



10 DOWNING STREET

From the Private Secretary ①

Prime Minister

INMOS

Could I ask you to have another look at the papers. Policy Unit feel that although the injection of institutional funds into INMOS looks attractive, it has risks and could close off options. The attached note seeks to spell out the difficulties and suggests some questions we might put to DTI.

Agree P U recommendations?

AT  
Yes - we cannot put £13 any more money into INMOS. That is why I wanted to try off at least 75% of the Policy Unit's view.



INMOS

The Prime Minister is sympathetic to the idea of institutional investment to create an independent UK company and hopes that at least 75% of BTG's holdings can be sold off in the operation.

This is not an option which is currently available. The institutions are only proposing to put up perhaps half of the £75 million of new money which INMOS will require over the next two years. Of this only £20 million appears to be certain and there must be doubts, given INMOS's past track record, whether the balance can be raised on the terms proposed.

The institutions will not take on any of BTG's holdings at this stage although the injection of new money would dilute BTG's holding from 75% to perhaps about 50%.

The disposal of BTG's holding is a longer term possibility which depends upon

- the success of the proposed initial placement
- the institutions putting up further new money
- a successful flotation
- the ability of INMOS to operate as an independent company.

Although we agree with the Prime Minister that this would be an ideal solution, it is a high risk strategy spread over at least two years.

The market place for semi-conductors is changing rapidly (see Annex). With its preferred strategy of product innovation, INMOS is always likely to require significant inputs of cash to finance major investments in R&D.

There must be considerable doubt, therefore, about the ability of the company to maintain its competitive position in the up-market specialist chip sector. Consequently the willingness of the institutions to continue to finance the company must be uncertain, particularly as INMOS has no real market share in the standard memory chip market place.



The alternative route of complete sale has many obvious attractions both in terms of removing Government's commitment and in providing corporate support.

AT&T are prepared to pledge further money (\$100 million) for investment in Newport which needs substantial additional investment to come up to scratch as a production centre. It is by no means clear that legitimate concerns about technology transfer and the design capability at Bristol could not be met by negotiation (see Annex).

While AT&T have not expressed an interest in the Bristol design facilities or the transputer - itself a worrying sign -, it is not clear whether they might not be prepared to contribute to maintaining the Bristol facilities as part of the price for early entry into Europe.

Alternatively we would have anticipated that some British companies would wish to take over this work in order to develop on all British VLSI systems design capability of world excellence. ICL could well come into this category.

Very Large  
Scale  
Integration

### Recommendations

Before coming to any conclusions on the difficult choice confronting us, we recommend:

- 1) that the Prime Minister does not rule out the possibility of a complete sale to an overseas bidder;
- 2) that Norman Tebbit should be asked to
  - spell out the risks associated with the institutional route;
  - assess the viability of INMOS as an independent company;
  - negotiate with AT&T to establish both a market price and suitable terms to meet our concerns about technology;
  - provide information on other prospective bidders and their offers.



INMOS is in effect three businesses:

- 1) an up-market specialist chip maker at Colorado Springs where INMOS is designing and making STATIC RAMs and EEPROMs largely sold to four key US computer companies - IBM, Cray, CDC, Tandem. Colorado Springs is also the base of INMOS's process technology;
- 2) standard memory producer with 64K and 256K RAMs to be produced at Newport;
- 3) a microprocessor design house at Bristol - the home of the transputer and advanced CAD facilities.

The Japanese are strongly entering the STATIC RAM market and are eroding some of INMOS's technical edge. On the 256K RAM standard memory chip, INMOS has still some way to go on process technology. This chip is already being manufactured in Japan and the USA at rates well above INMOS projections. Indeed, the race is now on to introduce the Megabit RAM.

In this context, we need to be clearer about our national technological objectives

- freedom to design and develop state of the art VLSI with access to UK production ie the Bristol activity linked if possible but not necessarily to Newport
- acquisition of as much advanced US technology as possible - the basic purpose behind the whole INMOS project.