NASA

COMET CRASH CREATES POTENTIAL FOR LIFE
Shock waves may trigger amino-acid formation.
go.nature.com/UVrGQ5

Synching Europe's big science facilities

The ALBA Synchrotron Light Facility near Barcelona opened last week.

ALBA

Europe's busiest big science facilities, such as powerful neutron sources and synchrotrons, are centres of international collaboration — but there is precious little coordination to ensure that they are adequately funded, or that underused or moribund facilities are wound down.

To tackle this problem, the head of the committee charged with drawing up Europe's priority list of such facilities is calling for a new independent body to help manage their cash flow across the continent.

The new body would not manage facilities directly, says Carlo Rizzuto, chair of the European Strategy Forum on Research Infrastructures, but would be "more like the conductor of an orchestra", bringing greater coherence to funding decisions.

Speaking at the 6th European Conference on Research Infrastructures, held in Barcelona, Spain, on 23–24 March, Rizzuto said that, if created, the new body could resemble the European Research Council — the pan-European funding organization that allocates scientific grants on the basis of excellence — directing European Union (EU) cash to facilities in which the best research is being carried out.

Recommendations and conclusions from the conference will be discussed at the next meeting of EU research ministers in Brussels on 25–26 May. John Wood, chair of the European Research Area Board, which advises the European Commission, said that he supports the creation of an independent body. But he added that it would need to have the political clout to increase EU infrastructure spending significantly.

The EU's member countries together spend around €10 billion to €15 billion (US$14 billion to $20 billion) per year on running research facilities. Because the annual operating costs can be around 10% of the price of construction, they can exceed the initial investment within a decade. But the EU itself currently contributes just €250 million per year, or around 2.5% of the running costs of European facilities.

That figure is "too small to drive better integration of research infrastructure and should be at least ten times higher", Rizzuto told *Nature*. Because individual governments pay the bills, the locations of new facilities (see 'Big beasts') are generally decided through political horse-trading, and the host nations make the key decisions on funding levels and whether to maintain or shut a facility. Rizzuto wants a further €1 billion to €2 billion from the EU for running infrastructures in the next European research initiative — the eighth Framework programme.

Getting that extra cash will not be easy, but it will be "indispensable" for managing Europe's facilities better, Rizzuto says, and would also help to make them truly open to scientists with the best proposals, wherever they are in the world. Currently, scientists based in the country hosting the facility tend to have a greater share of the access. "It's not only how you build the facility and how you run it, but also the people that use it," Wood said. But there is a balance to be struck — host nations that put up most of the cash will expect privileged access, he added.

The new body could also advise on difficult decisions. "Infrastructures that are obsolete or not well managed could be closed down," says Rizzuto. He adds that, of the 400–600 small and medium-sized scientific facilities in Europe, he thinks that around 200 are poorly managed. "By closing them or making them more efficient, we could save more than €2 billion in operating costs," Rizzuto told *Nature*.

Wood agrees. There are many old telescopes operating, he said. "But who has shut down a telescope so far?" ■

Cristina Jiménez

Big beasts

Many facilities in an advanced stage of planning could have their funding coordinated by a new pan-European body.

Council of European Social Science Data Archives (CESSDA)
Gateway to social sciences data; headquartered in Norway and Germany; 20 participating countries.

Upgrade of the European Synchrotron Radiation Facility (ESRF)
Europe's most powerful synchtrotron, based in Grenoble, France; 12 EU countries are members.

European Social Survey
A survey of more than 30 countries, providing data for social scientists. Secretariat based in the United Kingdom.

European Spallation Source
A new neutron source, to be built in Lund, Sweden; 14 countries involved.

Facility for Antiproton and Ion Research (FAIR)
Currently under construction in Darmstadt, Germany; 15 countries participating.

ILL 20/20 at the Institut Laue-Langevin
The upgrade of this neutron source based in Grenoble, France, is under way. Managed by 13 countries.

Partnership for Advanced Computing in Europe (PRACE)
High-performance computing centre; headquartered in Portugal; 20 partner countries.

Survey of Health, Ageing and Retirement in Europe (SHARE)
Collecting data from more than 45,000 people aged 50 or over; coordinated by Germany.

SPIRAL2
Upgrade for the GANIL particle accelerator based in Caen, France; members are founding countries of GANIL plus 13 other countries.

European XFEL
Construction has started on this X-ray free electron laser in Hamburg, Germany; 12 countries participating.

SOURCE: ESFRI