

Midland bank to PM 23/9
Pilkington Bros to PM 26/9



10 DOWNING STREET

Prime Minister (4)

Michael replied to
these letters in your
absence abroad.

AT
3/10

Pilkington Brothers P.L.C.

c.c. Dr. Nicholson ✓ 28/9

Prescot Road St Helens Merseyside WA10 3TT Telephone St Helens (0744) 28882

FROM Dr. D. S. OLIVER, C.B.E.

The Rt. Hon. Margaret Thatcher, M.P.
Prime Minister,
10 Downing Street,
LONDON

26th September 1983

R29

Dear Prime Minister.

I greatly appreciated the invitation to your Seminar on Science and Technology. Like many others I found the day stimulating, and left having been unable to contribute to the discussion because of the lively debate which the Seminar encouraged. I left immediately after the Seminar on a visit to the U.S.A. (where, incidentally, I found myself following you when I visited Genex for discussions with their chairman) and this is the earliest opportunity I have had to thank you for the invitation to attend, and to make a contribution to one area of discussion.

You commented that you will shortly be considering the ACARD report on collaboration between HEI's and industry. The report concentrated, understandably, on research inter-linkages, and there cannot be disagreement with the objective of strengthening these. However, if one takes a marketing approach to the role and work of HEI's, their most important products are the qualified men and women they produce. If we do not have this 'commodity' from the HEI's, there is no alternative source of supply. I believe that the research contribution to society by our HEI's is crucial but, in the limit, it is of lesser importance than the supply of adequately trained people.

I am sure you will already have this facet of HEI/industry interaction in mind when considering the ACARD report in its full context. May I suggest three areas (one only indirectly related to HEI's) where the Government may be able to help.

1. There is a need to improve the inter-change of staff between HEI's and industry with the objective of improving the educating base of the HEI's. It occurs to me that SRC/D. of T. & I. Teaching Company Scheme could well be extended to seek for effective ways of securing this interplay, and to foster the application of ways forward. As the present chairman of the Scheme's Management Committee, I am sure that such a development would be welcomed both by the Directorate and their industrial advisers.

2. We should not fall into the trap of emphasising vocational training in our HEI's at the expense of a more broadly based education. Very often (as you have recognised in your recent SSRC initiative) technological innovation can only take place if there is enabling social innovation. Our graduates who enter industry need to be prepared for the holistic approach that this combined technological/social change requires through a suitably broadly based education, itself being more holistic in character than is often the case. The Government is in a unique position to offer incentives that will stimulate developments in this direction.

3. A part of our cultural problem in the U.K. is that technology and industry do not 'stand high' in the value judgments of many people. Consequently our entrants to HEI technology courses are not of as good a standard as we need, and many of our graduates do not see manufacturing industry as a desirable first choice for employment. To change values we must start at as early an age as possible. This means, pragmatically, starting with schools rather than universities. It is hard to see how a change in values in our schools will come about by internal action, because of the personal histories of those who teach. Thus we need outside influences. One such influence has come from the SATTRO's (of which we have Science and Technology Education on Merseyside - STEM - in my area). The funding and general support for these has come from industry, LEA's and from D. of T. & I. It is my experience that industry cannot at present give the support it has in the past, whilst the LEA's have, in many cases, been of little help with the SATTRO's. The D. of T. & I. support has been limited, essentially, to pump priming! May I suggest that this be extended to longer term aid since I believe this is the only immediate way of obtaining the relatively very small funds required for what I consider is a vitally important activity.

Although I would have liked to comment on many other topics raised at your Seminar, I have restricted my comments to the one broad area which I believe to be important and capable of influence by the Government in the relatively short term. I trust you will find them helpful.

Yours sincerely

Dennis Alwin

Copy of Mr. Warnes' letter
already sent to Dr. Nicholson.



cc Blow for:
Venture Capital

10 DOWNING STREET

From the Private Secretary

CABINET OFFICE	29
W	...1642...
30 SEP 1983	
FILING INSTRUCTIONS	
FILE NO.	

