

## France and the Netherlands: Two regions discovering each other

*Representatives from the North of France pay a return visit to the Eindhoven region*

*In November 2013, High Tech NL organized a study tour to the North of France. This relatively unknown region hides a lot of research activities and development of applications in the field of high tech industry. Besides that, the region is equipped with a high quality university in the field of engineering and has several universities of applied science. Of course we didn't split up without inviting our hosts for a return visit to the Eindhoven region. On Tuesday and Wednesday the 23<sup>th</sup> and 24<sup>th</sup> a small delegation visited several hot spots and returned to Lille, as inspired as we were after our visit to them.*



### ***Lille – Eindhoven. Only a two hours' drive apart***

Mr François Danneville is Executive Project Manager at the international relations office of the University of Lille (Sciences and Technologies) as well as Director of University of Lille1 Department at IEMN. IEMN stands for Institut d'Electronique, de Microélectronique et de Nanotechnologie. Mr Olivier Colot is Director of CRIStAL, which is the abbreviation for Centre de Recherche en Informatique, Signal et Automatique. They arrived at the High Tech Campus in Eindhoven at noon on Tuesday together with Ms Emeline Marchesse who is working for the Réseau Franco-Néerlandais. They noticed that it took them only two hours to get from Lille to Eindhoven. Obviously, we had been equally surprised by this proximity at the end of our study tour in 2103



High Tech Campus Eindhoven

### ***Cradle of inventions***

The visitors were invited to the High Tech Campus by Mr Cees Admiraal, who is a member of the Management Team of the campus. While having lunch together, Mr Admiraal explained the history of the High Tech Campus. In the past, the huge Philips

company concentrated its Research & Development activities in the Natlab which was

the cradle of innovations such as video recording and compact disk technology among many of others. After Philips changed its corporate strategy, there was a need for joint research facilities, innovative networks and new combinations. After 15 years of development, the High Tech Campus now is a concentration of more than 150 companies and research institutes. Here 10,000 employees meet, work together and reinforce each other every day.



### ***The internet of things***

The visit at the High Tech Campus continued at the Holst Centre, where the delegation was welcomed by Mr Jos Oudenhoven, one of the senior researchers. He first presented the Holst Centre, which is a joint research institute of the Dutch TNO and the Belgium Imec organizations. Mr Oudenhoven illustrated the importance of the internet by mentioning the following things: In 2008 for the first time there were as many devices connected to servers as the number of people living on Earth. In 2020 the number of connections from all kinds of devices to servers and vice versa will exceed 50 billion. The Holst Centre employs over 200 FTE of various nationalities. They work on all kinds of research projects from energy-saving technology, health applications to ultra sensitive sensor technology. Three demonstrations had been prepared to show their capabilities to the guests. During its nine years of existence, the Holst Centre has produced 700 publications and acquired 230

patents. The purpose of the Holst Centre is to carry out research programs and projects of which the costs and results are shared by several customers.



### ***High standards***

The last visit on Tuesday was paid to FEI , a company located near Eindhoven Airport. The visitors were welcomed by Ms Inge Houbraken, who organized the FEI visit, and by Mr William Hermkens, Mr Hans Scholtz and Mr Pascal Doux who had prepared a presentation each.. The FEI team presented the capabilities of FEI, which specializes in designing, developing and producing high precision electron microscopes which are used all over the world. Their applications range from the oil and gas industry to scientific applications and research on issues like materials and life sciences. FEI offers a broad portfolio,



based on high standards of precision. The FEI specialists don't hesitate to support the customers in finding the most effective ways to solve their problems. An extensive demonstration by the training and demonstration manager convinced the guests of the fact that FEI delivers a wide range of products for all kinds of industrial and scientific applications. It is no wonder FEI works closely with universities and research institutes all over the world. As customers' demands get more specific all the time, FEI recently took over a specialized company in the Bordeaux area completing the computing expertise of FEI. FEI employs 2700 people worldwide, of

whom 700 are located in Eindhoven. Research and development at this plant is done by approximately 200 masters and PhDs of about 60 nationalities.



