has to be provided.

## PARTNERS

### Confindustria Veneto SIAV - IT

**Gabriella Bettiol, Chiara Salatin** - Tel: +39 041 2517511,  
area.progetti@siav.net, www.siav.net

### Technische Universität Dortmund

**Sozialforschungsstelle DE Antonius Schröder**  
Tel: +49 231 7552205,  
schroeder@sfs-dortmund.de, www.tu-dortmund.de

### Federación Vizcaína de Empresas del Metal - ES

**Joseba Sainz de Baranda** - Tel: +34 944 396469,  
joseba@fvem.es, www.fvem.es

### Camera de Comerț și industrie Cluj – RO

**Elisabeta Dumitrescu, Delia Santa**  
Tel: +40 364 730980, erzsi@ccicj.ro, www.ccicj.ro

### Region of Veneto – Department of Labour - IT

**Simonetta Mantovani** - Tel: +39 041 2795924,  
simonetta.mantovani@regione.veneto.it,  
www.regione.veneto.it

### API Applicazioni Plastiche Industriali - IT

**Luca Soffia** - Tel: +39 042 4579711,  
luca.soffia@apiplastic.com, www.apiplastic.com

### Bruss Juntas técnicas - ES - Kepa Jon Arana

Tel: +34 946 21763, kepaArana@bruss.es,  
www.bruss.de

### SC Sinterom - RO - Alexandru Gaciu

Tel: +40-264-415080, dirprod@sinterom.ro,  
www.sinterom.ro

### EVTA - The European Vocational Training Association - BE Tommaso Grimaldi

Tel: +32 (0)26445891,  
tommaso.grimaldi@evta.net, www.evta.net

### Silent partner

### Fòrema - IT - Roberto Baldo

Tel: +39 049 8227277,  
rbaldo@confindustria.pd.it, www.forema.it

