

Behind the scenes at the Big Science Business Forum (BSBF): New procurement practices can support large research organisations

by Interview by Romain Muller (CERN)

[interview Anders Unnervik BSBF procurement](#)

An interview with Anders Unnervik, Head of the Procurement and Industrial Services Group at CERN



Anders Unnervik addressing the audience at BSBF in February 2018 (Image: Rikke Kolding for BSBF2018)

The first edition of the Big Science Business Forum (BSBF) was organised from the 26th to 28th of February in Copenhagen. Anders Unnervik, Head of the Procurement and Industrial Services Group at CERN, is a member of the International Organising Committee of the BSBF. We interviewed him about the event and how it will influence the sourcing strategy of large research organisations in Europe.

Anders obtained an MSc in Industrial and Management Engineering in Linköping (Sweden), before joining CERN in 1988, as a member of the Procurement Service Group. After heading several procurement projects, he became Head of the Procurement and Industrial Services Group in 2008. For Anders, procurement is very rewarding, as it gives the opportunity to explore many different technical fields: “I was lucky to be involved, from the very beginning, in the LHC procurement process and to work on all the big contracts. Each of the technical specialities you get involved while procuring products or services is truly fascinating”.

The BSBF2018 vision was to provide an important stepping-stone towards establishing a stronger, more transparent, and efficient Big Science market in Europe. Which were the results? This is what we discussed with Anders.

Why was the BSBF2018 organised?

In EIROforum, there is a Working Group for Procurement in which we discuss problems that each organisation faces with suppliers. There are two tendencies. On one side, in

research organisations, the projects face increasingly longer development periods, whilst companies on the other side look more and more at short-term issues. In most cases, we need to engage the industry at the development stage and some companies need to work for years before they deliver large orders. Most, if not all, of the EIROforum organisations, as well as other big research facilities, like the European Spallation Source (ESS) or Fusion for Energy (F4E), face the same dilemma of being able to attract suppliers over long development cycles. For certain equipment, such as superconducting cables, we may need a big volume for a couple of years, followed by several years with no demand. At the same time, other research facilities may need large volumes with a time-shift compared to CERN.

The idea was to establish a Big Science business model, in which all the research organisations could show to the industry their collective needs for the next 4-5 years, thereby raising the interest of a larger pool of companies, compared to what each research organisation could achieve individually. We also aimed to show to the companies that the Big Science market is bigger than what they thought. This is linked to the so-called planning angle, since companies can have a mid-term view on the requirements from the research organisations.

This idea was also discussed among some of the Industrial Liaison Officers and, as a result, in October 2016, the Danish Agency for Science, Technology and Innovation at the Ministry of Higher Education and Science in Denmark, submitted a proposal to host the first Big Science Business Forum (BSBF2018) in Copenhagen.

As the interest to organise such event grew, seven organisations from EIROforum were joined by ESS and F4E and, as affiliated partners, nine other big science organisations. I was appointed, from day one, as contact person for CERN in the International Organising Committee that supervised the design and delivery of the Big Science Business Forum.

Can you give us an example on why it is important to establish a stronger, more transparent, and efficient Big Science market in Europe?

The big science market will require more and more frontline technical developments and there are less and less companies working on such long-term development. To give you an example, for the High Luminosity LHC (HL-LHC) project and for the Future Circular Collider (FCC) study, we worked with two companies to develop high-performance niobium-tin cables that could reach the required parameters for the high-field magnets, one with production in the US and one in Germany. We have been working for years with them to push for developments that to ensure the cables will meet our requirements, first for HL-LHC and even more performant cables for FCC. We were satisfied working with two companies, each using a different technology, to reduce the risk of being dependent on one supplier and to ensure some competition. And what happened? One of the firms acquired the other.

In order to avoid similar situations and to increase the number of potential suppliers in areas related to cutting edge technologies, it is important to show to the companies that this market

is larger than what they may initially think and therefore worthy of their R&D investment. This also requires that companies get a view on what the research organisations will require in the future, so that they get the complete picture.

Did you have a particular role in the organization of BSBF18?

My role was to liaise between CERN and the local organisers of the BSBF. We aimed for a programme that would represent each organisations' needs in a range of technical fields: superconducting magnets, radiofrequency, high vacuum, control systems, etc. Furthermore, we identified speakers that could best represent the various institutions involved and who had a deep knowledge of the technological challenges. From CERN, 24 people participated in the Forum, three from procurement and 21 from the technical fields. My role was to make sure that all the work was coordinated smoothly amongst ourselves. Frédéric Bordry came as well, on behalf of Fabiola Gianotti, to give a general presentation of CERN and its requirements in the years to come.

