

Address by Ambassador Bruno H. Moor at
CHIPP Strategic Workshop (SWICH)
on 3rd April 2018, Murten

Dear Professor Nakada,

Dear Members of CHIPP,

Ladies and Gentlemen,

First of all: thank you very much for your kind invitation!

Your dedication will never stop to impress me. Many people consider the week following Easter as a welcome and well-deserved holiday. However, this statement does not seem to apply to Swiss particle physicists. Considering that this week could still be free in most of the agendas, you decided to hold this strategic and most important workshop and almost 100 of you made yourself available. Exotic Easter travel destinations belong to the waiting list: this week, for you, the action takes place in Murten.

You might then wonder why I am not visiting one of these exotic Easter travel destinations. After all: I am definitely not a particle physicist, although as an economist and theologian and as a diplomat my interest for this chapter of science has always been and is still deep.

However, there is another reason than my personal interest in your discussions, and it is a simple but important reason: I represent the Swiss government, and I can ensure you that the Swiss government is very interested in what you will produce during this workshop.

The work that you will start today is indeed critical not only for you as a scientific community, but also for Switzerland's research policy as a whole. As a Host State of CERN, Switzerland has a keen interest that this organization maintains and develops its outstanding leadership in particle physics. To do so, CERN needs ambitious yet realistic plans to guide its action over a long period. Two parameters are important here: these plans must be widely supported by the particle physicists within CERN Member States and beyond, but their focus must also be strong and precise to give to the world a firm idea about what CERN intends to do, and also – this is important – what CERN does *not* intend to do. A clear statement on these “do” and “do-not” parameters sets a solid ground for all the funding processes upon which an organization like CERN relies. The best way to describe such plans is probably to use the concept of “strategy”.

Surprisingly it took some time for the CERN Council to realize that such an instrument could be useful. The CERN Convention in force since 1954 (by the way my year of birth – I will come back to this at the end of my speech) this Convention foresees that the Council “determines CERN's policy in scientific matter”.

Nevertheless, it left it to the Council to choose the best way to arrive at this determination. In the year 2005, the difficulties related to the LHC construction had put the CERN Council under some pressure. The Council realized by this time that a more robust way to set up guiding principles would be desirable in order to keep CERN's ability to pool its Member States' resources for the benefits of particle physics. The Council thus established a process towards a so-called "European Strategy for particle physics".

The first trial was of course a learning path. Nevertheless, the document approved by the CERN Council in 2006 in Lisbon proved to be convincing. Cleverly, the text of the strategy contained its own update recipe, ensuring that the Council will keep such an important document regularly up to date. CERN Council adopted the first and so far only update of this strategy in 2013 in Brussels, in the European Commission's premises. This was a sign of courtesy for the fruitful and respectful cooperation between CERN and the Institutions of the European Union.

This update did not introduce any significant divergence with respect to the original strategy. This could have been disappointing for those who love surprises. From my point of view, however, this was rather the welcome confirmation that the underlying scientific assumptions, upon which the strategy relies, are indeed robust.

Meanwhile the research policy landscape in Europe has flourished with roadmaps and strategies of all possible kinds. Just think about ESFRI roadmaps and their numerous national declinations.

Whether this profusion of plans is sustainable – only the future will tell us. However, this development demonstrates once again that particle physics and CERN stand at the forefront of development when it comes to science policy.

Last year CERN Council decided to set the framework for the new update of the strategy. This document should be ready for adoption by 2020. The Council chose the timing carefully, such that the update could take into account most of the scientific results of the LHC Runs 1 and 2. It became also clear that one expects critical funding decisions related to the future CERN machines by the beginning of the 2020 decade. A robust strategy update will support the Council and all CERN Member States to fulfill this task in a context of limited financial resources and fierce international competition. China is just around the corner...

As mentioned before, the 2020 update of the strategy cannot fall neither from sky nor from heaven. Even more it must reflect the expectations of the widest possible community of scientists, as they should all clearly stand behind the document after its release. All of you should stand behind it. The main strength of a strategy is its wide and sincere acceptance.

That is why the process of collecting inputs to the strategy has to be as open as possible, in order to ensure that all good ideas are considered. However, writing the strategy would become an impossible task if all particle physicists in the world submit their inputs individually. Some coordination of the inputs is helpful, for instance at the level of national communities within CERN Member States. This builds a first layer of consensus and provides a unique opportunity for the national communities to speak with a unified voice - not only to CERN, but also to their own national authorities.

