

## ESS & MAX IV: Cross Border Science and Society

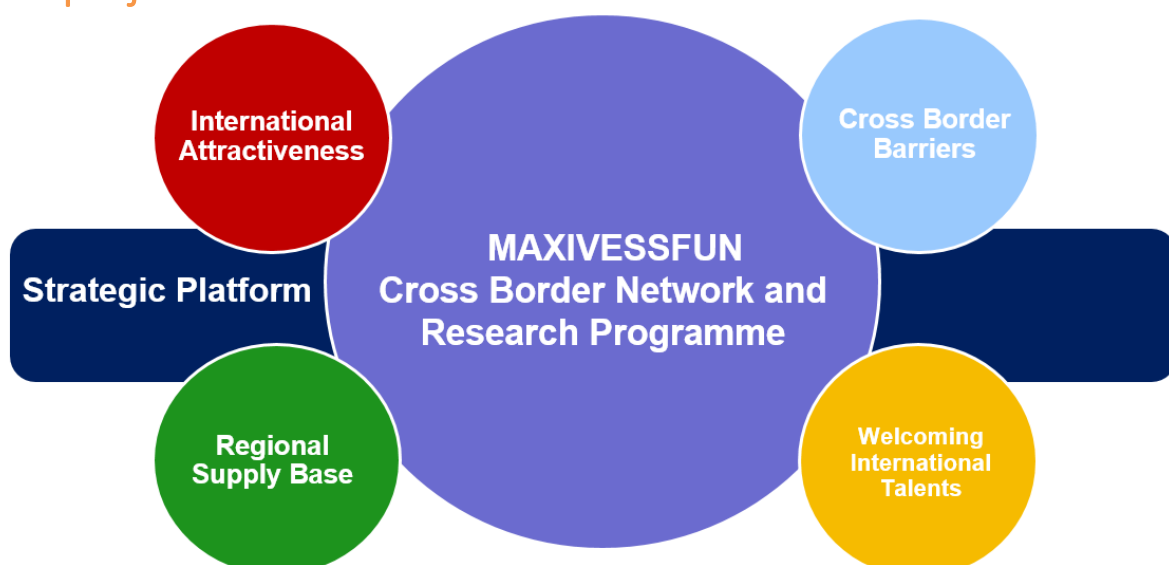
Project Summary, 20-04-2018

**ESS & MAX IV: Cross Border Science and Society** is an EU project led by Region Skåne (Lead Partner) and the Capital Region of Denmark (Co-Lead Partner) in collaboration with 25 partner organisations in Sweden, Denmark and Norway during September 2015 to August 2018. The project has a total budget of nearly 19 million EUR, half of which comes from the EU programme Interreg Öresund-Kattegat-Skagerrak. It's the biggest project to be approved in the programme so far.

The long-term purpose of the project is to develop the region's strengths, such as materials science and Life Science, with the opportunities that come with the establishment of the two world-leading research facilities ESS and MAX IV as a starting point. Synchrotron X-ray facility MAX IV was opened in June, 2016, and completion of the neutron facility ESS is expected at the end of 2019. Thereafter, ESS is to go through a period of three years, and is expected to be up and running around year 2023. ESS and MAX IV offer unique opportunities to study materials on a micro-level by using advanced techniques in a number of research fields. The two research facilities are strategically located next to each other in Lund, with the ESS Data Management and Software Centre (DMSC) in Copenhagen.

The main goal of the project is to increase the share of young researchers in the region who can use the facilities in the future. The project has identified several fields where there is great potential for working across borders. The fields have been divided into five subprojects that are held together by a *Strategic Platform*/overall project management. Altogether, the project has a wide scope for increased benefits to society through ESS and MAX IV. The broad partnership creates opportunities for dynamic learning between different organisations and across country borders.

### Subprojects



## MAX4ESSFUN (Cross Border Network and Researcher Programme)

**Partners:** University of Copenhagen, Lund University, Technical University of Denmark, Malmö University, Aarhus University, Chalmers University of Technology, University of Gothenburg, University of Oslo, ESS, MAX IV

**Budget:** 13,607,293 EUR

The long-term objective of *MAX4ESSFUN* is to increase the share of young researchers who can perform experiments at the ESS and MAX IV. The ambition is for 176 experiment projects of six months each to be completed, with the purpose of increasing doctoral/PhD and postdoc students' user competence within neutron and synchrotron techniques.

