

A new era for French science?

Last month's presidential election in France offers the best chance in decades for profound reform of the country's research and innovation systems. Nicolas Sarkozy must not blow the opportunity.

France entered a new political era with the election last month of Nicolas Sarkozy, leader of the centre-right Union for a Popular Movement party (UMP). The election was fought on the need for major economic and social change, or rupture.

Research was a major campaign theme for the first time (see *Nature* 446, 847–850; 2007). With an 85% turnout, and a clear victory over Socialist Ségolène Royal with 53% of the vote, Sarkozy has a clear mandate to face down opposition and impose reforms. Logically, France's legislative elections this month should deliver him the parliamentary majority he needs to execute that mandate.

The research community is not only open to reform, but actively wants it. Under Jacques Chirac, government arrogance and a refusal to consult with the research community resulted in relations hitting an all-time low, historic street protests and ensuing paralysis. To succeed in reform, Sarkozy needs to find the right mix of force, and sensible reforms that rebuild trust and buy-in from the research community.

One test will be whether Sarkozy delivers on his acknowledgement that reform is impossible without resources, and his promise of €4 billion extra for research, and €5 billion for higher education. Another test will be whether he gives research a high political priority, among the pressing problems of unemployment, strained public finances and a flagging economy.

Sarkozy should create a full science ministry, and appoint a minister up to the job. Too often, research has been relegated to a junior ministry, with ministers being political appointees that governments have gone through like paper tissues, resulting in a damaging lack of continuity and coherence.

There should be three immediate priorities for research reform, universities,



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Will Sarkozy make university reforms and research a priority as he has pledged?

universities and universities. French universities are underfunded and dilapidated, with excessive centralized ministerial meddling. Archaic election systems create weak governance structures.

Sarkozy has rightly identified the need to create powerful autonomous universities, free from ministerial control over such things as recruitment and salary scales, and with modernized governance. He will need to capitalize on the momentum of his election to quickly break the French taboo on university reform and face down the inevitable resistance from trade unions and student groups.

Without change in the universities, deep reform of research will be difficult. Sarkozy wants to transform the bureaucratic CNRS, Europe's largest basic research agency, and

other large agencies into research councils, with universities taking over their role of managing labs, for example, but France's universities are not yet in any fit state to take on that task.

If university reform is key, the research agencies need evolution, not revolution. Reform is most needed where France is weakest, for example in the life sciences at CNRS, and at Inserm, the national biomedical agency. Reforms of the physical sciences, where France has strengths in physics, earth sciences, space and mathematics, are less pressing.

Similarly, many research agencies such as the French Atomic Energy Commission (CEA), and INRA, Europe's largest agricultural research agency, are performing well, and there is frankly no urgency for reforms here. Indeed, rather than grand rearrangements of the deckchairs, much greater impact could be had by simpler measures to inject a dose of greater competition and flexibility, such as freeing up salary scales to reflect scientific merit.

Some of the tools to balance better the research agencies and universities already exist. The National Research Agency created in 2005 will steadily increase the proportion of research funds distributed by competitive grants proposals. The agency has problems in that it is not sufficiently independent from government, and also needs to greatly increase the one-quarter share of its funds that go to basic research. But these are perhaps teething problems.

The ultimate challenge for Sarkozy will be to return his Gaullist movement to its true research roots — the vision of its founder, Charles de Gaulle, who saw research and innovation a key to securing France a place at the world stage, and helped to create France's world-beating nuclear, aerospace and transport industries.