### ***High-tech ecosystems and historic places***

After thanking our hosts we hit the road towards 's-Hertogenbosch (Bois-le-Duc in French) where the French guests had found a bed & breakfast. It was our mutual pleasure to enjoy dinner in one of the many cosy restaurants in the historical city centre as well as a walk through the most characteristic parts of 's-Hertogenbosch. For me, as an original inhabitant of 's-Hertogenbosch and a non-official city guide, it was exiting to see that our guests really appreciated places like the old marketplace, Saint John's Cathedral, the Dieze River which flows underneath the city centre, and the former military parade square. Apparently, discovering high tech ecosystems and sightseeing in historic places is a perfect match. As the weather was not too bad, we took the opportunity to have a drink al fresco and evaluate the day.



### ***Smart Industry and New Skills***

The next morning, we only had to travel four kilometres to arrive at Omron, a Japanese company that has had its European R&D, sales and distribution centre in 's-Hertogenbosch since 1990. Starting green field at that time, the Omron company in 's-Hertogenbosch now employs 300 people. Which is not much compared to the company's total of 37,000 worldwide, but it is very promising for the region that Omron has re-shored several activities from China here and has taken over the assembly of some products

from an Omron plant Germany. Moreover, new products and applications are being developed all the time and sales in Europe are still expanding. That is why Omron will grow by around 50 people. Some of them will be working on R&D projects. For that reason, Omron is working together with the technical University of Eindhoven. Three students received a so-called top-sector scholarship, which allows them to carry out research projects for Omron in combination with their studies. Omron is active in fields like automotive, automation, environmental systems (solar), healthcare and social systems like magnetic strips on cards, which they developed and introduced, and even face recognition technology. Omron has existed for more than 80



**Nord-Pas de Calais**

years. Omron's philosophy involves answering the needs of society, and by doing so it intends to guarantee the company's success in the future.. Omron even helps customers connect Omron equipment and devices to those of competitors to make sure that the customer has a maximum uptime. This special service contributes to the knowledge and expertise development of Omron and is even appreciated by competitive companies. During the guided tour through the assembly facilities by Ms Carin Hendriksen, who is responsible for manufacturing and warehouse operations, it became clear that Omron is a lean company. Inspired by Toyota, Omron decided to introduce continuous improvement processes. The company KPIs are communicated all the time and responsibilities for quality, planning and working processes are in the hands of all employees. The emphasis is on developing new skills related to individual development processes, which makes Omron a very good example of Smart Industry. Mr Tim Foreman, who is working in the field of engineering and product development, explained that Omron is taking part in two Smart Industry Fieldlabs, which are meant to accelerate improvement

processes and create new combinations and new business.



### ***Global and regional***

Our next visit was to the Technical University of Eindhoven where Mr Harold Weffers was our host. He had organized a demonstration on football robots, which was carried out by one of the students. She showed that working with technology in this kind of project is fun. It brings together all kinds of technology, including mechanics, electronics, software, and vision- and sensor technology. And what is more, students have to work together in order to achieve results. And so they did. They even became the world champions in 2014! Mr Weffers presented the characteristics of the Eindhoven University. Although the University is relatively small, its achievements are recognized worldwide. The university is part of networks all over the world. It is active not only globally but also locally, participating responsibly in regional ecosystems. That is why the High Tech System Centre has been developed. It answers directly to the competence needs of students, companies and knowledge institutes in the high tech ecosystem that has its epicentre in the Eindhoven area. Possible cooperation with the University of Lille has been discussed and could be one of the future projects.



### ***Fontys, close to the company***

Last but not least we were welcomed at the Fontys University of Applied Sciences by Mr Kees Adriaanse. Mr Adriaanse is managing director of the Centres of Expertise of which High Tech Systems & Materials are a part. He had prepared demonstrations at the robotics, 3D printing and materials laboratories. The most elementary difference between a

university of applied science and a technical university is the fact that research at Fontys is done close to the company's applications and is meant to improve educational curricula. Fontys and the Technical University work closely together in order to connect fundamental knowledge to applications. That is where Mr Danneville saw the possibility to connect the North of France to the South of the Netherlands. Why not look for combined research projects between the University of Lille



*At the laboratories of Fontys*

and Fontys, finding cooperation with small- and medium-sized enterprises both in France and in the Netherlands? This thought inspired us to evaluate the two-day visit and all the impressions we have shared. Let us think it over and then return to this question. And so we will. After all, Lille and Eindhoven are only separated by two hours of driving, if you do not take into consideration the daily traffic jams at the Antwerp ring .....

We are sure we will meet again.

Be our guest!

June 26<sup>th</sup>, 2015

Jos van Erp  
Program Director High Tech NL



*Au revoir, bon voyage et.....  
à bientôt !*