The goal of carrying out 176 experiment project has been exceeded by a total of 195 approved experiments. This entails 1170 months of young researchers training in using the techniques available at the ESS and MAX IV. The experiments have a clear cross border dimension, as the students get access to a co-supervisor from a partner university in a different country, the ESS or MAX IV. In total, the subproject includes 585 months of instructor time from senior researchers.

Several interviews and surveys have been carried out and show that MAX4ESSFUN has been regarded as successful, and has for instance given young researchers new and valuable contacts and developed research competence in the region. Many of the researchers have reported that they will most likely use the ESS and/or MAX IV in their future research.

MAX4ESSFUN has arranged several international workshops and summer schools aimed at increasing user competence for researchers in the region. The sub-project has established a wide researcher's network in the region and has also developed two web portals with an overview of all available courses and scientists working with neutrons and X-rays at the eight participating universities. The web portals can be found at [www.max4essfun.ku.dk](http://www.max4essfun.ku.dk).

### Expected results

- Researcher network with 150 existing and new users from academia and industry
- 176 cross border experiments/research projects with neutrons and synchrotron X-rays
- 200 young researchers with high user competence in neutrons and synchrotron X-rays
- 300 – 400 researchers who have participated in activities for improved user competence
- Compilation of the universities' courses and strengths
- Joint summer/winter courses and international workshops (some of them in collaboration with industry)

### Achieved results

- A researcher network among the universities has been developed with more than 150 users from academia and industry
- 195 cross border experiments using neutron and synchrotron techniques have been carried out
- Almost 200 young researchers have increased their user competence through the experiments
- Approximately 300-400 researchers have participated in activities aimed at increasing user competence (courses and workshops)
- MAX4ESSFUN has developed two databases, one of the universities' collected courses in neutron and synchrotron research and one of the region's researchers and their area of expertise
- MAX4ESSFUN will have arranged seven summer schools and five international workshops by the end of the project

## International Attractiveness

**Partners:** Invest in Skåne, Copenhagen Capacity, ESS, MAX IV, Science Village Scandinavia, Medicon Village, Copenhagen Municipality, Lund Municipality, City of Helsingborg, City of Malmö

**Associated Partner:** Lund University

**Budget:** 1,822,000 EUR

*International Attractiveness* takes cohesive action concerning global marketing of the region's joint research infrastructure in Materials Science and Life Science. The ESS and MAX IV are catalysts for work with marketing and sales performed within the subproject. By participating in strategically chosen global conferences and fairs around the world, the subproject is working to attract investments, businesses and researchers to Greater Copenhagen. The subproject has also been successful in attracting international conferences to the region, for example *Nordic Life Science Days 2017* in Malmö and *BIO-Europe 2018*, which will be held in Copenhagen with some sessions located in Malmö and Lund.

International Attractiveness has identified the region's collective strengths and opportunities to attract operations globally through benchmark analysis with other regions. The analysis has formed the basis for the ongoing work which now aims to develop cogent value propositions that can be used for international marketing. These Value Propositions focus on areas such as oncology, nano-technology and hydrogen.

The subproject has identified and contacted "ambassadors" who can spread the word on the region's strengths in Materials Science and Life Science internationally. For example, the Copenhagen Capacity's Goodwill ambassador network, with representatives from industry, has been used for this purpose.

### Expected results

- Cohesive message concerning the region's strengths in Materials Science and Life Science
- Value Propositions (hands-on offers to businesses)
- 50 Goodwill ambassadors spreading the region's message internationally
- Development of a "tool kit" which can be used by multiple parties in the region

### Achieved results

- An analysis of the region's strengths in Materials Science and Life Science was done in the initial phase of the project and can be found on the projects webpage, "[Benchmark and situation analysis report](#)"
- Three Value Propositions on Oncology, Nano-technology and Hydrogen have been completed. The sub-project is currently working on a fourth Value Proposition on Food and Packaging
- Goodwill ambassadors have been identified and will be used to spread the region's core story internationally
- A tool-box has been developed with marketing material, e.g. films and Value Propositions, to be used by the several organisations in the region

## Regional Supply Base

**Partners:** Big Science Secretariat, Industrial Platform in Skåne (Region Skåne), IUC Syd

**Budget:** 488,310 EUR

The objective of *Regional Supply Base* is to increase Swedish and Danish companies' business opportunities in the Big Science industry. Two analyses were developed in the initial phase of the project, one focusing on the facilities' non-technical requirements and operationally crucial events and the second analysis focused on what the competence requirements that businesses in the region need to meet to be able to function as suppliers to the ESS and MAX IV. These analyses have formed the basis for the subproject's activities focusing on strengthening the businesses' networks on the both sides of the Öresund, such as study visits and workshops.

