

# Neutrons and Food

29 Jan – 1 Feb 2012, Delft  
<http://neutronfood.tudelft.nl/>



## Topics

Dairy  
Lipids and fats  
Protein and complexes  
Food packaging (biodegradable plastics)  
Digestion and metabolic processes  
Carbohydrate/biopolymers  
Nutrition and health  
Drinks and beverages  
Sample environment  
Plant materials  
Glassy states

## Invited speakers

Monique Axelos  
(Inra Angers-Nantes)  
Arjen Bot  
(Unilever, Netherlands)  
Peter Fischer  
(ETH, Zürich, Swiss)  
Richard Ipsen  
(Univ. Copenhagen, Denmark)  
Andrew Jackson  
(ESS, Lund, Sweden)  
Martin Leser  
(Nestlé, Lausanne, Swiss)  
Alan Mackie  
(IFR, Norwich)  
Annika Olsson  
(Lund Univ., Sweden)  
Maria Antonietta Ricci  
(Roma tre Univ.)  
Jan Swenson  
(Chalmers Univ. of Tech., Sweden)  
Cook and Chemist (Netherlands)

## Advisory Committee

Elliot P. Gilbert  
(ANSTO, Australia)  
Tommy Nylander  
(Lund Univ., Sweden)  
Hans Tromp  
(NEZO, Netherlands)

## Organisers

Wim Bouwman  
(Delft Univ. of Tech., Netherlands)  
Erik van der Linden  
(Wageningen Univ., Netherlands)

## Deadline abstracts

9 december 2011  
[neutronfood@tudelft.nl](mailto:neutronfood@tudelft.nl)

## Neutrons & Food workshop

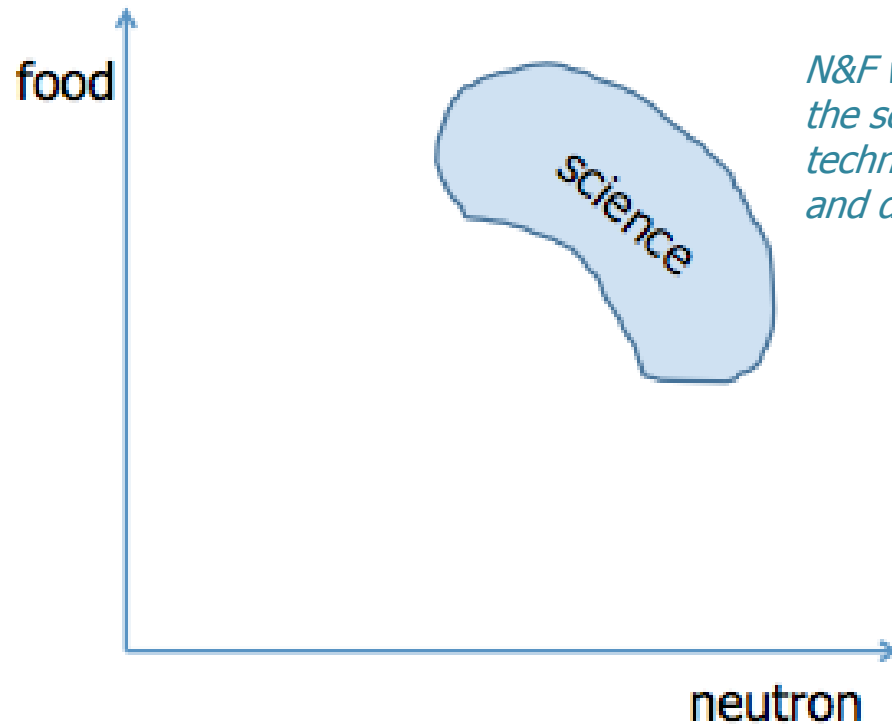
Delft, Jan 29<sup>th</sup>-Feb 1<sup>st</sup> 2012

ESS Science Symposia

Sofie Ossowski

# Aim of the workshop

*Spectrum - Product  
development and pure  
fundamental science*



*N&F workshop – cross section in  
the science field in between  
technology, fundamental science  
and direct product design.*

