

NATIONAL RESEARCH DEVELOPMENT CORPORATION

THE sixteenth annual report of the National Research Development Corporation*, covering the year ended June 30, 1965, again emphasizes a marked increase in the Corporation's activities; to cope with the anticipated increase, major changes were made in the organization of the Corporation. The two Departments of Applied Science and Engineering have been divided into groups for Bio-Sciences, Industrial Chemistry and Scientific Equipment, and for Electrical Engineering and Electronics, Computers and Automation, Mechanical Engineering, and Production Engineering, respectively, and a Department of Planning and Policy Co-ordination has been established. Financial assistance was provided for more than thirty-five new projects (representing an initial investment of £5,759,000) compared with thirty in the previous year, as well as additional support of about £2 million for existing projects including hovercraft. Actual expenditure on development was £591,339 compared with £457,366 in the previous year, and forward commitments now amount to £8,653,000. Nine items of development expenditure totalling £128,000 were written off, and ninety-five development projects were in being at the end of the year compared with sixty at the end of the previous year. During the year, fifty-six new licence agreements with firms in the United Kingdom and overseas were completed, and nineteen terminated, compared with seventy-one and thirty-three, respectively, in the previous year, making a total of 593 licence agreements in force in the United Kingdom and 56 overseas (561 and 58, respectively, in the previous year).

Two major changes during the year noted in the report were the transfer in February 1965 of statutory responsibility for the Corporation from the Board of Trade to the Minister of Technology and the extension of the Corporation's financial resources and the increase of its scope under the Development of Inventions Act, 1965, passed in June. The Corporation believes that its future business will continue to be concerned mainly with supporting technological development, but that work of a high-risk, long-term, or applied-research nature will be more extensively supported where this is judged to have a probable commercial advantage for an industrial user. Even more extensive may be the support of innovation in industry, and for this purpose the Corporation's experience in furthering the exploitation of its own projects may be more generally applied. The Corporation also affirms its belief that in all significant developments where Government spending with industry is involved, it has much experience to offer in the conduct of joint ventures with firms. It considers that Government departments could well profit from closer contact between the research establishments and itself. It also believes that further steps should be taken to increase the awareness of industry of the help which the Corporation could give. The report reiterates the view that in future the proportion of projects in which industry and the Corporation share the risks will increase and that a large increase in the number and scope of applications for assistance from industry can be expected.

Of the 1,122 inventions communicated to the Corporation during the year, 276 were from Government departments and Research Councils, 168 from universities, nine

from industrial research associations, 93 from private firms and 510 from private individuals in the United Kingdom. Of 183 patent rights assigned to the Corporation during the year, 134 were from Government departments and Research Councils, thirty-four from universities and two from industrial research associations. At the end of the year, the Corporation held 377 United Kingdom patent applications and 817 granted patents, as well as 912 overseas patent applications and 1,346 granted patents. A further 113 United Kingdom patent applications and forty-nine granted patents were held by the Corporation's subsidiary development companies, as well as 443 overseas patent applications and 432 granted patents. The 1,226 United Kingdom patents and patent applications which are the subject of exploitation include some awaiting formal assignment. Receipts from exploitation amounted to £436,853. The Corporation is represented on the Co-ordinating Committee on Technology for Developing Countries and has supported projects intended to meet the specific needs of the developing countries. The Joint Development Committee with the Department of Scientific and Industrial Research no longer exists.

Among new projects started during the year under the Bio-Sciences Group are those for a bollworm attractant, a process for a component of human follicle stimulating hormone, fish-drying equipment, a locust attractant from grass and a typhoid vaccine. Under the Industrial Chemistry Group the report notes new projects for bonded boron carbide, metal polishes and a plastic sealing process; and under the Scientific Equipment Group, for an endo-microscope, a histogram plotter, membranes for heart-lung machines, and a project for a library of teaching programmes on industrial training for use with teaching machines.

The Computers and Automation Group records new projects for the automatic process and plant control system known as *ARCH*, for developing computer hardware and software, and for a magnetic tape recorder and a magnetic tape store. The Electrical Engineering and Electronics Group gives details of new projects for a beta-backscatter gauge and a high-background radiation monitor and reports that the first batch of six instruments for a photosonic blind aid has been completed. Work continues at the Imperial College of Science and Technology on the fundamental aspects of two systems of television bandwidth compression although support from the Corporation was terminated at the end of 1964. New projects in the Mechanical Engineering Group are for the development of a large Diesel engine of advanced and novel (opposed piston) design, and epicyclic gears. The Production Engineering Group reports schemes for a new type of tunnel kiln (hoverkiln) for firing clay and glazed ceramics and pottery, and a numerically controlled turning machine. At the time when the report was published the development and test programme for flexible containers—the *Dracone* project—was almost complete and the original fuel cell programme was expected to be completed by the end of 1965. Satisfactory progress is reported with the oil well drilling rig project, and further progress with the development of hovercraft is also recorded, including the initiation of a joint programme of research at the National Physical Laboratory.

* National Research Development Corporation. Sixteenth Annual Report, 1964-65. Pp. 53+8 plates. (London: H.M.S.O., 1965.) 5s. net.