



SPEECH BY MR. JACQUES CHIRAC FRENCH PRESIDENT ON THE OCCASION OF THE INAUGURATION OF THE CROLLES 2 NANO-ELECTRONIC PILOT RESEARCH AND DEVELOPMENT UNIT

February, 27 , 2003

Mr. Mayor,
Mr. Minister,
Madame President of the Regional Council,
Chairmen,
Elected representatives,
Ladies and Gentlemen,

I am delighted to be here with you today, in Crolles, to inaugurate the Crolles 2 pilot unit for research and development into nano-electronics.

This exceptional facility is the largest industrial investment project in France in the 10 years since Crolles 1, with a planned outlay of 3.5 billion euros. It will create 1,500 direct jobs and 3,500 indirect ones.

In the current world economic climate, this success augurs well for the future.

Tomorrow's jobs are won here and now. France is determined to be ready. It is working relentlessly to convince businesses to create their highly-skilled jobs on French soil. It is doing everything possible to preserve and promote the industrial activities and labour services that help to make a diverse, jobs-rich, well-balanced developed economy. At the same time, France is seeking to respond more effectively to the distress of workers suffering from the loss of their livelihood, and to the worries of those concerned over the future of their company. We need to mobilise all our energies government, regional or local authorities, and of course the social partners alongside business, in order to achieve stronger and more job-intensive growth.

The facility we are inaugurating is a model of its kind, in terms of both the technology deployed and the spirit of innovation and co-operation displayed by the women and men who have made it possible.

The Franco-Italian firm STMicroelectronics and the Dutch company Philips have been engaged in a partnership within the Crolles 1 unit since 1992. The American firm Motorola then joined this alliance for Crolles 2. This has been made possible thanks to a shared strategic vision, and to a common spirit of understanding and willingness to listen, reaching out across differences of culture and nationality. I pay tribute to all



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workers here present and to their competence, their enthusiasm and their commitment. I also wish to express all my gratitude to Chairmen Pasquale Pistorio, Gerard Kleisterlee and Christopher Galvin for having chosen our country.

Gentlemen, you have displayed your confidence in France over many years. And today you have renewed that confidence in spectacular fashion. Everyone here will be determined to justify that faith.

We are honoured by your choice. It shows that in Grenoble you have found the human resources, the skills, the intellectual and economic environment, and the assistance of the public authorities that are crucial to the success of this strategic investment.

Our country is lastingly committed to a policy of boosting its competitiveness, reducing labour-related welfare costs and modernising its public services. My ambition, the ambition of the French people, is to see France recognised everywhere as an attractive destination for investment, innovation, the start-up of new activities and job creation. That is a task for the long haul, one that the Government is tackling with energy and determination.

Teamwork and dialogue are the keys to the success of any human venture aimed at overcoming major challenges. An exceptional venture like Crolles 2 is the outcome of a quite remarkable convergence of energies. Three major industrial corporations operating in the same sector have pooled their research efforts. Local and regional elected officials have provided firm support. And the French Government, especially the Invest in France Agency, has given its constant backing. In addition, we have seen a culture of dialogue between private enterprise and public-sector researchers from the CNRS, the University and engineering schools of Grenoble, together with the CEA's Electronics and Information Technology Laboratory (CEA-LETI), and the Minattec Innovation Centre.

I have been impressed by my tour of Crolles 1 and Crolles 2. By the scale and quality of their facilities. By the totally clean conditions in which you work. By the high-precision technologies you employ and by your relentless drive into the world of the infinitely small.

I want to congratulate each and everyone of you who has designed, built, and now operates, these facilities.

Nanotechnologies hold out great promise. They will have numerous applications in a wide range of fields, from consumer electronics to the environment, industry, and health. We will be using them more and more in our daily lives. Because of their great potential, they are the focus of intense technological competition, and they receive extensive support from Government and the European Union.



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Grenoble's centre of excellence in the field of nanotechnologies enjoys a worldwide reputation thanks to a combination of top-flight public and private-sector research laboratories, a highly-skilled working population, and incentives to locate here. The Crolles 2 pilot unit will henceforth be a pillar of this community.

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France is fully capable of attracting international investors when it decides to achieve excellence in a given area of high technology. The fact that European and American firms have chosen to develop the technologies of the future in France confirms this. France also stands ready to provide the best possible conditions for investment in production facilities arising out of development work conducted at Crolles.

The full panoply of national measures is being deployed in our effort to improve the business environment. These include lifelong training, which the social partners are striving to expand rapidly, lower taxes and social security contributions, flexible application of the 35-hour working week, reduced red tape, and reform of the State.

France must prepare for the return to growth by unleashing its pent-up energies.

Entrepreneurship must be restored to its rightful place. Initiatives, however small or large, must be encouraged. Those of researchers, especially in all the public sector, to enable them to exploit their discoveries commercially. Those of craftsmen and small and medium businesses, by means of a bill to promote economic initiatives. And those of large corporations, notably through support for international projects, as for Crolles 2.

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Making France more attractive also implies promoting the development of science and technology.

Today, intellectual capital is the new source of wealth from which a dynamic nation draws its vitality.

