

BigScience.dk & brokerage events

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BigScience.dk

CERN Industrial Liaison Officer for Danmark



Uddannelses- og
Forskningsministeriet
—
Styrelsen for Forskning
og Uddannelse

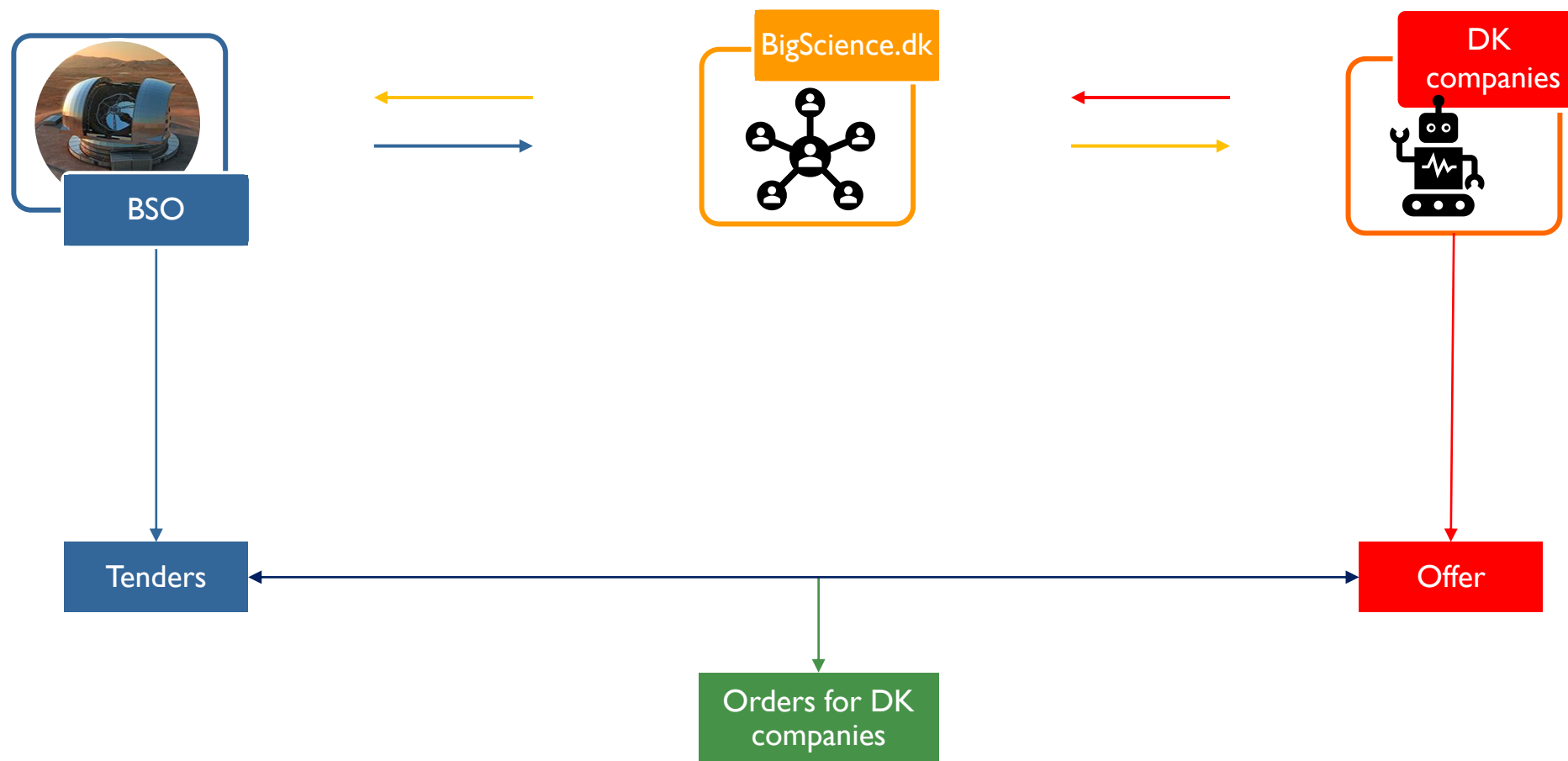


**TEKNOLOGISK
INSTITUT**



Danmarks
Tekniske Universitet

BigScience.dk – Link between Big Science Org and DK companies



2020: 10-year anniversary



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CERN

"As an ILO function they punch well above their own weight"

- Anders Unnervik, indkøbschef, CERN



CERN arbejder med grundforskning inden for partikelfysik ved studier af kolliderende højeenergi partikelstråler. CERN finansieres af 20 medlemslande, der betaler et bidrag proportionelt med deres BNP. Med konstruktionen af LHC (Large Hadron Collider, operationel fra 2011) kan kollisioner mellem protoner eller blyioner med energier op til 7 tera-elektronvolt studeres. Partikler trækkes desuden ud i diverse andre testfaciliteter og bruges af besøgende forskere til studier af materialer og strukturer på atomart niveau og til kerneforskning.



