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Postcard from the chairman

Many of us are already into vacation mode, either having started or heading into. On a personal level most of us dream of and enjoy beautiful summer weather, on the other hand professionally we feel best when the sky is grey and chilly winds whisper around your ears.

However, we may say, yet another area where we science centre people have a privilege, we are happy regardless of the weather.

The spring semester is behind us and preparations for the autumn semester should be finished. This does however not leave us on the dole, the summer is the peak season for many of us with higher income per visitor giving us a financial platform for the less "profitable" seasons. Therefore we all have to put our forces together to try to prolong and nourish the positive trend in visitor numbers and contribute to strengthening the science centres position in society as is.

The forthcoming annual meeting and conference in Helsinki is the perfect meeting place to discuss this and expose yourself to inspiration from colleagues and other knowledgeable and skilled people. This year's program is at premium level, great honours to the organizing committee. The rest is up to you – we expect to see you in Helsinki in September.

The NSCF Board will take the opportunity to raise some topics concerning the organization's mission at the conference. Previously the following has been considered "pillars" in NSCF's activity:

- The newsletter and information flow
- The annual meeting and conference
- Professional meeting places for staff
- Nordic projects and Nordic lobbying
- Scholarships and grants
- NSCF web site

Are these still alive and should the structure be strengthened by other "pillars"?

Looking forward to see you all in Helsinki!

All the best from



Svein Anders Dahl

Visiting a giant heart...

Paula Bäckman

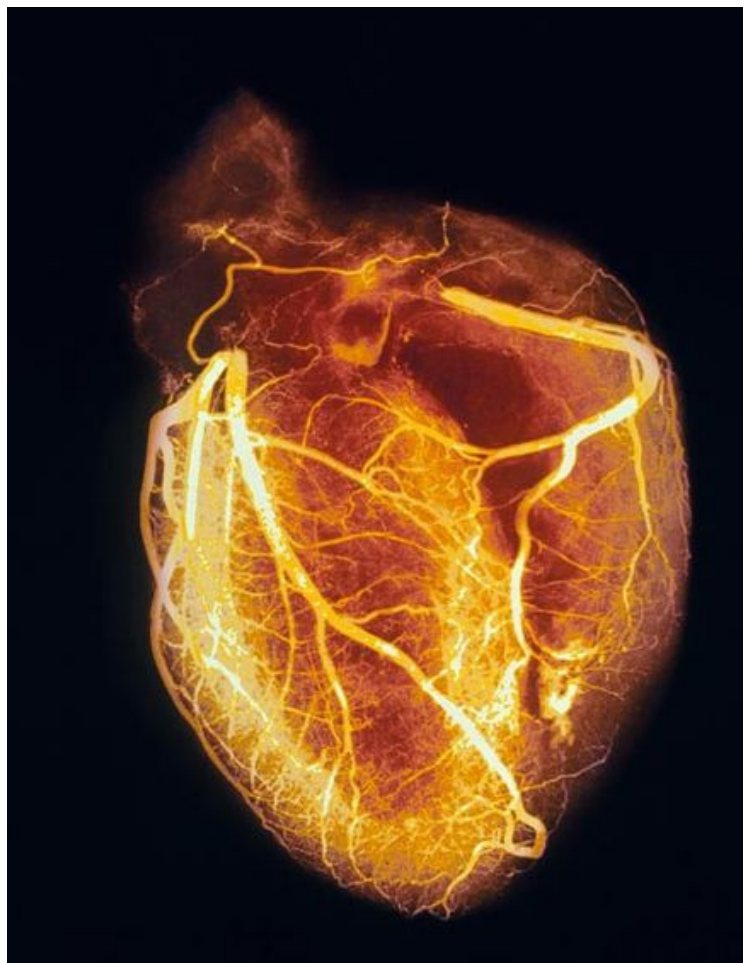
Head of Educational Development

In Balthazar Science Center in Skövde, visiting school classes get to experience how fantastic our heart is by lots of activities and experiments. They can find out how much blood your heart pumps every minute, how you can make your heart beat faster, but also how you can make it slow down. It is possible to investigate all different chambers by creeping around in the giant heart, look at the circumflex arteries and perform pacemaker surgery or a balloon angioplasty intervention.

The aim of our heart theme is to have experiments and activities that schools will use in their teaching in health related topics. This teaching tool will arouse curiosity and interest in health promotion, science and technology.

- Young people will become more positive about themselves and their bodies
- They will see a direct link between their lifestyle and health
- Young people will develop a greater understanding about what effects their bodies and their health
- Teachers and educators will see that the theme makes their teaching richer.

Kids' comment on further development: "One could have a huge body to walk through, and to walk through different parts of the body... imagine walking inside a big stomach too"



Today's food production

Anne Jorunn Frøyen, Jærmu-seet

In September 2009 Jærmu-seet, with its two science centers Vitengarden and Vitenfabrikken, hosted the yearly NSCF conference. Food and food production, and the impact of this on science centers, was discussed at the conference.