As for Switzerland, it is a very fortunate coincidence that the establishment of CHIPP took place just a few years before the start of first discussions about a European strategy for particle physics. As some of you might remember, CHIPP's foundation followed a recommendation from the European Committee for Future Accelerators (ECFA), made during its visit to Switzerland in 2002. The recommendation from ECFA addressed the need to set-up a body ready to develop a long-term national strategy for particle physics. CHIPP was so efficient that, only two years after the visit, a high-quality document entitled "Particle physics in Switzerland: status and outlook of research and education" could be released.

In 2006, CHIPP was therefore more than ready to deliver a coordinated Swiss input to the first European Strategy for Particle Physics. Should CHIPP not have existed beforehand, the Swiss authorities would have probably asked for its creation just for this purpose!

With CHIPP as your organizational structure, you are now ready to prepare the Swiss input to the 2020 update of the European Strategy for particle physics. This input comes also timely to inform the Swiss authorities on the needs and plans of your community after 2020. Our expectations are high: we wish to read a comprehensive roadmap, built on consensus. It should be ambitious on the one hand, but also realistic and focused on priorities on the other hand, keeping the limited size of Switzerland in mind. It will be up to you to decide what you write. However, it seems obvious to me that Switzerland is generally better at focusing on selected topics of excellence, than in doing a bit of everything. This is probably also true for particle physics. This cautious consideration should not prevent you to be imaginative and to think beyond the current boundaries. What shall be the focus of your research in 10 years from now? Which machines do you need to perform disruptive experiments? Does one have to build a new collider larger than LHC, or would a suitable upgrade be sufficient as a first step?

How to seize the benefits of constructive interferences between particle physics and other fields, like the booming research on gravitational waves? How to make sure that investments in particle physics translate into improvements of the life of human beings and of the sustainability of our planet?

I am definitely not in a position to provide answers to these questions: this is your job! However, the questions may be allowed, even more: they are essential. I admit that the question “What to do next?” is always a frightening one. However, looking back, one always is longing for these brainstorming times, as they prove to be an unbeaten moment of creativity. So please be creative! The Swiss authorities are eager to learn from you and to support the paths that you would have considered reasonable – as good as they can. As you might imagine the political and financial implementation of your ideas could turn out to be tricky!

In this regard, I would like to share some political considerations with you. Through all changes, if one thing shall remain stable, it is the firm commitment from the Swiss Government and Parliament towards the Swiss particle physics community on the one hand and towards CERN on the other hand. Federal Councillor Johann Schneider-Ammann said just the same thing as he greeted the CERN Director-General Fabiola Giannotti last fall in Berne.

Switzerland is proud and thankful to share with France the privilege and the duty to host CERN. We are committed to support the CERN continuation and development under optimal conditions, as CERN's mission is far from being finished. However, the new machines that CERN might consider to build will reach far beyond the financial and technical capacity of the host States alone, and probably even beyond the joint capacity of all CERN Member States. It seems unavoidable that particle physics soon will have to go for fully global experiments; just as nuclear fusion is doing with the building of ITER. However, one should learn from ITER and other globalized science endeavours. For instance, it would be pointless to establish new organizational structures for each new scientific case in particle physics. We should better use the framework available – and that is CERN –, expand it as far as it is needed, and use it to set clear priorities. Whether the way to globalisation will lead through a further enlargement of CERN or through a closer cooperation with other organisations – we will see. Switzerland will do its utmost to make sure in any case, that CERN remains a pole for particle physics worldwide. In this view, it will be necessary to mobilize broad commitments among Member States and beyond, because Switzerland will not go very far only on its own. The task will not be easy, but Switzerland is determined. Your support in this context is invaluable, as the efforts of Switzerland will only be credible if its particle physics community remains as vivid as ever.

Today is the 3rd of April. This might not sound like a very famous date for most of us. Nevertheless, something happened on 3rd April 1973, which brought a revolution to our communicating habits: in New York Martin Cooper, an engineer from Motorola, placed the first cell phone call in our history. By this time, a cell phone was a heavy device... and actually in spite of swift progresses since 45 years, remote communication remains a heavy process to me.

I am convinced that nothing will ever replace a direct contact when one needs to deliver an important message to important people. That is why I am here today with you and not in some exotic Easter travel destination.

Let us hope for a high quality CHIPP Roadmap leading to a high quality Swiss input to the 2020 update of the European strategy for particle physics!

I promised you to mention something in connection with the year 1954: At the end of October this year, I will retire. The name of my successor will be announced as soon as possible.

Once again, I would like to thank you for your kind invitation. I wish you a very pleasant stay in Murten and a fruitful and most successful work.