*Interview med
Anders Unnervik
indkøbschef, CERN*

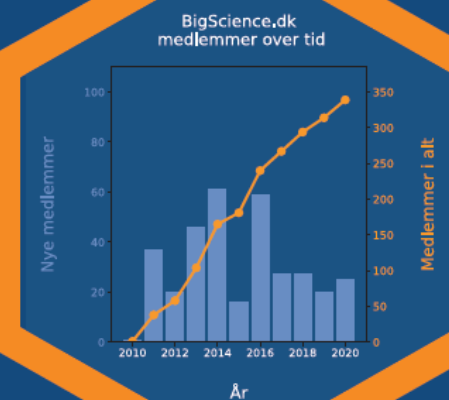


CERN works with fundamental research within particle physics by studying colliding high-energy particle beams. The beams are directed to test facilities, where materials and structures on the atomic level are examined.

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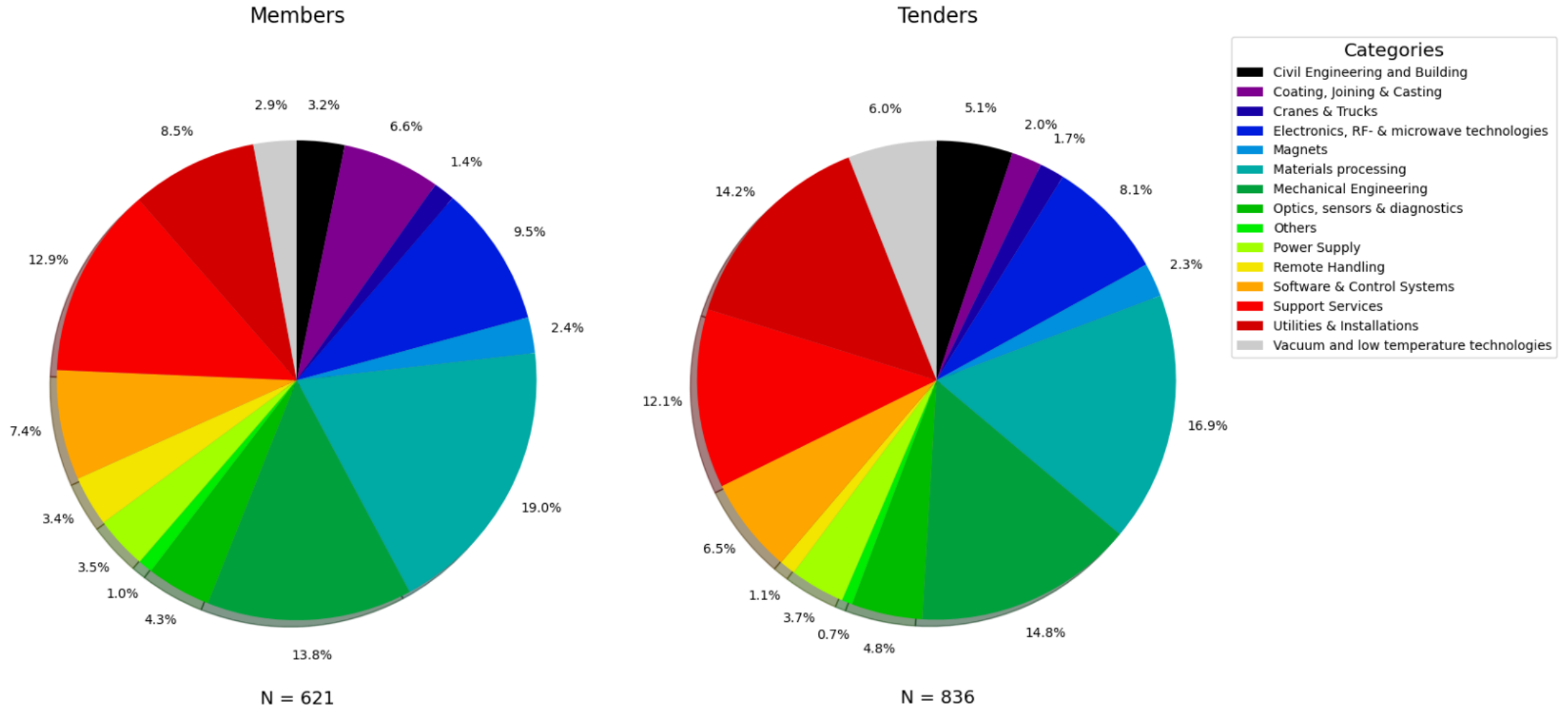
BigScience.dk-netværket