Vitengarden (the Science Farm) is situated in the south of Jæren, in one of the best agricultural areas in Norway. It is mainly the mild climate and a long growth season that makes it a good farming area. A new greenhouse will be starting its production of tomatoes this spring, this will result in that the farmers of Jæren will completely dominate the Norwegian tomato production.

The neighbor of Vitengarden is Kviamarka, a cluster of different aspects of the food industry, with slaughterhouses, dairy and greenhouses. The conference participants were informed how the industries are planning to cooperate to save energy and reduce the emission of carbon dioxide. They also got a guided tour of the greenhouse.

The answer to the energy problem

The conference participants were invited for a cup of coffee, together with a presentation of the energy cooperation in the industry cluster. It is a unique cooperation where the largest dairy in Norway is the hub. Natural gas is used as the energy source in the production of dairy products. Carbon dioxide from the combustion of the natural gas is transported to the greenhouse where it

increases the tomato production significantly. The dairy has excess heat from its production. It goes into a waste heat plant, together with waste heat from several other industries in the cluster. This supply all the heating needed for the tomato production. The use of this innovative technology results in the new greenhouse being the only large tomato production facility in the Nordic countries that does not require central heating.

Jæren has also one of the most intensive livestock in Europe. There are plans for a biogas production in the nearby industrial area, based on that local manure will supply energy. It will be possible to produce and refine food on large scale using only the energy produced from manure and food waste.

The new greenhouse

The total size of the new greenhouse is going to be approximately 77.000 square meters, more than the size of 10 full-scale football stadiums. It is going to produce 1.500 metric tons of tomatoes and nearly 400 metric tons of sweet peppers, also called snack pepper. The dimensions are huge in the largest greenhouse in the Nordic countries. It also made an impression on the conference participants. The tour was given by Kåre Wiig, who initiated the project. The tomatoes are going to reduce the import. When operating on full capacity 90 employees will produce 30% of the tomatoes consumed in Norway.



NSCF conference 2009

Elin Ravndal Bell, Jærmuseet

The 2009 NSCF annual conference took place at Jærmuseet in Sandnes, Norway, 25th – 27th November 2009. 30 participants from 15 different science centers from Iceland, Finland, Sweden, Denmark and Norway attended the conference.

Jærmuseet is located on the Southwest coast of Norway, and is responsible for two science centers; Vitenfabrikken “the Science Factory” in Sandnes and Vitengården “the Science Farm” in Nærbø. Jærmuseet has also got “Science Circus”, a science center on wheels that travel to schools in the south and southwest regions of Norway. The museum was in 2009 awarded the European Michelletti Award and also the Museum of the Year award in Norway. One of the largest travel magazines in Norway, “Reiser&Ferie” also voted Jærmuseet, with its two science centers, to the “most charming museum for children”.

The main part of the conference was held at Vitenfabrikken, a science center and museum that opened for the first time in 2008. The main focus for Vitenfabrikken is astronomy, science, mathematics and regional industrial history. All participants stayed in Sandnes, only a short stroll from the science center.

Programme

All participants arrived Wednesday night for an informal reception at Vitenfabrikken. The social parts of a conference is important, and it was good to meet new and old friends from the Nordic science centers again. All participants were given a tour of Vitenfa-

brikken, with focus on the process of how to create a science center.

Thursday morning all participants were collected by bus that took us through spectacular landscape of Jæren and its beautiful beaches. The first stop was at Kviamarka, a cluster of different aspects of the food industry, with slaughterhouses, dairy- and greenhouses. The participants were informed how the industries are planning to cooperate to save energy and reduce the emission of carbon dioxide. The session also included a guided tour of the greenhouse, with its 77 000 m² it is one of the largest of its kind in the Northern part of Europe.

The participants continued on to Vitengården, which is located only a few kilometers from Kviamarka. Vitengården is placed in one of Norway's best agricultural areas, due to the mild climate and a long growth season and the close distance to Kviamarka gives the science center many new opportunities in order to show processes from the industry. At Vitengården, the participants were greeted by manager Helene Østby Larsen, Senior Advisor of Jærmuseet Anne Jorunn Frøyen and Manager of Education, Knut G. Austad. Helene and Knut explained the participants how Vitengården consistently use the nature as the class room, and how experiments inside the Science centers are connected to activities in the outdoors. Anne Jorunn Frøyen spoke about contextualization and green hot spots in the Science Centers, and how science centers can be relevant and constitutive, and address local and global society issues.

At lunch, participants got a taste of Jæren with “Jæren tapas”, all ingredients grown in

the areas around Vitengården. The bus then headed back to Vitenfabrikken for the afternoon session of the conference.

The first part of the programme at Vitenfabrikken was “the year of Astronomy”. Speaker Pål Brekke is a Scientist, Sunphysicist and senior consultant at Norwegian science center. Pål Brekke has published more than 40 scientific publications. He explained cosmic travel through the universe and down to the climate changes on Earth.



