university budgets by 10% and allowed only one in five of any vacant academic positions to be filled. It also allowed universities to convert into private foundations to bring in additional income. Given the current climate, university rectors believe that the latter step will be used to justify further budget cuts, and that it will eventually compel them to drop courses that have little commercial value, such as the classics, or even basic sciences. As that bombshell hit at the beginning of the summer holidays, the implications have only just been fully recognized — too late, as the decree is now being transformed into law.

Meanwhile, the government's minister for education, universities and research, Mariastella Gelmini, has remained silent on all issues related to her ministry except secondary schools, and has allowed major and destructive governmental decisions to be carried through without raising objection. She has refused to meet with scientists and academics to hear their concerns, or explain to them the policies that seem to require their sacrifice. And she has failed to delegate an undersecretary to handle these issues in her place.

Scientific organizations affected by the civil-service bill have instead been received by the bill's designer, Renato Brunetta, minister of public administration and innovation. Brunetta maintains that little can be done to stop or change the bill — even though it is still being discussed in committees, and has yet to be voted on by both chambers. In a newspaper interview, Brunetta also likened researchers to *capitani di ventura*, or Renaissance mercenary adventurers, saying that to give them permanent jobs would be "a little like killing them". This misrepresents an issue that researchers have explained to him — that any country's scientific base requires a healthy ratio of permanent to temporary staff, with the latter (such as postdocs) circulating between solid, well equipped, permanent research labs. In Italy, scientists tried to tell Brunetta, this ratio has become very unhealthy.

The Berlusconi government may feel that draconian budget measures are necessary, but its attacks on Italy's research base are unwise and short-sighted. The government has treated research as just another expense to be cut, when in fact it is better seen as an investment in building a twenty-first-century knowledge economy. Indeed, Italy has already embraced this concept by signing up to the European Union's 2000 Lisbon agenda, in which member states pledged to raise their research and development (R&D) budgets to 3% of their gross domestic product. Italy, a G8 country, has one of the lowest R&D expenditures in that group — at barely 1.1%, less than half that of comparable countries such as France and Germany.

The government needs to consider more than short-term gains brought about through a system of decrees made easy by compliant ministers. If it wants to prepare a realistic future for Italy, as it should, it should not idly reference the distant past, but understand how research works in Europe in the present. ■

Meeting expectations

Scientists need to ask themselves if their meeting or conference is really necessary.

This week, *Nature* publishes the last in a series of essays on 'Meetings that Changed the World', with an account of a conference held in 1986 in Santa Fe, New Mexico, that helped launch the human genome project (see page 876).

The meetings highlighted in the series were unusual in that they deployed the latest science in support of larger goals. Yet most scientific meetings do not aspire to such heights. Indeed, scientists these days rarely expect to hear much new science at a conference; rather, the greatest value of meetings comes from interaction and networking. At the same time, there are now so many meetings that it is impossible for scientists to attend more than a fraction of what is on offer. So are scientific meetings really necessary?

The traditional scientific conference performs many functions. The power of face-to-face contact in generating new thinking, ideas, networks and collaborations cannot be underestimated. Moreover, increasing work and time pressures make it more important than ever to escape the daily grind and meet colleagues from around the world. Another function of scientific conferences is often to generate income for universities and learned societies, not to mention the profitable industry of conference organization.

The ever-increasing number of scientific meetings is cause for concern. Yes, the pace of science is quickening. But the proliferation of meetings is sometimes influenced as much by researchers wanting to pad out their CVs, and by the prestige conferred on an institution by hosting such an event, as it is with a desire for real intellectual exchange. All too often, meetings lack clarity of purpose and seem hastily constructed. This is particularly the case with 'me-too' conferences held to capitalize on a topical issue, such as avian flu. And the economic crisis, along with the rising costs of air travel and its impact on climate change, argues for greater parsimony and prioritization of conferences.

If a conference is absolutely necessary, some basic guidelines are in order. First and foremost, organizers need to be clear about a meeting's aims and objectives. Second, the number and length of formal presentations could be reduced. Attendees can now digest content before conferences begin, for example using wikis, social networks and other online tools, which leaves more time for face-to-face discussion, brainstorming and the all-important networking breaks at the event itself. Such measures would also make the content of conferences and workshops accessible to those unable to attend — particularly students, scientists from poorer countries and scientists from other, less-related fields. Third, more meetings should be webcast live, with videos archived online and linked to associated content such as papers presented, live blogging and other social networking.

Technology cannot — at least for the time being — match the power of direct interaction. Conferences are where reputations are forged — the humble poster session remains important for up-and-coming researchers to get themselves noticed and as a place for discussion. Online networking itself works better with people who know one another personally, and collaborations flow naturally from people who enjoy good relationships.

All of this means that scientific conferences are necessary and retain an important role in the research enterprise — but also that more careful thought needs to be exercised before sending out yet another call for papers. ■