September 1983

Dear Mr. Warnes,

I am writing in the Prime Minister's absence in North America to thank you for your letter of 23 September. I will place your letter before the Prime Minister immediately upon her return to this country.

I know that Mrs. Thatcher will be most interested to read your views and I will ensure that the substance of your letter is conveyed to those who have been charged by the Prime Minister to carry forward work in this most important area.

Yours sincerely,

Michael Scholar

B.C.J. Warnes, Esq.

Midland Bank Venture
Capital Limited

L28

BCJW/JB

22 Watling Street
London EC4M 9BR
Telephone 01-638 8861



Extn. 1599

23rd September 1983.

The Prime Minister,
10 Downing Street,
London. S.W.1.

c.c. Dr. Nicholson

cc ECOW Por: Venture Capital

Dear Prime Minister,

Seminar on Science, Technology and Industry

I have allowed a few days to elapse before writing to thank you for the impeccably organised Conference at Lancaster House on 12th September.

Previous letters have mentioned the need to change British attitudes towards business; and small business in particular. Given that change - a role for which the Government is pre-eminently well placed of course - others, like myself, can begin to make headway in bringing about tangible change on the ground.

I do believe, as you know, that a relatively large perceptual gulf exists between the (few) barrow-boys who really do know how to run business; and the rest. Striking (and most unexpected) confirmation of this comes from Sir Kenneth Corfield, whose remarks are attached.

The importance of a brain-storming event like the Lancaster House Conference was to highlight the nature of this gulf. I thought it did it very well indeed.

One small example. When I saw Ian Hay Davison last December on the merits of the MBVC form of improved financial control (which, in principle, he very much welcomed), he said "the only way to force through such a fundamental change within the timescales needed (months rather than years), would be for the Banks to agree to lend only to companies whose accountants/auditors possess these skills. Small accountancy practices up and down the country would then be compelled to come to grips with the new techniques in order to hold onto their traditional audit and tax work".

cont/d....

For various reasons the idea was not fully practical, but a version of the same thing has now been successfully achieved (e.g. see attached article from The Accountant). The Banks themselves, particularly the Midland, have moved light-years on this in just the last few months, which is "pulling" the rest of the scene with them.

A year ago an article such as this could never have been published with any hope of success. Now, thanks very largely to you in changing national attitudes, the prospects are rather different. Equally important moves are taking place with the business schools, Aston and Sundridge Park in particular.

On a parallel theme, there is now a rather different explanation for the relatively poor investment record of British Industry. On every page of Professor Alan Hankinson's "Study of Investment Behaviour of South Wessex Small Engineering Firms 1979-82" "confidence" is shown to lie at the root of whether a company expands, invests, takes on more staff; or not. This has always been taken to mean confidence in the Economy, confidence in the buoyancy of the business climate.

But consider whether it might not, instead, really involve the inner confidence of the Managing Director himself, in his own business skills? And that, only where such inner confidence exists - the sureness and confidence of a Sir Kenneth Corfield for instance - does a business really begin to take off.

The Lancaster House Conference was a further step towards putting all this right on a national scale. But it highlighted how very much more needs to be done. For instance Michael Heseltine's admirable initiative in extracting products from Government Research Departments for the benefit of the entrepreneur, will be stillborn unless great pains are taken also to provide facilities needed to re-engineer, and perhaps even re-design, the products themselves and their associated production processes to dovetail specifically with clearly identified and carefully researched market needs.

There is the old saying that business is not to do with products and services but with buying and selling production hours; with buying for £1 and selling for £2 (or £3 or £4). The products and services themselves are only the outward manifestation of this process, which, as people like Sir Kenneth Corfield would undoubtedly have it, goes to the very root of understanding the true nature of business.

This flavour did come across at the Conference, particularly from people like Sir Robert Telford describing the ALFI project, but perhaps not nearly enough. The main business strengths of this country must come from enhancing existing products and services as well as going out on a limb with new products; where, again as mentioned, the success rate can be as little as only 2-3%. The overall potential for business in this country - correctly handled (and the proviso is crucial) - is therefore very much greater than is commonly supposed.

Overall, a very good and a very important Conference. It was a privilege to attend.