*Spectrum - Pure  
technology and the  
science performed  
with neutrons*

Malmö

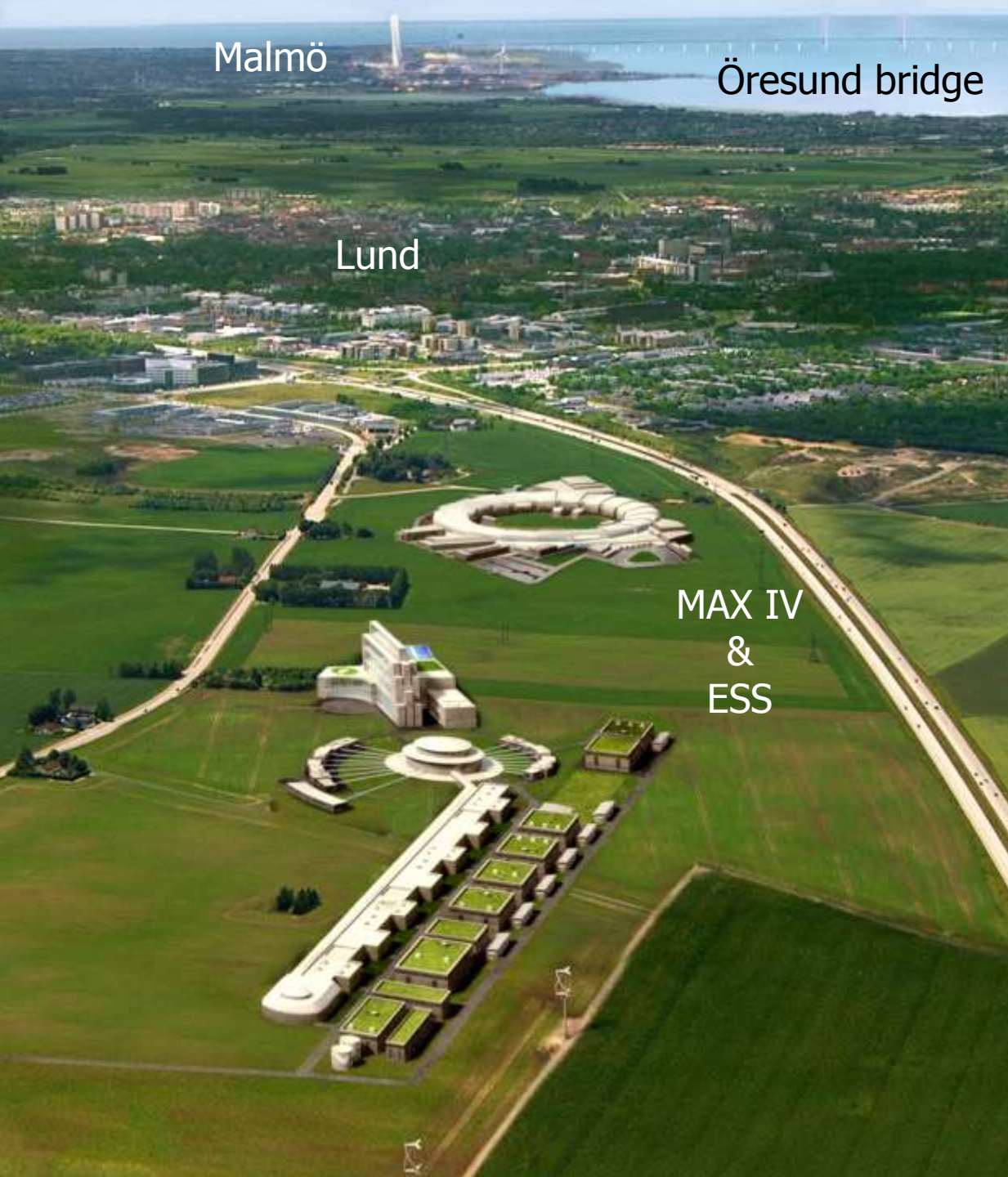
Öresund bridge

Copenhagen

Lund

MAX IV  
&  
ESS

The European  
Spallation Source