The key speaker of the conference was Theo Jansen. He is known as the Leonardo Da Vinci of the 21st century and has devoted his body and soul to creating a new life-form over the last two decades. Theo Jansen took the participants through the process of how he has created skeletons that are able to walk on the wind, out of using only yellow tubes as the material. The participants got to meet some of Theo Jansen's creations, and he explained his theories that have made him to a leading innovator and a kinetic sculptor. Read more about Theo Jansen on www.strandbeest.com

The workshop of the conference was held Wednesday afternoon, where manager of Science Circus, Ivar Reed Nakken, instructed the participants how to build a telescope similar to the Galileo scope. The Galileo scope has been part of the Year of Astronomy in Norway, and all Science Centers have handed out free galileoscopes to school children.

The dinner was hosted by European Champion Chef, Charles Tjessem. It started with a tasting lab where all participants got to test their senses, and where we can taste the different flavours on the tongue. Why do white wine and red wine taste so similar when we cannot see the colour and it is served at the same temperature?

The first speaker Friday morning was Sigurd Nielsen, General Secretary of the expert group – the Norwegian Science Center program. Sigurd Nielsen explained to the participants how the program was created, and how the group has worked. The expert group's task was to assess the 7 regional science centers in Norway's development in reference to the National schemes 12 criterias and strategies and to the Governing member peer consultation report. The expert group ended up with future strategies for the schemes in relation to finances, income structure, regional responsibility, cooperation with scientific environments and cooperation with the scheme. The presentation can be found on NSCF's website.

The last speaker of the conference was CEO of VilVite, Svein Anders Dahl and Financial manager of VilVite, Hanne Grete Ringstad. VilVite took the initiative to create a benchmarking structure for the

science centers in Norway, measuring key numbers for the science centers such as investment per m², total income per full time employee, number of visitors per employee and so on. Svein Anders Dahl and Hanne Grete Ringstad explained how the science centers can benefit from benchmarking, how improvements can be made based on numbers from others in the same industry and how the Nordic science centers can work to develop the benchmarking model and make use of it.

The annual conference of NSCF was then held, before lunch and departure to Stavanger and the Norwegian Oil Museum. A guided tour was given, with emphasis on the newest exhibition "The North Sea Divers", which ranks as the largest single project mounted by the Norwegian Petroleum museum since it opened in 1999.

The conference touched many different subjects, from green hot spots to the universe above. On behalf of Jærmuseet, I would like to thank you all for participating. The NSCF conference is a great way for all Nordic Science Centers to meet, share ideas and work together to improve on our main tasks. Until we meet again – på gjensyn!



We urge everybody in the NSCF family to promote the annual conference September 15-17 at Heureka, your own participation is expected. More information to be found at:

<http://www.nordicscience.org/>



2nd Circular

NORDIC SCIENCE CENTRE ASSOCIATION ANNUAL CONFERENCE

“VISITORS LEARN AT SCIENCE CENTRES”

Vantaa/Helsinki, Finland, September 15-17, 2010

Heureka, the Finnish Science Centre and the Finnish Museum of Technology, both long-standing NSCF Members, have the pleasure to invite you to this year's Annual Conference to be held in Vantaa and Helsinki, Finland, on September 15-17. The theme is topical: *“Visitors Learn at Science Centres”*.

Conference Registration

The Conference fee will be **240 euro** including all receptions, lunches, coffee breaks and excursions in the programme or **180 euro** for one day. A detailed programme follows in the next pages.

Register by completing the enclosed registration form and returning it by **August 20, 2010** to Ms. Päivi Garner at Heureka (paivi.garner@heureka.fi).

Invitation to Contribute

The Organizing Committee invites NSCF Member Institutions to contribute to the programme in two Panorama Sessions. We welcome 5-minute presentations introducing the participants' institution and activity or a specific project or programme, planned or already implemented. These sessions require pre-registration, please use the form provided.

Welcome to Finland and NSCF!





NSCF offers study grants!

If you would like to send a member of your staff on a practical training at another NSCF member science centre, you can apply for an up to DKK 10.000 grant from NSCF. Please send an application by e-mail to our chairman Svein Anders Dahl, sad@vilvite.no.

The application shall contain:

1. Name of applicant and applying science centre
2. Name of science centre to be visited
3. Date of the practical training
4. Description of what you are particularly interested in during the training

After the practical training period, a short report must be written to the NSCF Newsletter. When the report has been submitted, NSCF will pay the grant to the applying science centre.

We have received some applications and all members are encouraged to apply within August 20th 2010 if you want to be part of this year's distribution.

Explainers' seminar 2011

Next year's explainers' seminar will take place in Copenhagen at Experimentarium January 12th to 14th 2011. Reserve time in your calendar!



NSCF Newsletter

To keep a newsletter a living forum for information and discussion relies on → **YOU**. Please forward your contributions to sad@vilvite.no, illustrations and pictures are always welcome, but in compressed format.

To fill the last page of this Newsletter I tak the liberty of sharing some pictures from VilVite with you.