The first analysis showed that the needs from the ESS, MAX IV and other research facilities cover a wide range of products and services, ranging from office supplies to advanced development services. Regional Supply Base chose to focus on regional companies that can form competitive manufacturers of advanced technical products and systems. The second analysis was completed in June 2017 and showed a need for skills development in, for example, production of advanced technology, procurement, 3D printing and other prioritised fields which had been identified through the subproject's workshops. Based on the latter analysis, the subproject chose to arrange workshops in these identified areas and invited stakeholders from both academia, industry and the research facilities in order to obtain an increased collaboration between the sectors.

For bench marking opportunities, the subproject has arranged several study visits for representatives from industry to similar research facilities that have successfully managed to work closely with industry.

### Expected results

- Analysis of non-technical requirements and operationally crucial events at ESS and MAX IV
- Analysis of what businesses require in terms of competence development to enable them to supply services and products to ESS, MAX IV and other large-scale research facilities
- Information and competence development measures, such as within public procurement (supply)
- Cross border business network
- Technology workshops

### Achieved results

- Both analyses have been completed and have formed the basis for the measures for skills development that have been carried out in the sub-project. The analyses are regularly updated.
- Several information meetings for companies have taken place in both Sweden and Denmark
- A cross border business network has been established with more than 300 companies in Sweden and Denmark
- Four technology workshops have been arranged.

## Cross Border Barriers

**Partners:** The Greater Copenhagen and Skåne Committee, the Swedish Public Employment Service, the Swedish Social Insurance Agency, the Swedish Tax Agency, the Skåne County Administrative Board, Öresunddirekt DK, DK Skat, ESS

**Associated Partners:** The Danish Agency for Labour Market and Recruitment (STAR), the Nordic Council of Ministers, the Swedish Migration Agency

**Budget:** 340,505 EUR

This subproject finished in December in 2016 with a stakeholder conference in Copenhagen. At the conference, a brochure with identified cross border obstacles was presented.

During the project period a number of Swedish and Danish authorities have mapped out and analysed cross border obstacles facing third country and EU citizens wanting to commute between Sweden and Denmark. The main obstacles have concerned taxes, social insurances and labour market. A report on this can be found on the project webpage. During the process, the ESS has contributed with cases of cross border obstacles their employees have encountered.

In 2016 the subproject sent an amendment to the Danish Ministry of Taxation in order to influence the "Tax scheme for foreign researchers and highly paid employees" (Forskerordningen) for employees at DMSC in Copenhagen. The new law, called "Lex-ESS", was successfully approved in the Danish parliament in December. The new regulations enables employees at ESS to live in Copenhagen and work in Sweden. The new law came into effect on 1 January 2017.

The cross border obstacles identified in the subproject will continuously be registered in the Freedom of Movement database (Gränshindersdatabas) at the Nordic Council of Ministers, and will be included in the Council's regular work. The remaining obstacles identified throughout the subproject have been implemented in much of Greater Copenhagen and Skåne Committee's work on cross border barriers.

### Expected results

- A report of identified border obstacles faced by EU and non-EU citizens
- Suggestions of solutions to be presented on a national level
- An influence strategy for long-term work
- Information dissemination of results on Öresunddirekt's website/English portal

### Achieved results

- The report "[Hinder och möjligheter](#)" with identified cross border barriers for EU- and non EU-citizens has been produced
- Proposals for solutions have been presented to national governments and has contributed to amendments of two Danish laws
- Strategic communication for long-term work in, for example the Nordic Council of Ministers and the Greater Copenhagen and Skåne Committee
- Dissemination of results on Öresunddirekt's webpage, with some information in English

## Welcoming International Talents

**Partners:** Copenhagen Municipality/International House, Invest in Skåne, Lund Municipality, City of Helsingborg, City of Malmö, Copenhagen Capacity

**Budget:** 952,000 EUR

*Welcoming International Talents* aims to improve services for international talents that move to the Öresund region/Greater Copenhagen. The aim is to build up a cross border network for different organisations in the region working with talent reception in order to share knowledge and best practice. Through the project, new concepts and events for international talents and their spouses are being developed. The events are coordinated based on the target group's needs and focus on areas such as labour market, culture, leisure or social activities. Another part of the subproject involves systematic mapping of talents' needs through an "expat panel", including people on both sides of the strait. The long-term purpose is to get more international talent to remain in the region.