France must strengthen its position in the knowledge society. Research and innovation will rank among the key drivers of future growth. The lead times between the emergence of an innovation and its arrival on the market are growing ever shorter. Increasingly, our competitive advantages



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will lie in our mastery of rapidly evolving technologies. This is a decisive factor for the location of major production centres, and indeed for an entire fabric of industry and services. The sub-contractors who have prospered around Crolles 1 are proof of this. Today they represent nearly 300 companies and 3,000 jobs.

Other nations have grasped the importance of occupying these niches, which are so important for the future. To stand in the front rank, France and Europe need to promote the highest educational standards and attract talent.

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France's research and development policy now takes a global view of research, treating basic research, technology research and industrial research as parts of a coherent whole.

These three types of research are inseparable. It would be pointless to establish an opposition between public and private research, or between basic and applied research. They are inter-dependent.

No major country can afford to depend exclusively and durably on discoveries made elsewhere. Which means that France has no option but to invest heavily in basic research. But applied research is vital to the creation of wealth and economic growth. This is a reality our national research effort must not ignore.

The European Union has set a Research and Development spending target of 3% of GDP. With a figure of 2.2%, France is slightly above the EU average, though still a long way off the 3% target. We therefore need to step up our effort in this domain, in particular by encouraging corporate spending on R&D, since our public spending already matches that of our main partners.

It is equally vital to expand our research personnel.

Brainpower – research and development scientists – are the raw material of research, and the current dislike of science among young people is a cause for concern. This is visible in most of the western nations. It is imperative that we stem this decline in the desire to pursue careers in science and that we reverse the trend. This necessity is highlighted by the fact that in the public research sector, 31% of university lecturers also engaged in research, 27% of pure researchers, and 38% of engineers and technicians, are set to retire between now and the end of decade.

It is vital to prepare for this development, to ensure that knowledge continues to be passed on and to redeploy staff as necessary. We must do



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all we can to halt this brain drain, to offer those who have gone abroad possibilities of returning to France, and to attract first-class foreign talent.

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To fulfil these objectives, the Government has adopted a national mobilisation plan for innovation and has overhauled its research policy.

The first aim is to encourage investment in research. That is the purpose of the new legal frameworks introduced for innovative start-ups and individual venture capital companies. It is also the aim of the revamped research tax credit, of the exemption from the business tax for investment in research, and of the strengthening of seed-capital funds.

It is important, too, to strengthen the links between publicly-funded and industrial research. This will entail a radical change in attitudes.

Researchers will be encouraged to take out patents to protect their findings, and assistance will be provided to help them negotiate with interested industrial firms. The cost of filing and even more so of maintaining patents, must be brought down, an important consideration for research laboratories and small to medium-sized enterprises. Major research complexes are a natural focus of co-operation between industry and research, and they need to co-ordinate more effectively with industrial research. The role of the French Committee for Major Research Facilities will be enhanced. Its mission in particular will be to incorporate European co-operative programmes into our own programmes at an earlier stage.

Finally, we need to release pent-up energy in the public research sector, by fostering mobility between institutions, whatever the nature of people's employment contracts and status, and through greater career diversification as between teaching, research, technology transfers, popularisation of science, international relations, business start-ups, and so forth.

Spurring initiatives in public research bodies also implies improving their governance, modernising their modes of supervision, making their organisations more flexible, and subjecting their strategies and results to international evaluation.

To complete government support for research and innovation, we need to rely more on local authorities. They have shown what they are capable of here. The Rhône-Alpes region, admittedly, has always set the example in this domain. Equally, France's candidature for the ITER international research programme on nuclear fusion was facilitated by the commitment shown by the local authorities. Regional authorities are best-placed to promote innovation in small and medium businesses, to support



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"incubators" and technology transfer centres and, in general, to foster interaction between public research and the regional economic fabric. France's policy of decentralisation represents an opportunity to strengthen their role.

France's research community and industry have opted for Europe. They will increasingly become part of a single European area for research and innovation. This single area is intended to encourage mobility on the part of researchers and students. It is expected to facilitate the protection of innovations via the introduction of a Community patent. It will promote co-operative ventures, notably through the sixth Research and Technological Development Framework Programme. France will be taking over the Chair of the Eureka initiative in June 2003 and it intends revive this, through improved articulation with the framework programme.

Finally, we have proposed that the European Convention establish research as a shared competence between the European Union and Member States, and that decision-making in this sphere be speeded up.

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Ladies and Gentlemen,

The industrial corporations taking part in the Crolles 2 project will gain a tremendous strategic lead in the race to develop nanotechnologies.

May others follow their lead, for innovation will be our greatest competitive strength in the international arena.

Research cannot be divided into two kinds, one that is principled and another that is mercantile. One that is pure intellectual speculation and another that is socially useful. The dialogue you have nurtured in Grenoble has broken down barriers for the benefit of all. It should serve as an inspiration for other initiatives.

Research must expand in all its forms – basic, technological and industrial – in order to flourish. We must stimulate and nurture that expansion by developing networks for exchanges among researchers, places for them to meet, science and technology parks, and large-scale programmes.

Young people will rediscover their taste for science if they can sense this enthusiasm all around them, in their region and in the towns where they live. If they can sense this upsurge of creativity and generosity that is the hallmark of the great adventures in human thought and major industrial projects. And if they can feel that, one day, they too could be part of a research community drawing strength from its diversity,



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filled with hope, rooted in their region yet open to the world.

Once again, I congratulate all those women and men who have contributed, and are contributing, to this magnificent project.

I wish you every success: it is fully deserved.

Thank you.

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