

France seeks scientific entrepreneurs

[PARIS] A multi-billion-franc package of measures to stimulate innovation and entrepreneurship in France was launched last week by the Socialist government. It includes lifting a ban on public researchers from holding financial interests in companies with which they have research links.

Other measures include FFr1 billion (US\$167 million) for new national networks of public- and private-sector laboratories in key technologies, and the creation of a FFr100 million 'seed money' fund to help entrepreneurs to take ideas to the stage where they can seek venture capital.

The government acknowledged what many observers have long been arguing: that France's centralized state planning of technologies is now obsolete, despite its success in the past in areas such as nuclear power, aerospace and transport.

The prime minister, Lionel Jospin, said that this model is "no longer adapted to a global economy in which the market plays a determining role, and where the evolution of knowledge and technology has accelerated".

He said the culture of French science and industry must be changed accordingly, while protecting basic research. The need is to "cultivate the taste for risk and entrepreneurship". French industrial culture is notoriously averse to risk, largely because public-sector researchers enjoy civil-servant status and the engineering élites have secure jobs.

Jospin was speaking at a national conference on innovation in Paris, attended by hundreds of leading researchers, industrialists and businessmen. State intervention has to be "profoundly modified", he said.

There has to be a move away from central planning to a more limited role in supporting education and fundamental research, and in providing a fiscal and legal environment conducive to entrepreneurship. France has to shift from a "logic of subsidies to a logic of incitation", said Jospin.

He announced that direct subsidies to industrial research in large companies will end. Funding will instead be awarded to competitive project proposals that include small companies. Claude Allègre, minister for national education, research and technology, said the need is to shift from an "old-fashioned Colbertism to an enlightened Keynesianism".

The shift in official thinking has been widely welcomed. Daniel Muzyka, professor of entrepreneurship at the prestigious INSEAD business school on the outskirts of Paris, describes the policies as "a very serious step in the right direction".

Many politicians acknowledge that state interventionism has left France with centralized élite *grandes écoles* (see *Nature* 393, 102; 1998), massive public research organizations



Strauss-Kahn: a moving force.

and large state-backed companies. The structure is poorly adapted, in particular, to fostering contacts between scientists, entrepreneurs and small companies.

The new emphasis on fostering contacts marks a significant shift towards considering entrepreneurship and the growth of companies as the key issues, rather than just innovation, the production of ideas and prototypes, says Muzyka.

The glaring gap between France's strong science base and its poor performance in wealth creation was castigated in a recent report to the government by Henri Guillaume, honorary president of the national innovation agency ANVAR (see *Nature* 392, 214; 1998). Picking up this theme at last week's meeting, Allègre deplored the fact that only a handful of the tens of thousands of public researchers transfer to industry every year.

In a move designed to encourage links between public- and private-sector researchers, Allègre and Dominique Strauss-Kahn, the industry and finance minister, announced the creation of a FFr1 billion fund over three years to create national networks between public and private laboratories in key technology areas.

The government also promised to break a long-standing taboo in France by passing a law before the end of the year to lift the ban on publicly funded researchers holding shares — or stock options — or sitting on the boards of companies with which they have research links.

The move is considered long overdue by scientists. It is aimed at sending a strong political message to government officials, research administrators and scientists that money-making by researchers — long considered a shameful activity in France — is to be actively encouraged as an essential element in wealth creation.

Allègre also suggested that technology transfer and industrial experience should be included in the criteria used to evaluate researchers for promotion and funding. But he failed to give details of how this would work in practice, saying only that measures are under discussion.

Several observers are critical of what they describe as the lack of concrete measures to encourage technology transfer, such as the adoption of strong foresight initiatives or the introduction of a fully fledged postdoctoral system to increase mobility and flexibility.

Strauss-Kahn confirmed a decision to use FFr600 million of public funds to boost venture capital. The minister said that 5 per cent of Assurance Vie, a popular endowment scheme, will be invested in shares in high-technology companies — a sum that should amount to several billion francs (see *Nature* 392, 856; 1998).

He declared that innovation is his "top priority," arguing that the creation of companies, for example in biotechnology and computing, is now recognized as the engine of economic growth and job creation.

Some critics, such as Marc Giget, head of the Paris-based technology consultancy Euroconsult, argue that the government is failing to abandon interventionism completely. His remedy, shared by several speakers at last week's meeting, is a drastic liberalization of the research and university systems, and a marked withdrawal of the state from industrial policy.

Declan Butler

Report released on INSERM laboratory

[PARIS] An inquiry by the French research ministry into the activities of a laboratory of INSERM, the national biomedical research agency, headed by Bernard Bihain, has taken a new turn. Last week the ministry released a controversial — and previously confidential — report on the laboratory drawn up last year by an independent commission of inquiry (see *Nature* 391, 519 & 825; 1998).

The inquiry, chaired by Pierre Corvol of the Collège de France, received testimony from 24 'whistleblowers' who work or have worked at the INSERM Laboratory of Nutrition, Lipoprotein Metabolism and Atherosclerosis at the University of Rennes. It concludes that the testimonies of seven of these witnesses raise doubts about the

"validity of certain results published or in the process of publication by the director of the laboratory".

A scientific annexe to the report, by John Chapman, a panel member and the director of INSERM's Laboratory of Lipoproteins and Atherogenesis in Paris, claims that Bihain "lacked scientific rigour", and describes allegations that he had "favoured and selected" certain results "to reinforce a hypothesis *a priori*".

Daniel Nahon, director-general of the research ministry, announced last week that four international experts had been asked by the ministry to carry out a new inquiry within three months. He promised that their findings would be made public.

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