In Skåne, knowledge exchange from Denmark has contributed to the development of a new concept, the "Kick-start program", which aims to make it easier for spouses to enter the labour market. The development of the concept takes place in collaboration with ESS' HR department, the Swedish Public Employment Agency, Öresunddirekt, businesses and other organisations.

In August 2017, the subproject participated at the "HELLOpenhagen" in Copenhagen City Hall, which is a fair that attracts around 1,000 international participants. The fair showcases Copenhagen's culture and leisure offering, and also, thanks to the project, the opportunities offered in Skåne.

The electronic survey "*International Talent Forum*" focused on areas such as "Housing", "Civic participation", "Work" and "Day-care and School" and has been sent to persons that have recently moved to Greater Copenhagen and Southern Sweden. The goal is to map out their needs in order to better adapt the work for this particular target group.

A cross border "Step-by-Step Guide" has been developed, with easily accessible information online for foreigners moving to the region.

### Expected results

- The creation of a cross border knowledge network for reception organisations
- Coordination of joint activities for international talents and those accompanying them
- Development of Talent Forum, Welcome Reception, Culture and Leisure Guides and a Step-by-Step Guide
- Better communication and marketing of events for talents arranged in the region

### Achieved results

- Increased knowledge exchange for stakeholders in the region working with international talents
- Coordination of several common activities for international talents and accompanying partners
- Development of a cross border International Talent Forum
- Three fairs in Copenhagen (HELLOpenhagen/Welcome Reception) have been held
- The "Culture and Leisure Guides – concept" has been evolved in Skåne
- A digital "Step-by-Step Guide" for new arrivals, <https://international.kk.dk/checklist-newcomers>
- Improved communication on events arranged in the Greater Copenhagen-region

## Strategic Platform

**Partners:** Region Skåne, Capital Region of Denmark

**Budget:** 1,766,200 EUR

The purpose of the *Strategic Platform* is to lead and coordinate the project. The platform shall ensure goal achievement, cross border added value, and synergies between the subprojects. A coordination group with representatives from all subprojects has supported the project management team, and contributes to ensuring synergies between the work packages. The project management team has reported the project's implementation status to the Steering Group twice a year and has initiated strategic discussions in an Advisory Board consisting of organisations and authorities on both regional, national and international levels.

The project management team has arranged four strategic forums throughout the project on cross border themes regarding horizontal criteria, Science Village Scandinavia, innovation, and internship positions at the ESS.

In September 2017, the Strategic platform arranged a workshop focusing on how to meet set goals in the project and if there were any particular issues to address in order to ensure that the work and collaboration built up will continue after the project has ended. Since then, several ideas for new projects have been developed and are in the process of application.

The project management team has continuously worked on spreading information on the project, its results and key messages. This has been done both on a regional, national and international level by arranging and participating in a number of meetings and workshops, such as University Business Forum in Sofia and the Danish Folkemödet in 2018.

The project management distributes monthly newsletters and social media to give information about the project and disseminate results. Several young researches have been interviewed and highlighted in the newsletter as a way of disseminating outcomes of the project.

In May 2018, the project management will arrange a seminar during the Fehmarnbelt Days in Malmö on research collaboration in the Nordic countries together with Hamburg. On the 21<sup>st</sup> of August, the project's final conference will be held in Malmö with f.ex. participants from national level in Sweden, Denmark and Norway, together with representatives from the ESS and MAX IV.

## Contact:

Eskil Mårtensson,  
*Project Manager*  
[eskil.martensson@skane.se](mailto:eskil.martensson@skane.se)

Louise Svensson,  
*Project Secretary*  
[louise.c.svensson@skane.se](mailto:louise.c.svensson@skane.se)

Thomas Nilsson,  
*Communicator*  
[thomas.j.nilsson@skane.se](mailto:thomas.j.nilsson@skane.se)

Jakob Øster,  
*Co-Project Manager*  
[jakob.oester@regionh.dk](mailto:jakob.oester@regionh.dk)

Anna Hjerresen Schuppli,  
*Project Secretary*  
[solveig.hvidtfeldt.larsen@regionh.dk](mailto:solveig.hvidtfeldt.larsen@regionh.dk)

Solveig Hvidtfeldt Larsen,  
*Communicator*  
[solveig.hvidtfeldt.larsen@regionh.dk](mailto:solveig.hvidtfeldt.larsen@regionh.dk)

**Website:** [www.scienceandsociety.eu](http://www.scienceandsociety.eu)

**Twitter:** @ESSMAXIV\_CBSS

