

Towards a more confident future

Robert Aymar reflects on progress during five years as director-general at CERN.

The year 2008 has been an important one for CERN, with the first complete cool-down of the LHC, the highly successful start-up with beam on 10 September and the official inauguration ceremony on 21 October. Unfortunately, the impressive start-up was followed by an incident caused by a faulty electric connection. This has delayed further commissioning until spring 2009, as the sector involved must be warmed up, the repairs made and the sector cooled down again. It is certainly a setback, but one that I am certain will be overcome with the usual rigour and application of the teams at CERN, who have support from industrial contractors and our partners in other laboratories involved in the LHC project.

When I became director-general at the beginning of 2004 the LHC project was emerging from what was potentially a more serious crisis, which had arisen when an increased "cost to completion" emerged in 2001. To redirect money to the LHC, savings had been forced in various areas, including the non-LHC programme and long-term research and development, coupled with a compulsory reduction in staff and a decrease in the budget. There was a loss of confidence in CERN among certain member states, coupled with a real loss in the ability to create a long-term vision for the organization.

It was clear that the future of CERN depended on recovering the full confidence of the member states and developing clear priorities for the years beyond the immediate implementation and exploitation of the LHC. To regain confidence, my aim was to make CERN transparent and unified in the way that it worked, with improved management at all levels and increased overall efficiency – an organization that gave justice to the high levels of quality, competence and dedication of its staff. I also wished to establish CERN as an organization that could serve to unite the particle-physics community in Europe: as the place where the European programme in particle physics is coordinated, shared and supported by all of its players.

At CERN my strategy was to introduce



Robert Aymar speaking at the LHC inauguration.

more dynamic management methods in a framework that is not compartmentalized within departmental boundaries but that instead takes a CERN-wide approach, focusing on activities in which different parties would work together. In particular, the structure would centre on projects that report directly to the directorate. At the staff level there would be increased mobility within the organization and a new system to reward people on merit and recognize their talents. During the past five years these objectives have been achieved, with a new management structure brought quickly into place – followed in 2007 by the introduction of the new Merit Appraisal and Recognition Scheme to reward staff appropriately.

Looking outwards, the strategy was to strengthen and deepen co-operation with other European particle-physics laboratories. I believed that it was important for CERN Council to place more emphasis on a neglected part of the organization's original mission: to organize and sponsor international co-operation in nuclear research, including co-operation outside the laboratory (*CERN Courier* March 2004 p31).

Council has achieved this goal at the European level by agreeing to steer activities in particle physics not only at CERN but across the continent. At its meeting in Lisbon in July 2006, Council agreed the European Strategy for Particle Physics, which presented a long-term vision for the future development of the field in Europe, and which positioned Council as the body to oversee this development.

I also wanted to develop CERN's co-operation with other particle-physics laboratories in Europe, with more collaboration towards common goals, particularly in the field of accelerators. Moreover, anticipating regained confidence in CERN (in 2007) through the implemented improvements in management, I hoped that Council would be able to approve a plan with coherence between resources and scientific objectives.

The main goals to 2010 were to strive for completion of the LHC; to fulfil existing commitments; to ensure reliable LHC operation; and to promote European coordination in accelerator R&D and new infrastructure. Important goals on a longer timescale were to develop solutions for a future luminosity upgrade of the LHC in 2012–2015, including a new linac (Linac 4), and to accelerate tests of the feasibility of the Compact Linear Collider concept so as to reach by 2010 a firm conclusion on its possible use in an electron-positron linear collider operating above 1 TeV. These goals in fact matched several of the priorities set by the European Strategy for Particle Physics.

In 2007 the member states, through Council, approved an additional financial contribution of SFr240 million over four years in addition to a level annual budget for CERN. This will be dedicated towards implementing new activities that are linked to the priorities of the European strategy. Construction work on Linac 4, for example, has just begun (p5) and there is good progress with the CLIC test facility (*CERN Courier* November 2008 p5).

Through this action the member states, and particularly the host states, have provided for the future of CERN in the long term. At the same time, they have strengthened CERN's position on the European stage. Now CERN can continue to look outwards, beyond Europe, towards further international collaboration on a global scale.

I have full confidence in CERN's continued success and that it will continue to be a reference as a centre of excellence.

Robert Aymar, CERN.

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