With many thanks,

Yours sincerely

Brian Warnes.

B.C.J. Warnes
Managing Director

12th September, 1983

B.C.J. Warnes Esq.,
Managing Director,
Midland Bank Venture Capital Limited,
22 Watling Street,
London, EC4M 9BR

YOUR BOOK

This is a very good and well written treatise.

✓ It happens to express the self same principles that have contributed more to my own modest success than any other single factor of which I am aware.

✓ || The importance of break even point and of testing the market value of a product or service by pricing it truly profitably seems so commonplace to us - and yet is so much neglected.

✓ The 'barrow boy' mentality I may have practiced but the phrase was first used in my presence by Mr. Hugh Barker, then Chairman of Parkinson Cowan Limited in the early sixties.

✓ | Every year or so another company in my own province displays just the characteristics you so vividly describe. We have to change the management - perhaps your book will help more, otherwise intelligent, people to survive and help the Country.

The various Engineering Institutions (there are 57 altogether) should be approached to review your book, recommend it and make it available from their libraries.

Every good wish for success,

ORIGINAL SIGNED BY
KENNETH CORFIELD

THE PROFESSION

The accountant's role — a banker's view

The British accounting profession is well placed to lead the country into the small business age. It has brilliant minds and abundant skills but many of its techniques are outdated, more suited to an era when 'historic' accounting was the order of the day. In the austere and highly competitive climate of the 80s business needs real time accounting and rapid access to information, says Brian Warnes, managing director of Midland Bank Venture Capital and a chartered accountant. The profession must adapt to take its place at the forefront of business life otherwise others will take its place. MARGARET MARLEY reports.

WHEN a small business goes to the wall and it is happening at the rate of 2000 a week, the receiver prepares a statement of affairs showing assets and liabilities. Sometimes the bank finds that an apparently secure loan is at best a partial recovery and the bank manager who made the loan finds himself on the hook. 'Why did you make such a loan to a company in this state of health,' his superior inevitably asks.

The beleaguered manager refers back to the audited accounts, the figures on which he based his decision, but the picture they present often bears too little resemblance to that of the receiver's report, even allowing for the differences between a 'going-concern' and a 'gone' basis.

If the bank manager feels let down in such circumstances, so can the managing director who often looks on an audit as a clean bill of health. For a small business with unacknowledged weaknesses is in no shape to face up to market pressures; whereas given the right kind of information and financial control it might be able to survive.

Between 7-800,000 audits are done in the UK every year, mostly small business audits by small practitioners. Most are never put to the test because the business survives, but with more than 50 per cent of the small business start-ups folding, criticism of the traditional audit is growing. And it is criticism on a fairly significant scale.

It is a criticism that has significance

far beyond the accounting profession, because Britain's small businesses contribute less to GNP than do those of the US, Japan or France; and a lot of money and resources are being poured in to make them the spearhead of economic revival. But there is a one-in-five failure rate of small businesses using the Loan Guarantee Scheme, and it is raising fundamental questions about the annual audit, the accountancy profession and the British businessman in general.

The annual audit is the only financial record kept by many UK firms; notable exceptions are the highly efficient, big league companies. A great number do not have any kind of monthly management accounts, they just keep cash books on a day-to-day basis. Then three months after year-end the auditor comes in and takes two to three months to audit the accounts. By the time the management sees the figures some of them are 18 months old, hopelessly out of date and irrelevant to current costs.

Far too late the managing director realises, for instance, that his prices bear no relation to costs. These are much too low, but he has to let his current order book run out for another two or three loss-making months. In today's austere climate, a small firm needs much closer financial control and few can survive this kind of misjudgment.

By contrast there are relatively few collapses among firms with a good

financial management system and at the other end of the scale the highly successful, well-run company will have a sophisticated weekly or monthly, real time accounting system.

Take GEC for example, a group which controls 250 companies. A full description of the financial behaviour of the entire group is on Lord Weinstock's desk every Tuesday morning. It is exactly the same for Oxford Instruments and undoubtedly Racal, British companies that have taken world markets apart. They run weekly accounting systems which describe output, orders, manpower statistics, cash-flow and all the information that is necessary to allow the management to keep a finger on the pulse of business life.

