

A \$500-million renovation

Tokyo

In a move to infuse some new life into Japan's rundown national universities, the Ministry of Education, Science and Culture is hoping to get more than \$500 million over the next five fiscal years to renovate and rebuild them. The rebuilding plan is the most significant attempt in years by the ministry to repair Japan's decayed university infrastructure in the face of growing criticism.

The huge request, which starts with a budget of more than ¥15,000 million (\$111 million) for the next fiscal year and continues with similar amounts in subsequent years until fiscal 1996, comes on top of substantial requests by the ministry for increased funds for grants and fellowships to support university research (*Nature* 353, 102; 12 September 1991). The request is subject to approval by the Ministry of Finance and the Diet, but although some trimming may occur, substantial changes are unlikely.

A ministry official in charge of the renovation programme says the ministry decided to make the move partly because of savage press treatment of the shoddy state of Japan's universities. But in recent years, industry and the powerful Ministry of International Trade and Industry have also become increasingly vocal in expressing their concerns about the universities. Industry fears that there will soon be a dearth of young scientists and engineers in Japan to support industry, partly because of a rapid demographic decrease in the student-age population, but also because of the unappealing nature of Japan's rundown universities. With even cleaning staff and technicians in short supply, new buildings alone are no longer enough.

Probably the most vocal (or at least the most powerful) critic has been Akito Arima, president of Tokyo University. And although education ministry officials emphasize that it has not yet been decided how the money would be spent, the science and engineering faculties of Tokyo University, which are undergoing major reform (*Nature* 351, 679; 27 June 1991), have the most concrete plans for renovation among Japan's many national universities.

The engineering faculty already has a plot of land set aside on the main campus of Tokyo University for a planned new ten-storey building. Administration officials hope to begin construction next fiscal year with some of the funds requested by the education ministry.

The science faculty is in a more difficult situation because it does not have any spare land. If the main faculty building is torn down, there would be nowhere to accommodate the present faculty mem-

bers, supporting staff and students, who total about 300 people. Present plans call for half of the main building to be torn down and replaced with a much taller, ten- to fifteen-storey building, and then the other half would be replaced. Rather than just holding the physics department as at present, the new building would accommodate all the science departments except biological sciences and chemistry, which already have their own new buildings on campus.

BRITISH RESEARCH SPENDING

SERC ponders partnerships

London

BRITAIN'S biggest research council, the Science and Engineering Research Council (SERC), seems reconciled to a further period of budgetary constraint. But SERC's chairman since 1 April, Sir Mark Richmond, seems to relish the role of good housekeeper now thrust on him. Most big projects and even the council's own decision-making structure are due for review, to be completed by early 1993.

This emerges from SERC's 'corporate plan', published last week. One issue, a problem which has unexpectedly become an opportunity, is Europe's over-supply of neutrons for research. With the enforced hiatus in the operation of the nuclear reactor at the Institut Laue-Langevin at Grenoble (*Nature* 352, 366; 1 August 1991), researchers are beating a path to SERC's Neutron Spallation Source at the Rutherford Appleton Laboratory.

Richmond boasted last week that SERC's neutron source has already become an international centre, to the cost of which a handful of other research councils (Japanese as well as European) already contribute. But he also hinted that continued British membership of the Grenoble neutron laboratory would hang on the estimated cost of fixing the Grenoble reactor. The upper limit of £100 million overall would be too much.

Another bout of introspection about continued British participation in the European high-energy physics laboratory (CERN) at Geneva is also on the cards. SERC's Nuclear Physics Board has enthusiastically endorsed the plan to install in the tunnel now housing LEP (the Large Electron-Positron accelerator) a pair of accelerators for protons and antiprotons that will make the Large Hadron Collider.

Richmond is content that the construction costs will fit within the present budget (so that the British annual contribution should suffice), but is alarmed that the high cost of detectors will strain the discretionary budget, perhaps restricting Brit-

Given the complications, the science faculty does not expect to begin reconstruction for two years. And even meeting this schedule will be difficult, faculty members say.

The ministry's plans to put more money into the universities in the form of grants, fellowships and new buildings goes part of the way towards meeting the widespread criticisms of the university research system. It remains to be seen, however, how much other universities apart from Tokyo University will benefit from the rebuilding programme.

David Swinbanks

ish participation at CERN. SERC as a whole will have a first discussion of the project later this year; CERN's management wants a final decision by the end of 1992. Richmond, an enthusiast for European projects, hopes that a planned reassessment of national contributions to CERN or a possible delay of installation costs will liberate SERC from the financing jam.

That is likely to be acute. This year's budget of £454.9 million is 4.0 per cent less than last year's in real terms, even after using the Treasury's estimates of inflation in the general economy, but the costs of research increase more quickly. And SERC is faced with budgets that will decline (on the Treasury's basis) by 2.3 per cent next year and 4.0 per cent in 1993-94. One consequence is that SERC's staff will be cut by 300 people; some redundancies will be involuntary.

Two aspects of the review of SERC's own structure are especially significant. First, Richmond is looking for a system in which the four disciplinary boards (nuclear physics, astronomy and space, science, and engineering) that at present compete for shares in SERC's pie may be restructured to reflect the growth of interdisciplinary science. In a manner likely to win friends among politicians, he is also looking for better ways of making links between academic research and industry more productive of useful innovation.

The question (raised last week) of whether responsibility for engineering should be generally distributed through SERC's activities rather than concentrated in an engineering board (due to spend £138 million next year) is less likely, when asked aloud, to win friends among engineers. SERC's spending on engineering has had a talismanic quality since the research council added the 'E' to its name in 1982: Richmond's safest course may be to ensure that the promised detailed reviews of spending on engineering are widely publicized.

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