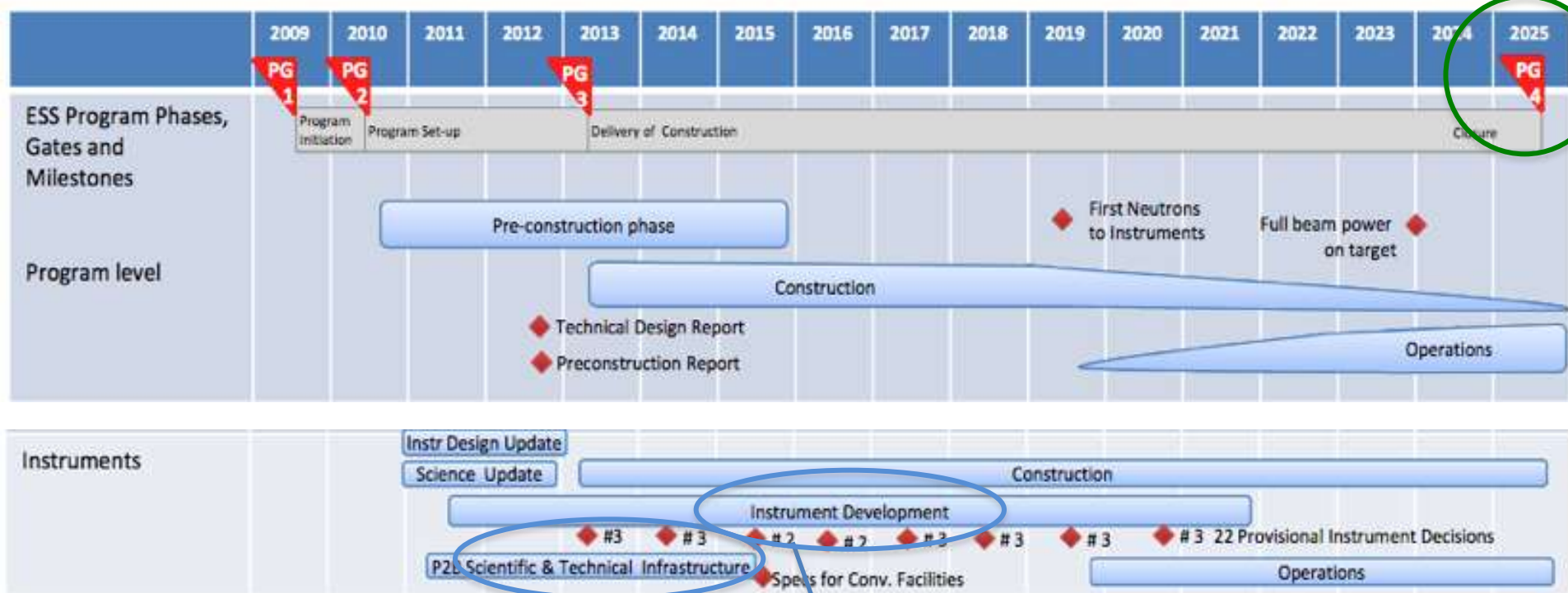
- ESS will be the world's best source of slow neutrons by 2025
- ESS will produce its first neutrons in 2019
- ESS will cost 1479 M€<sub>2008</sub> to construct





