

LES CAHIERS

Echanges

Internationaux

FRANCE - SUÈDE

- Intensification de la relation économique bilatérale depuis 2014
- Multiplication des partenariats
- Après la COP21 deux pays mobilisés pour le climat
- Intensification of bilateral trading relations since 2014
- Many more partnerships
- After the COP21, two countries mobilized for the climate

Science Village is building the place-to-be for researchers in Lund



Science Village Scandinavia will become a hub connecting the European Spallation Source (ESS) and the Max IV Laboratory. It would first of all be interesting to explain this project and its history.

When it was planned to build both ESS and MAX IV in Lund, the City of Lund decided to place them close to each other but with a space between them that could contain a meeting place and a service hub. That decision was made after several study visits to other combined research facilities in Europe and after understanding the importance of building up a common infrastructure close to the facilities early in the development process so that the two facilities could use the same service facilities and make it easy for researchers to meet. The City of Lund invited Lund University and the Region of Skåne to set up a common company for developing

the land between the ESS and MAX IV. As the result, Science Village Scandinavia AB was set up in 2011, and it owns the land between ESS and MAX IV. The City of Lund, Lund University and the Skåne Region each own one-third of the company.

Science Village Scandinavia has public partners, which are Lund University, the city of Lund and the Skåne Region. How do they support this project?

They support the project by owning the company Science Village Scandinavia AB. The board consists of two representatives each from the city of Lund, the region of Skåne and Lund University. They also support the project with different kinds of knowledge and commitments. Lund University is important because of its academic base and its interest in the research facilities. Skåne Region is important because if its goal of

increasing the number of jobs and their intense work on innovation, development and growth in the region, and the city of Lund is of course important because of its interest in developing Lund from all perspectives.

Let us speak about the ESS. Why is it a key research center for all the scientists who work on neutron source? How many people will work here and from how many countries?

The European Spallation Source (ESS) is a multi-disciplinary research center based on the world's most powerful neutron source. At the beginning, the ESS was set up as a Swedish company co-owned by the Swedish and Danish states and with cooperation agreements with about 15 other European countries. In August 2015, the Swedish company was transformed into an ERIC [European Research Infrastructure Consortium] with 12 European countries as owners. Another five countries are preparing to enter the consortium.

This new facility will be around 30 times brighter than today's leading facilities, enabling new opportunities for researchers in the fields of life sciences, energy, environmental technology, cultural heritage and fundamental physics. About 500-600 persons will have permanent workplaces at the ESS. Apart from that, the facility will host about 4,000 researchers per year.

Researchers will be elected and get their beam time due to their scientific qualifications and not due to geographical allocation. That means that researchers also could (and probably will) come from countries outside



Europe as well as from the countries which have set up the ESS.

Let us move on to the MAX IV laboratory and its contribution to the investigation of molecular structure and surface.

The MAX Laboratory (including MAX IV) is a national Swedish research facility, meaning that, unlike ESS, it is not a part of Lund University, but is directly financed by the Swedish state, with support from private foundations and the Finnish and Estonian states regarding specific beamlines. It is the successor to the MAX-lab national laboratory and includes both the operation of the present MAX I, II, III facilities (MAX-lab) and the MAX IV project, which aims at constructing the new MAX IV facility in Brunnsbög in the North-Eastern part of Lund. It operates accelerators that produce x-rays of very high intensity and quality. It is currently building a new project, which will be the brightest x-ray source in the world when it opens to users in 2016.

The first ring of the MAX Laboratory (MAX I) was already inaugurated in 1987 in a building about 2 km from the new MAX IV building. Today, all the Swedish Universities (and several foreign universities) already have researchers at the MAX Laboratory. MAX IV, which will open in June 2016, will provide about 150-200 persons their permanent workplaces and will host about 3,000 researchers per year.

The inauguration of the ESS is planned in 2019. Which steps are you planning before the opening?

When ESS is inaugurated in 2019, the Science Village is planned to contain a Guest House for researchers with about 100-120 rooms for visiting researchers, office premises for companies and universities, lab premises for production and preparation of sample materials, an information service desk for researchers, an exhibition for the public describing the ESS and MAX IV, a restaurant and a café.

The railway station of Lund is already connected to Copenhagen Airport with trains at least every 20 minutes day and night. A tramline is scheduled to be built to link the center of Lund to Science Village, and the decision to build it was taken in December 2015. The tramline is scheduled to start operations in 2019.



Are private companies a part of this project? Will the village be a place where private and public research work together?

Private companies, which work in research and which are interested in innovation will be tenants in the office and lab premises. There will be several opportunities for private companies and universities to work closely together. In the first building (planned to be ready in early 2018) there will be premises of a kind that we call an "Office hotel" which means, that people can rent rooms or just a workplace in an office together with other companies. You share the service facilities such as copy and coffee machines and you are invited to networking events. For those premises, we have already started discussions with some Swedish universities, one very large company (which wants some workplaces for its research organization), several small companies and some organizations working in field of material science and life science.

What is the role of France in the planned project?

Our project could be interesting for France from three points of view. The first interest is for French investors that would like to own plots for developing offices or labs. The second is the possibility to become tenants in the offices or labs and finally, of course, French researchers

can apply with their projects for beamtime at the ESS or at MAX IV.

A preliminary exhibition is scheduled for late 2015. Can you describe it in more detail?

The only thing that we have on the land today, except agricultural fields, is an old windmill from 1647 with its farmhouse from about 1920. When the mill was built, this part of Sweden belonged to Denmark.

The windmill is being renovated and the farmhouse has now been renovated. The farmhouse will be used as an exhibition area for ESS and MAX IV. It will be a science exhibition for the public, describing simply how the facilities work and the areas of research. The exhibition will open in February 2016.

The exhibition area in the farmhouse is extremely small (about 120 m²), so when the first new building is ready in early 2018, it is planned to move the exhibition to a bigger area in the building. After that, the old farmhouse is scheduled to be used as a café with a beautiful outdoor seating in the old-fashioned garden with roses and lavender. In the future, we are also planning a bigger science center which will be a combination between a visitor center for the ESS and MAX IV and a center for hands-on experimentation for both children and adults, where they can try things out. ■