Who else from the accelerators' community was there?

In addition to CERN, ESRF, XFEL, ESS, DESY, ALBA, MAXIV, PSI and FAIR all participated. It should be noted that half of the organisations behind BSBF2018 came from the accelerators' community.

How was BSBF2018 organised?

Firstly, each big science organisation presented itself at the Directorate level in the Plenary Session and, from there on, there were many parallel sessions organised. This format helped to maximise the interactions amongst the numerous different technical domains. There were also B2B and B2C meetings. Finally, CERN, like the other research organizations that participated in BSBF2018 and a number of companies, had a big stand presenting the ongoing and future procurement opportunities and giving the opportunity for industrial representatives to find out more.

Was there any plan of actions for the event itself?

The expectation for CERN, as well as for other research organisations, was to meet with new potential suppliers that might have worked with other organisations, but not with us. Our objective was to make them interested in CERN's activities. That was the key challenge. In addition, technical colleagues from CERN met their counterparts in other research organisations and realised that they were addressing the same problems through these discussions. This generated intense exchanges and can be seen as a by-product of the Forum as it happened outside the sessions.

Were you surprised to see 1000+ participants?

As the BSBF International Organising Committee (IOC), we set a number of targets to reach, even though it was difficult to estimate, since it was the first time that something similar was

organized. However we exceeded all of them. We had more than 1000 participants, amongst which 700 were external participants. 62 exhibitors, 500 business and organisations were represented from 29 countries. I think it was a big success with more than 95.2% of the participants reporting being satisfied or very satisfied with the event.

What were the two highlights for you at BSBF2018?

First of all, the organisation was excellent and everything went very smoothly. This was the feedback we received from all the participants, including the accelerators' community. There was a big interest from industry and I understand that, because it is much better for them to have the chance to meet all the stakeholders in one place, rather than touring Europe. This is the reason why so many industry representatives came. For them, it was an excellent opportunity to meet all European big science organisations. To me, the big advantage is that we created a critical mass and, for this reason, it is worth doing it again.

What are the next steps?

The feedback was so positive that the stakeholders are fully in favour of continuing. The IOC met in June and unanimously decided to plan a new BSBF event in two years' time. This will leave enough time for developments without generating a disconnect between the two editions. The idea was to rotate the location of the event and thus we invited expressions of interest from countries. The BSBF2020 venue will be selected later this year.

How would you qualify, in three words, the CERN supplier base?

In many aspects, it is very diverse. In size, it ranges from very small to very big companies, it is geographically distributed and capable of supplying a very large range of equipment and services. In general, we have very competent suppliers. Let us not forget that the LHC is the most complex machine ever built and we built it with the help of our suppliers.

We like to see suppliers as partners, because, for some of them, we have to work over long periods of time. These are more like partnerships, even if the collaboration is based on commercial contracts. So we are working with diverse competent partners and the challenge is always to find new potential suppliers that we did not know before.

What is an interesting fact about the CERN supplier base?

SMEs are often more successful as suppliers than the very big ones. CERN often comes with very specific requirements and that is where small companies, which are often more flexible compared to larger companies, will be more willing to modify or tailor their products in order to meet the specific requirements.

An example, the most successful suppliers for our servers in our computer centres are companies that you probably never heard of, because they are relatively small companies, but they are building the servers exactly as we want them and in a matching price range. We have very few of the big names' servers because it is seldom that they are exactly matching

our requirements and often they are not interested in customizing them only for CERN. However when they happen to have a system meeting exactly our requirements, prices are competitive because they are produced in large volumes.

From your 30-year experience, what is always changing in procurement and what never changes?

What gradually changes is the process and the way we do procurement. We regularly benchmark ourselves and we always try to improve how we deal with all procurement and contracting activities. We put a lot of documentation online, we provide transparency and we have implemented automated processes. These are constant modifications, not necessarily big, but constant as part of our effort to improve, adopting the best practices in procurement, and satisfying the challenges of the ongoing projects of our laboratory. What never changes is the ultimate goal. We will always want to buy products or services that meet or exceed our requirements at the lowest overall costs. You want to get sufficiently good quality when you need it and pay as little as possible. That will never change. However, the way to achieve that is something that continuously improves, always step by step.