

SCIENCE AND TECHNOLOGY PROGRAM - JAPAN

cultivating germinal scientific ideas and building industrial usages for such results. They work towards R&D promotion and try to support industry-academia-government interactions. Not to be left out of this revolutionary period in Japanese S&T reform, AIST also happens to be undergoing equally serious drastic upheavals in internal organisation. In the past, AIST was set up into large research establishments called laboratories. This year coming, AIST will amalgamate all 15 laboratories in their system into a single new Institute. This Institute, provisionally to be called (in English) the Industrial Science and Technology Institute, will contain 3,300 full-time researchers plus a larger cohort consisting of: visiting researchers from industry, post-doctoral research fellows and graduate students. The budget will be the biggest for a single institute at \$1 billion (US) per year. It will be the largest public research institute in Japan. In making this change, AIST legally will become relatively more autonomous and as such will be permitted more flexibility administratively and financially. They will have their funds-raising liberalised and will be able to take charge more directly in resource allocation according to their own prioritised areas. Their staff will no longer be considered public servants. Increased numbers of foreign researchers will be hired. An entire new research culture is expected to flourish.

The AIST is carrying out another major policy initiative of the government, the Millenium Projects. Details of these will be presented in due course, but briefly here, these concern Information Technology, Environmental Science and Aging (including genomics). This Programme was initiated as a one-off programme last year by PM Obuchi and AIST will participate positively in the realisation of the activities. Also under the MITI umbrella is the NEDO Programme (New Energy and Industrial Technology Development Organisation) and others. NEDO is tasked to promote technological development as a "special public corporation", and functions as a semi-governmental organisation. It has focussed on photovoltaic and fuel cell technologies and currently supports energy conservation measures, oil-alternative energy technologies and global environmental issues.

The individual National Universities themselves are not spared any pain of restructuring either, as the government reform tentacles stretch as far down to the grass roots as their level, too. Universities currently are supported by the federal government (entirely). Their Professors are considered civil servants and as such have until recently been forbidden to engage in relationships with industry using their research funds or working on university time. That restriction was lifted some years ago but the progress away from that old pattern of working has been slow. With the reform of 2001 ahead, universities will become "Agencies". Everyone is discussing the semantics of that term very carefully these days and the jury is still out on the term's precise meaning. But it is clear that going to agency status will free up the universities and the professors to interact much more closely with industry and business. Royalty payments from patents and licensing agreements would be returned to the research laboratories instead of to the government and assistance with patent application is being put in place. Universities are studying means of implementing technology transfer.