På kortet ses, hvordan medlemmerne er spredt i hele landet, og grafen viser netværkets vækst i perioden 2010-2020. Udviklingen er gået særligt hurtigt i årene med ekstra ressourcer 2013-2014 via Vækstmotorprojektet og i 2016 via Interregprojektet "ESS & MAX IV Crossborder Science and Society".



Match between BigScience.dk member's offers and demand

Categories across members and tenders



BigScience.dk and the role of Industrial Liaison Officer



Peter Frank
ILO for ESO
Network manager



Arne Jensen
ILO for ESS



Søren Bang Korsholm
ILO for F4E (ITER)



Nikolaj Zangenberg
ILO for CERN, ESRF & European-XFEL



Jonas Okkels Birk
ILO for ILL



Henrik Bak Jeppesen
Co-ILO på CERN & ESRF



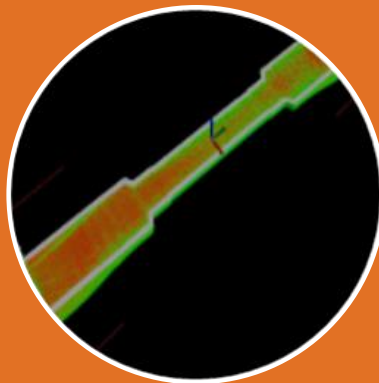


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Suppliers for the
Big Science
market


BigScience.dk



Technologies from
Big Science
applied in industry



Analytical services
for companies at
Big Science
facilities

DTI – Big Science Center

Best practices from organising RI events

Big Science Business Forum, International, Feb 2018

Worlds first industry fair on the Big Science market for suppliers

- ▶ **1037 participants** from 530 companies from 29 countries
- ▶ **120** presentations of BSO procurement needs
- ▶ Survey:
 - ▶ **95%** satisfaction
 - ▶ **98%** would participate in future BSBF

Key ingredients for success:

- ▶ Political support (€)
- ▶ Buy-in from facilities (CONTENT)
- ▶ Engage ILOs (OUT-REACH)
 - ▶ Disseminated to ILO-fora at each BSO
 - ▶ Promotion at single-BSO supplier events



Materials from Big Science to Industry, National, Sep 2019

Pilot event on Technology Transfer

- ▶ **30 participants** - few actual companies
- ▶ Presentations from **CERN, ESA BIC, ITER**
- ▶ Examples from companies

Evaluation:

- ▶ Good presentations (CONTENT)
- ▶ Poor engagement with companies (OUT-REACH)
 - ▶ Alignment with co-organisers

dmn
DANSK MATERIALE NETVÆRK



CenSec
CENTER FOR DEFENCE, SPACE & SECURITY


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New materials from Big Science
- the technologies of tomorrow in your company?

Friday September 20th, 2019 - 9.00-16.00
Danish Technological Institute, Gregersensvej 1, Taastrup



