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Aviation Valley: the leading aviation industry cluster in Poland

The Aviation Valley is an association which is the base for the largest aviation cluster in Poland. The Association was established in 2003. Significant funding for the Association has been provided by Pratt&Whitney, a world leader in the design, manufacture and servicing of aircraft engines, space propulsion systems and industrial gas turbines – an investor in Wytwórnia Sprzętu Komunikacyjnego in Rzeszów. The Aviation Valley is located in south-eastern Poland, mainly in the Podkarpackie province. The Association is the formal form of cooperation of aviation companies based on the region's long-term tradition in this industry.

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THE DEVELOPMENT OF THE AVIATION industry in the Podkarpackie province has its origin in interwar period in Poland, namely the implementation of a project called the Central Industrial Region (1936-1939). Among many industrial plants built in the region, two factories manufacturing aviation equipment occupied an important place: a plant manufacturing aircraft engines in Rzeszów and an airframe manufacturer in Mielec. In the post-war period, under the conditions of a centrally-planned economy, the development of these plants was continued. However the output was mainly shipped to the Soviet Union. As a result, at the time of transformation the region's aviation companies lost almost 80% of their orders. To survive the difficult period of restructuring, the companies had to jointly approach to the central government. The companies had to find new orders from other parts of the world. It was necessary to change their mode of operating, namely to restructure employment and create a network of local suppliers with higher quality and lower operational costs than in large companies.

However, the course of these processes and the effects of restructuring were different in individual plants. The specific location of aviation companies – these companies used to be the largest employers on the local labour market – was a big hindrance

for the adjustment process. Attempts to rationalise employment, for example, resulted in strong opposition from trade unions and workers who had no chance for other jobs. Hence this process spread over a long period of time. The scale of restructuring was clearly indicated by the change of the number of employees. For example, in WSK "PZL-Rzeszów" employment was reduced from 10,800 to 5,800 people in 1995. In 2006, the labour force was 4,700 people.

IN 1991-1996 THE RESTRUCTURING OF the companies in terms of organisation and ownership was carried out. They acquired the status of commercial companies. Different types of activities of companies were singled out and new companies were created on the basis of those previously existing. The leading plant focused on the final product and the newly-established companies became partners and suppliers of parts and services. Also many start-up companies, founded mostly by former employees, began cooperation with aviation companies, becoming cooperators and sub-suppliers. The favourable location encouraged foreign investors from the aviation industry and cooperating industries to locate operations in the Podkarpackie province. They created companies from scratch (e.g. Hispano Suiza, Creuzet Poland), or created them on the basis of state-owned enterprises

(WSK "PZL-Rzeszów" – privatised by UTC, Goodrich Krosno – established on the basis of the assets of WSK "PZL-Krosno").

THE AVIATION VALLEY WAS INITIATED by the existing companies and the entities which emerged as a result of the restructuring of the industry and new ones attracted to the region, following the example of other companies of the investors. The industry is still the main driving force behind the aviation cluster, but it also comprises other institutions such as universities and development support institutions. Cooperation with regional and local authorities is very important. The cluster consists of international companies – the presence of a single investor Pratt&Whitney attracted to the region other foreign cooperators. There are investments by foreign family companies and these investments are generally more durable, because families consider exactly where to take the risk of family capital investment. They are established next to the international corporations.

The objectives of the Aviation Valley Association is the organisation and development of a low-cost supply chain, the creation of favourable conditions for the development of the aviation industry companies in the region, the further development of research, skills and qualifications in the field of aviation, the cooperation and development of the aviation industry and universities, which will promote new ideas and develop the research and development sector in the aviation industry. The Association also works to promote the Polish aviation industry, obtain support for enterprises from the industry and affects the economic policy of the Polish government on the issues related to the aviation industry. The chief aim of the cluster is that the Podkarpackie province becomes one of the leading aviation regions in Europe, which will provide a variety of products and services for the aviation industry for the most demanding customers. The result

of this would be the region's dynamic growth, more jobs, and improved living conditions for its residents.

CURRENTLY, THE AVIATION VALLEY ASSOCIATION has 80 members from the region and there are prospective members undergoing the application process. The Association is going to have 100 members over the next few years. A company or an institution associated with the aviation industry of south-eastern Poland, having recommendations from at least two current members, can become a member of the Aviation Valley.

The cluster cooperates internationally with other aviation clusters. This cooperation involves the exchange of good and bad practices to avoid mistakes – such a cluster platform was established 6 years ago in Rzeszów. California's Silicon Valley, the most famous cluster in the world, is also one of the exemplars for the Aviation Valley.

THE AVIATION VALLEY ASSOCIATION is a partner in the Centre of Advanced Technology "AERONET- Aviation

Valley" at the Rzeszów University of Technology. This consortium was established in January 2004 as a response to the competition announced by the Ministry of Science on the funding of coordination and organisational activities of Advanced Technology Centres (ATC). Apart from Rzeszów University of Technology, the University of Rzeszów, and the Association of Entrepreneurs of Aviation Industry "Aviation Valley", AERONET also includes the Lublin University of Technology, Łódź University of Technology, Warsaw University of Technology, the Institute of Aviation in Warsaw and the Institute of Fundamental Technological Research Polish Academy of Sciences in Warsaw. The main objective of ATC "AERONET - Aviation Valley" is the implementation and commercialisation of new technologies for the aviation industry through the implementation of research and training programmes.

The Aviation Valley Association influences the training of staff at the secondary and higher education levels. Aviation Valley has included

technical secondary schools into its programme through creating professional laboratories there – workshops, such as in the Aviation Valley's factories – by equipping schools with equipment such as in enterprises. Teachers have also been trained. The Aviation Valley Association encourages children's interest in scientific education. There is the "University of Technology for Children," where the heads of the cluster companies teach children. The Association also contributes to the professional development of teachers. The cluster cooperates with local and national authorities and the Polish Information and Foreign Investment Agency (PAIIZ). Aviation Valley is present at fairs, therefore it joins the activities of the aviation industry.

The aviation cluster companies cooperate with each other primarily on the customer – supplier basis (supply of parts, materials and raw materials). This is the most common model of cooperation between leading and small companies who are subcontractors and cooperators. Particularly intensive cooperation exists between the so-called spin-off companies – established under the restructuring of large enterprises – and the core company, which usually is the main purchaser of products and services of these newly created companies. With the promotion of the Podkarpackie province as a location for the aviation industry, the cluster companies are able to find almost all cooperators and subsuppliers in the region.

THE PRESENCE OF THE AVIATION INDUSTRY in Poland is very important because, in fact, it exists only in a few countries in the world. The activities carried out within the Aviation Valley are conducive to improving the quality of this industry and creating the best location conditions for companies in the industry from all over the world, including those affecting the availability of skilled labour. A particularly important development direction of the cluster should be to increase the research and development activities related to the industry carried out in the region, so that not only will products associated with the aviation industry be manufactured there, but also new solutions be developed, especially whole aircraft. ::