# We need your input

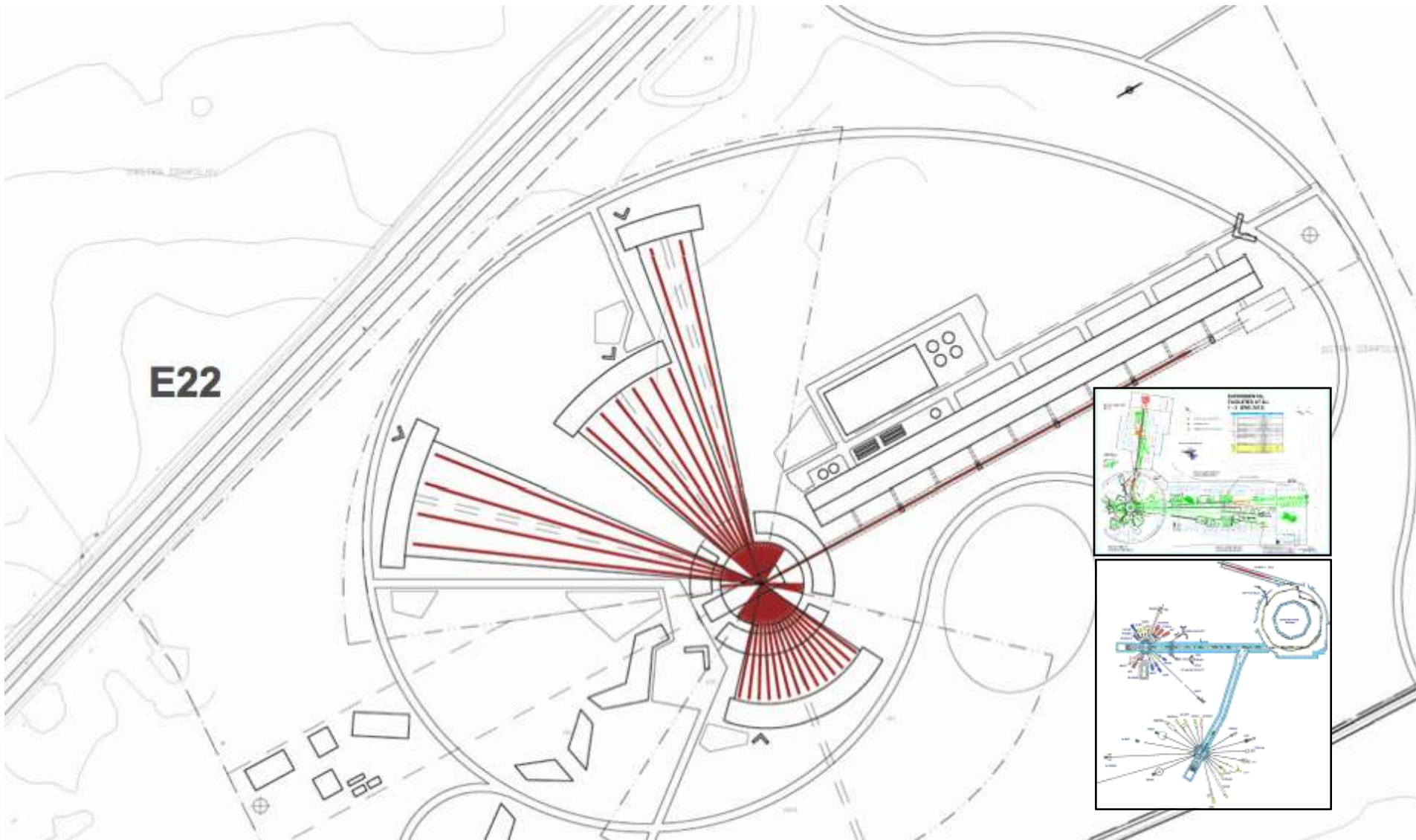
Full  
Specification



*Input and advise on scientific support (infrastructure, support labs, user facilities etc)*

