

<b>Participant details</b>	
<b>First name</b>	Dawn
<b>Last name</b>	Sammut
<b>Erasmus+ Mobility details</b>	
<b>Organisation name</b>	Albis Plastic GmbH
<b>Mobility dates</b>	01.08.17 – 02.10.17
<b>Place of Mobility</b>	Hamburg, Germany

## **Dawn's Testimonial:**

*"Throughout my 2 month mobility at Albis plastic, I have seen a product progress through the major steps of the engineering process, from an idea to the finished product.*

*Research and development is done by the Development Service Team which handles orders from potential or regular clients, produce samples and provide recommendations and information about the produced product. Any samples needed are produced in the Technikum, which is equipped with extrusion lines, injection moulders and also a colour lab for testing.*

*Before the samples can be produced, the raw material, which is the polymer, has to be mixed with additives or fillers such as glass fibres and fire retardants. Pigments can also be added to the compound. All additives and pigments are weighed carefully and mixed for a pre-set time.*

*When the compounding is finished, the material can be sent to an extrusion line, which mainly consists of the hopper, extruder, water bath for cooling and a pelletizer. During my time in the Technikum I was introduced to an underwater granulator which is used for softer materials such as elastomers. After extrusion is finished, the pellets are visually inspected for defects and then sent to be moulded. The cavities used in the Technikum are different to those used in a production line, as the parts produced are either used as testing specimen or for samples for the*

*customer. All parts are also visually tested for defects such as flow lines or short shots.*

*As mentioned before, the Technikum includes a colour lab for testing. These tests include colour matching and light transmission testing.*

*The testing specimen produced are sent to the Laboratory for testing, these come in various shapes and sizes due to the fact that not all tests use the same specimen. Like the Technikum, the lab is equipped with injection moulders and a few extruders for special materials. However, testing equipment is the most prominent, ranging from mechanical testing equipment to thermal and optical testing equipment. I spent most of my time in the lab conducting mechanical, thermal and analytical tests including; tensile testing, Charpy/IZOD impact testing, hardness testing and heat deflection testing. I had the opportunity to learn about new tests and testing methods such as gas chromatography and IR spectrophotometry.*

*The lab also consist of colourists and technicians which receive orders and modify recipes. The colourists also run optical tests such as haze and transmission testing similar to what is done in the Technikum colour lab.*

*Personnel working in the lab have to pass a colour test every 2 years. This test includes putting about 4 sets of 20 shades of colours in order in about 2 minutes for each set. All visual colour tests, like colour matching must be done in a well-lit area, with preferably white light.*

*One of the roles of the lab is to provide up to date and accurate data for product data sheets, which provide the most important properties if the material such as tensile strength, density and melt temperature.*

*After testing is done, and the material fits all specifications, it can be sent to extrusion for final production.*

*Another thing that I've learned at ALBIS is there are so many steps and people that a product has to go through in order to reach the final customer, and not just machines and technicians. I spent some time with the TSAD (Technical Service and Application Development) department, which also has an important role in the engineering process. This team communicates with sales persons and technicians on the field. They are responsible for providing technical support or recommendations to potential customers and clients.*

*In my time working with TSAD I discovered the wide range of products that ALBIS provides, some of which I never knew existed such as electrically conductive*



*polymers and Bioplastics. The team also helps with part design, where they make small adjustments and run simulations. This team is also responsible with making sure that their materials fit customer specifications and standards.*

*Although my work was mostly administrative at TSAD, I got an insight at what happens before the product is sent to me manufactured, how a team pushes forward an idea into a final product.*

*To conclude, my experience here at ALBIS has been nothing but positive, I got to work with very skilled people and innovative minds. I learned new ways of how to approach a problem and how work is improved by working in a strong team. I discovered new information about materials I had never heard about and improved my knowledge on what I've previously learned."*

