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cc Mr Hoskyns

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Qa 04191

To: PRIME MINISTER
From: SIR KENNETH BERRILL

Microelectronics

1. On Monday next you are to have a meeting with Sir Keith Joseph to discuss Microelectronics. You asked for comments before that meeting from the Treasury and the CPRS, and the Chief Secretary subsequently put in his views. In large part we in the CPRS agree with the views put forward by the Secretary of State for Industry and the Chief Secretary, though we would wish to put the discussion in a wider context. In what follows we set out briefly the position as we see it.

2. In an ideal world Governments would not need to intervene to help private industry develop and exploit new technologies. But on past experience of their reaction to technical change British industry is not the fastest out of the starting blocks. The microelectronics race is one which we just cannot afford to lose and we are already several years behind our main competitors. Despite their lead most of those competitors have decided that they, too, cannot just leave everything to the market. The German Federal Ministry for Research and Technology is increasing its expenditure in this field at a rapid rate. Expenditure to help with the application of advanced electronics to industry is rising from DM 14m. in 1978 to DM 23m. in 1980. They are increasing expenditure too on their Information and Documentation Programme which, through a new technology centre in Berlin and through local advisory centres, aims to help small and medium sized firms with R & D and with employee training in advanced electronics tailored to the particular needs of the individual company.

Details please

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3. We also agree with the Chief Secretary that one of the most encouraging events of recent months has been the way in which the TUC, the Post Office Engineering Union and APEX have recognised that Britain cannot opt out from the microelectronics revolution: indeed, we cannot even afford to try to take it slowly. It would be most unfortunate if this momentum were to be lost by any suggestion of lack of commitment to microelectronics on the part of the Government - given the strategy of increasing United Kingdom productivity generally and of promoting employment in new industries.

4. The CPRS would also agree that in a period of severe constraint on public expenditure the order of priority should be -

I. Helping individual United Kingdom firms to discover how microelectronics can be applied in their particular products and processes (the Microprocessor Applications Project - MAP).

II. Helping to create in the United Kingdom a design, development and production capacity in microelectronics (the Microelectronics Industry Support Programme - MISP).

III. Having some production capacity under British control (e. g. GEC/Fairchild and Inmos).

NO

5. The case for a MAP type scheme is clear and the German example shows the extent to which our competitors have accepted it. The possible uses of the new electronics are widespread and all pervasive. Many firms are vaguely aware of the possibilities but need to be helped to make these ideas concrete in their particular area and helped to train their staff.

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universities
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colleges.*

6. The case for support for microelectronics manufacturers (MISP) is more complex (though once again the Germans are doing it). Part of the case rests on the needs of defence (integrated circuits were developed first for the US Minuteman project). In the high technology defence/aerospace/computing industries, more and more of the systems are being incorporated

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in the chip. If the United Kingdom is to remain in the front rank in these areas some Government assistance in the design and production of semi-conductors is still necessary.

7. The case for having some production capacity under British control is largely one of security of supply. This could be achieved either by majority holding in the private sector (GEC/Fairchild) or by public ownership (Inmos). The case for continuing Inmos is weaker than for MAP and MISP. The creation of Inmos has already had some catalytic effect on the private sector, and in the medium term could well become sufficiently successful to be sold off as a going concern. Sold now its value would necessarily be less. But clear decisions on whether to close it now or continue and sell later should be taken soon since continued uncertainty will mean great difficulty in recruiting and holding skilled staff, and the possibilities of a successful outcome will wither.

Who said?
Enigma?

8. But apart from those issues raised by the Secretary of State for Industry and the Chief Secretary, the CPRS believes that the Government needs to discuss microelectronics in a wider context. The potential market for microelectronic equipment is very large and growing very rapidly, but the interesting point is the breakdown of this market. No less than 60 per cent of sales are expected to be in 'information goods' (communications equipment, office equipment, data processing). It is not for nothing that the French talk of Information Technology rather than of microprocessors. Approaching advanced electronics in terms of information technology creates a new perspective and the MAP/MISP/Inmos group of policies appears as only one part of the required response. If we have bottlenecks on the widespread use of the new 'information technology', our success in the microelectronics field is bound to be severely limited.

9. Such a broader 'information technology' perspective brings out other areas than MAP/MISP/Inmos where Government policy could be crucial in the United Kingdom's struggles in the microelectronics race:

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(a) the crucial importance of having an adequate communications network inside the United Kingdom (and hence the vital role of the Post Office):

(b) the international dimension - the importance of the United Kingdom having adequate access to radio frequencies and satellites:

(c) the many domestic and international issues in the fields of privacy, copyright, compatibility in data transmission, etc. in which the Government has an important role:

(d) the scope for the public sector using the new information technology to improve the efficiency of its administration.

10. In the view of the CPRS, all this is at present very far from well organised. It is not looked at as a whole, it is not dealt with at sufficiently high level, and the bottlenecks are not being removed quickly enough. Many Departments of State are involved as sponsors for industries, as potential users, as negotiators in international fora (e.g. radio frequencies). We would press for an interdepartmental examination of these wider issues and their relationship to the problems of microelectronics.

11. I am sending copies of this minute to the Secretary of State for Industry, the Chief Secretary, and to Sir John Hunt.

KB

12 July 1979



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