*Input and advise on instruments to built*

# Possible Instrument Layout



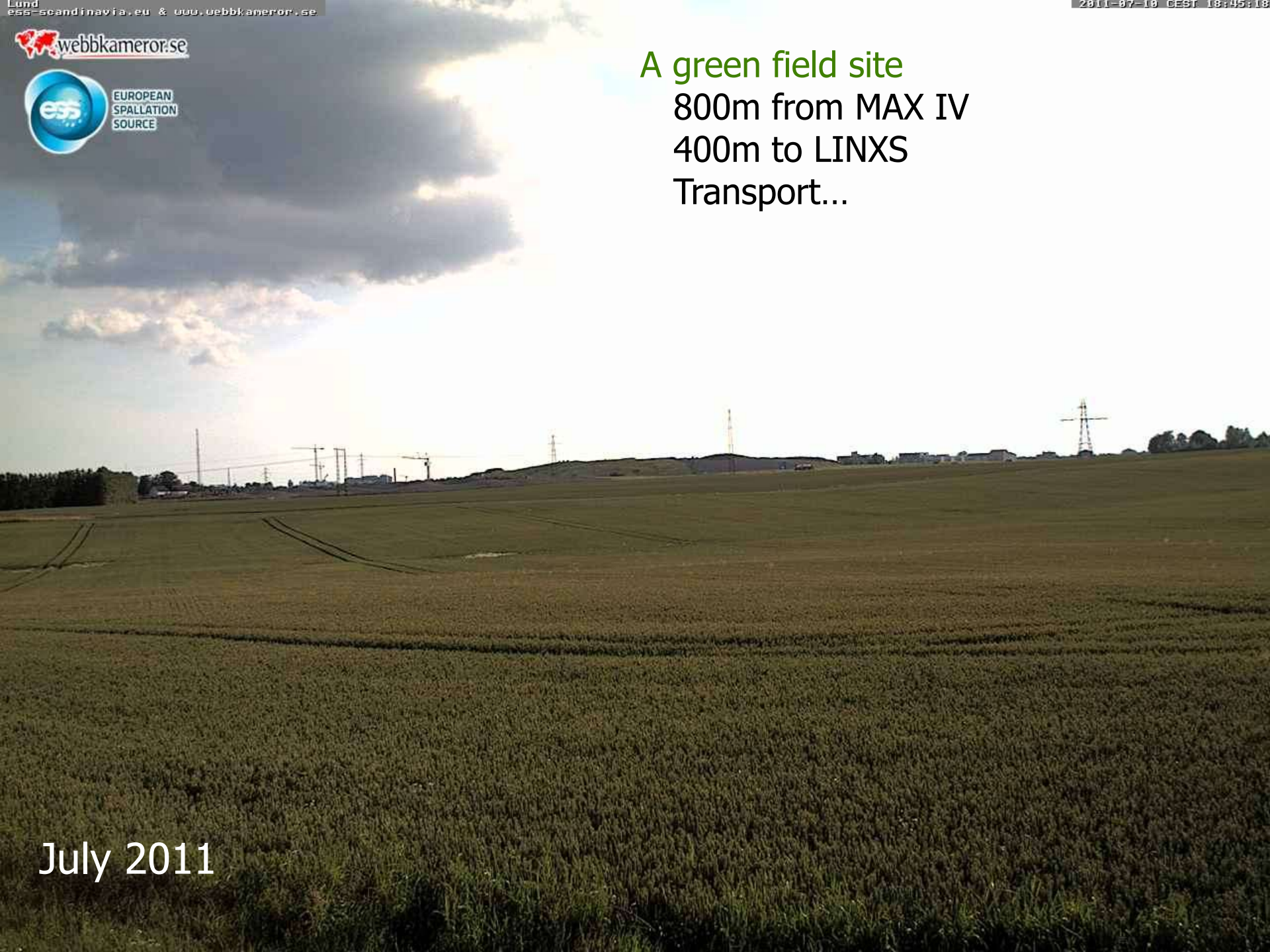
# Co-location with a high brilliance synchrotron

MAX IV





A green field site  
800m from MAX IV  
400m to LINXS  
Transport...



July 2011



North America



The Pyrenees



# "More than simply neutrons"

The Partnership for Structural Biology



Five separate Institutions  
with a common purpose  
11.6 M€<sub>2003</sub>



## Qualities

Scandinavian elegance and modesty  
Quietly impressive  
Functional  
Not exaggerated  
Quality without luxury  
Human scale

A meeting place – open and accessible  
Conference rooms  
Lecture theatres  
Accommodation block  
Cafés and Restaurants  
Inviting and relaxing

Leisure  
Exercise  
Arts and Sciences  
Nature and diversity  
Sustainable  
A Welcome



## Contents & Function

Centre for Energy Materials  
Centre for Climate Materials  
Centre for Health Materials  
Centre for Industrial Materials  
Centre for Sustainability Materials

...