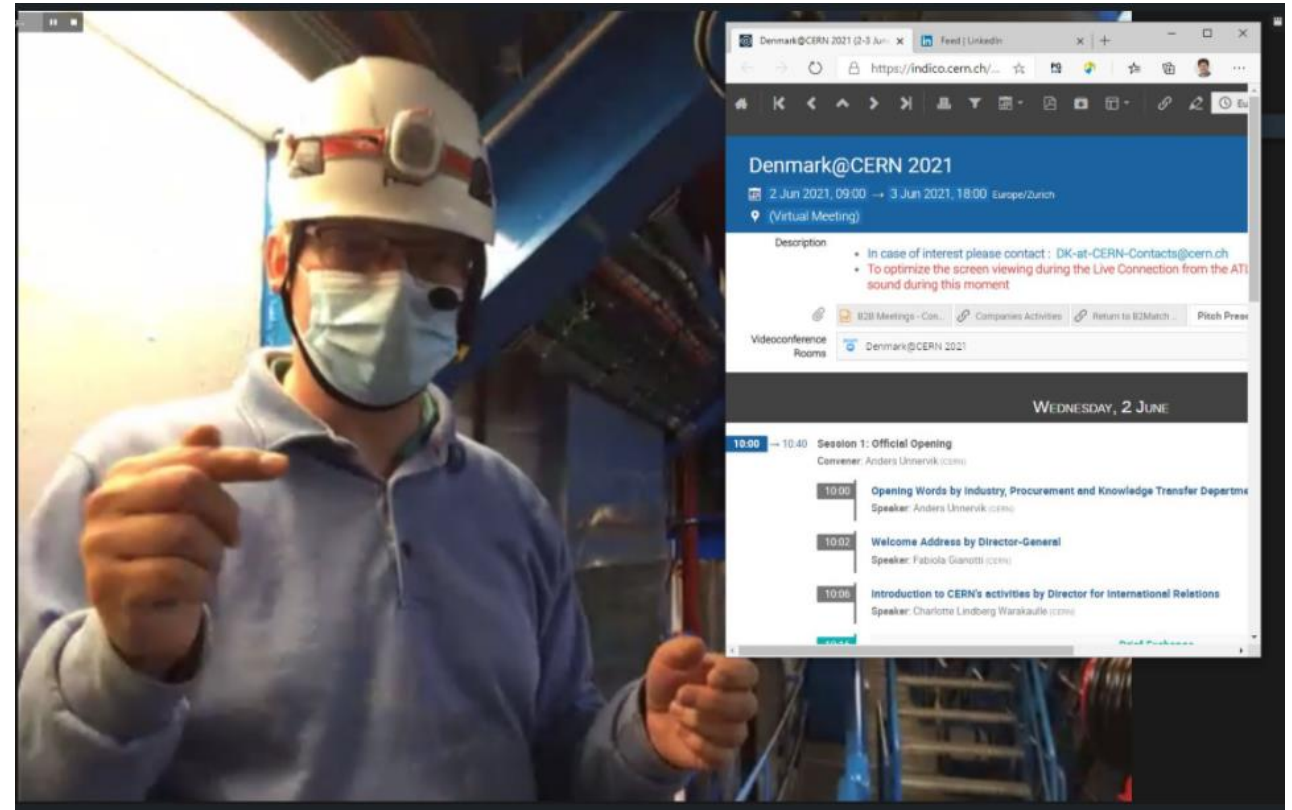
DK@CERN, National, June 2021

CERN standard event for suppliers

- ▶ "Brand recognition" - organised every 2 years
- ▶ **17 companies** participated in 2021
- ▶ Online event with:
 - ▶ general presentations
 - ▶ a tour (!)
 - ▶ B2C meetings

Evaluation:

- ▶ Feedback from companies – ongoing...
- ▶ Excellent e-tools and support from CERN
- ▶ Improve pre-event interaction with companies



Use succes stories to promote events



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CTS Ceramics



Development collaboration with CERN led to a high-tech order for CTS Ceramics Denmark

In 2020 CTS Ceramics Denmark delivered 5 custom-made actuators to CERN, while 15 more are expected to be delivered for a total contract value of more than half a million DKK.

Custom-made piezoelectric actuators are one of CTS Ceramics Denmark's competencies. The company, previously called Noliac, entered into a partnership with CERN in 2014 to develop actuators that can withstand high temperatures. CERN is currently testing crystal collimation as part of the Large Hadron Collider (LHC) upgrade project, which includes producing piezoelectric actuators.



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PVD-manufacturer wins large framework contract at ITER

The PVD equipment manufacturer Polyteknik is a supplier to both CERN and ESO. The company has recently won a four-year framework contract at ITER, where it will develop a system for self-cleansing mirrors.


The many mirrors on the ITER reactor will over time become contaminated by deposits from the use of the reactor. Therefore, the ITER organisation has searched for a supplier who can develop a system for the mirrors to clean themselves and has chosen the Danish company Polyteknik, which has won a framework contract.



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RECAB works with ESS on embedded computer systems

High performance and flexible systems means that RECAB's solutions have caught the interest of the Big Science organisations.

For many years, RECAB has delivered embedded computer systems for demanding applications, primarily within the telecommunications industry. In 2012, the company met engineers from the European Spallation Source, which at the time was in its early stage.

"At that time, we met with people from ESS at technology meetings, where we discussed how the technology we work with could meet the needs of ESS," says Sørensen, Country Manager & Engineering Director at RECAB.