

## EPCA 2011 ANNUAL MEETING - STUDENTS WORKSHOP

### SUMMARY KEY FINDINGS

In the context of the 2011 International Year of Chemistry, EPCA invited 14 award winning students in chemistry and related fields to join its Annual Meeting in Berlin from 2 until 4 October 2011. Students came from Europe, Middle East, Russia, Brazil and the USA. The purpose of this initiative was not only to bridge the gap between the academic world and the business environment but also to motivate young talented people to join the chemical industry and to improve the overall public image of the chemical industry.

On the agenda were meetings with members of the Young EPCA Think Tank (YETT), EPCA Past Presidents and EPCA Honorary Board members as well as with a supply chain expert. The discussions tackled a range of topics such as EPCA, energy, industry related career opportunities and career development, end consumer awareness of the chemical industry and relationship university and industry. An exchange with a senior supply chain expert provided background info on the key issues related to supply chain. In addition to the aforesaid discussions, students participated in the EPCA Annual Meeting business sessions inclusive of keynote speeches and panel discussions, the logistics leaders' breakfast - a round table discussion forum-, the closing session with Her Majesty Queen Noor and in social activities. Dr. Arvind Natu from the Indian Institute of Science, Education and Research (IISER) was the students mentor during their participation in the workshop.

Students appreciated the opportunity to get acquainted with the public and the atmosphere of one of the world's largest events for the petrochemical industry. It gave them the opportunity to learn "*from within*" about the objectives, strategies and structure of the chemical industry. The chemical industry is a broad area including a number of companies with very different activities ranging from extraction of raw materials to logistics and chemical sales.

To most students the area of supply chain was a totally unknown business area. Sustainable chemical supply chains are however key to the long term success of the chemical industry. The discussion with the supply chain expert revealed interesting concepts such as the Internet of Things and made clear the possibilities offered by technologies in view of the development of sustainable chemical supply chains.

In terms of image of the industry, increasing transparency is needed to improve the reputation of the industry. A lot of progress has been made in the areas of health, safety and environmental concern but the public is not aware of it. YETT members explained that the entire production process must be analyzed, not just the final product, to see if the product is economically and ecologically favourable. Also, molecules should be transformed, not burned. Every single person must take responsibility for the world's environment.

The chemical industry needs talented people with a chemistry background. The business session revealed that in Europe there is a talent shortage with only 2 out of 10 youngsters who take up science and technology while the required number is at least 4 out of 10. Therefore it is critical that chemistry is made a more attractive subject for schoolchildren and students. Some students believe that chemistry can be an interesting subject for everyone provided they have a talented teacher. The science teachers' profession should be more rewarded. Teachers have to be motivated and supported to be able to make chemistry an interesting subject to students. Science education should become much more practical and the industry should get involved in the process. The industry should also invest in chemistry class infrastructure in schools. A good science education should also partially solve the issue of the poor public awareness.

While there is a talent crunch in Western Europe, young graduates in Eastern Europe are confronted with a lack of opportunities and in the developing world the chemical industry has only touched the surface and has massive scope for growth.

Students learned that in case they would like to work for the chemical industry in the future, they need to not only study chemistry (or another discipline) but also develop their communication, people management and networking skills and may need to learn the basics of logistics, management and economics. In order to be successful in a job, one must develop oneself into a self-confident person.

YETT members explained that with a background as a chemist or as a chemical engineer, combined with the required skills and talent, it is possible to shift jobs between departments within a chemical company, and even climb the success ladder pursuing high management positions. Working in the chemical industry also requires a high mobility, both geographically and in the tasks performed.

Regarding the relationship between industry and academia Dr. Natu from IISER asked for a change towards a more collaborative approach. The discussions confirmed that there is cooperation between the academic and industrial world in terms of research and recruitment.

Students learned that a job in research and development in the industry offers a good opportunity to learn that equals the ones offered in an academic environment, in addition to broaden one's personal skills to inspire people in order to deliver the desired results.

Discussions with EPCA Past Presidents revealed that the transfer from academia to the industry is in fact easier than anticipated by most students. Key question is to understand one's personality and preference in relation to working habits. The chemical industry offers both options : real workforce experience and research. In order to be able to advance in the chemical industry, one must be willing to continuously expand one's skills set.

EPCA Past Presidents encouraged the students to get out of the lab, travel around and familiarize themselves with as many different cultures as possible. This will allow students to discover a lot about themselves, increase their knowledge, widen their perspective and ease the process of understanding of the end consumer. To be able to view situations from different points of view and understand one needs will help break the barrier between the suppliers and the consumers. This will aid in spreading awareness and passing the correct image of the chemical industry.

The students came to the conclusion that students workshop has given them a better understanding of the chemical industry and new perspectives on potential future career choices. Career opportunities in the chemical industry may range from the field of research and development to operational or management positions. With the right skills and a solid educational background, a graduate can prosper in this industry. Students also appreciated the opportunity to meet and discuss the chemical industry with senior industry representatives. They confirmed they expanded their knowledge and opened their minds on what human society needs and how petrochemical companies satisfy them.

Students confirmed they will stay in contact with each other and inform each other on future career choices.

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