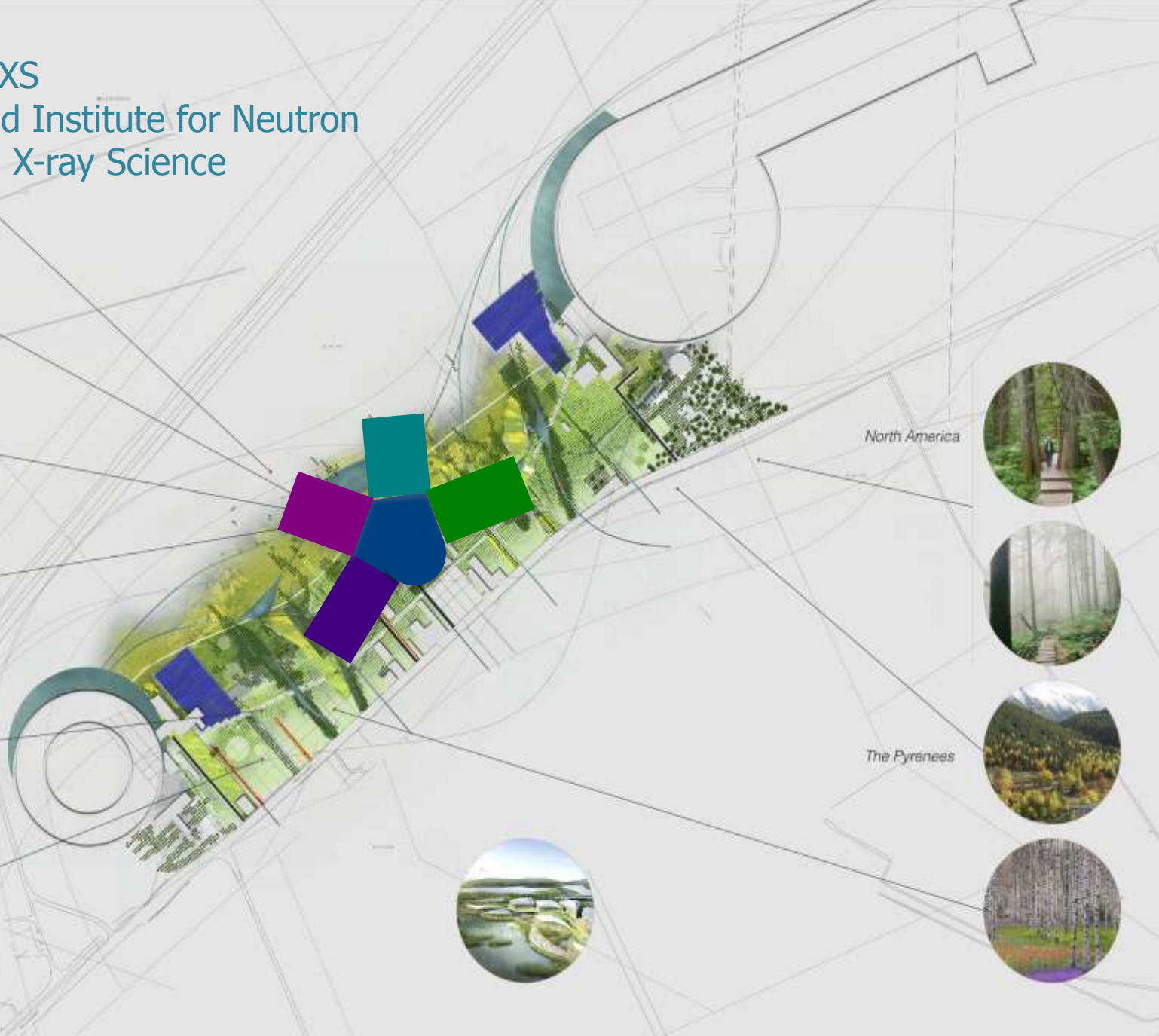
Managed by European Institutes  
together with ESS & MAX IV  
for their researchers

# LINXS Lund Institute for Neutron and X-ray Science



North America

The Pyrenees



## Aim of workshop & anticipated outcome

- Further identify the scientific needs for food science
- Illustrate possibilities of neutron scattering in food science

...

*- Provide us with science-driven recommendations for ESS Instrument suite, Scientific Infrastructure and to highlight challenges*

# Thank you!

A decorative graphic in the bottom right corner consisting of several overlapping, curved blue bands in various shades of blue, creating a wave-like effect.