'The sophistication of the management information system is usually a mirror image of the business perception of the people running the business. The two seem to go together,' says Brian Warnes.

Unfortunately good business perception is not a natural British characteristic and British success stories are the exception rather than the rule. We produce products of high technical excellence which are commercial flops because we have not mastered the business logic that the commercial benefit of a product must be in proportion to its cost; Concorde for example. 'The British are just not as good as they should be at business; they seemingly lack the barrow-boy instinct that makes pro-

THE PROFESSION

fits out of indifferent products.'

It is a question of culture block, the legacy of empire when the country, with assured wealth and captive markets all over the world, directed its best brains into administration, the civil service, the army, the professions. And business was very much a dirty word.

Traces of these attitudes still remain and the difficulties and challenge of the business world are largely underestimated. A man will decide to go into business overnight, if he can raise the steam. He sees no need to learn the basic ground work and if trouble arises he will push up his prices and hope they stick. It becomes a trial and error process; there is no scientific method of deciding on the right price at the outset.

In the cold light of the 1980s, British attitudes are changing. The severe and prolonged recession has decimated the number of safe, prestigious jobs, and under the influence of the Thatcher government, the small business is gaining acceptance and respect; it is seen as a key element in the nation's economy.

But the budding businessman is labouring under a tremendous handicap. There is no source of hereditary business wisdom to draw upon; no distilled business knowledge and experience turned into formalised procedures and techniques. While individual companies have excellent real time accounting systems many have been self-developed, worked out empirically, and they remain outside the mainstream of British business life. They have not been codified nor made the basis of teaching.

There is a growing awareness that business needs real time rather than 'historic' accounting and bankers are forcing the pace in this direction. The annual audit is under attack, both as an indicator of a company's creditworthiness and as a relevant tool that will help keep a firm on the straight and narrow path. But in a large number of cases no other figures are available and, in sheer desperation, some banks are launching their own monthly accounting systems.

'It is purely a question of investment protection', says Brian Warnes. 'The banks don't want to pinch the financial services of the accountant,

but they know that the information available is not good enough as a basis for seasoned judgment. The motive is to provide the proper background for better investment judgments.'

MBVC, which has investments in about 55 companies, insists that each company adopt MBVC's standard cash-flow plan, a simplified accounting system which monitors a company's progress from month to month. Lloyds has adopted the Carl accounting system and already is handling the monthly accounts of 600 customers.

Barclays and NatWest have powerful computer bureau subsidiaries, Baric and Centre-file, which are rapidly moving into the monthly accounting field. AIDS, the independent computer bureau which specialises in monthly accounting for the 5 to 50 employee firm, plans to establish 225 franchises throughout the country and to develop a 5000-strong client base. 'The banks are giving us every encouragement', says AIDS director Mike Salinger. 'We have been assured of introductions to clients through the branch network.'

But it is really the accountancy profession that should be leading the way and developing simplified, real time accounting systems for every-day business use, says Mr Warnes. Instead, when the accountant is called in to do a formal exercise reams upon reams of paper emerge, a veritable jungle of figures, words and jargon. The audit costs thousands and may be a valuable bench-mark for the professional, but it is incomprehensible to the average managing director. It remains an academic exercise that is irrelevant to the day-to-day running of a business.

There is a desperate need for simple real time systems. 'The engineer who sets up a small business knows all about product development, but he does not understand cash-flow or how to keep a business afloat. He needs a simple system that will cover the key issues, orders, sales, overheads, breakeven point, gross margin, debtors, etc, which will tell him at a glance how the firm is doing.'

But the simpler the system the more sophisticated the thinking behind it. A consultant charging £250 a day will

take two or three weeks to design a one-off system for a small firm, but at £6000 to £7000 the cost is prohibitive. 'I can see no reason why the profession, and in particular the Institute, should not step in and develop half a dozen standard systems for different business applications', says Mr Warnes. 'The profession, in intellectual terms, is probably the strongest in the world. It has all the sophistication and skills necessary for the job.'

A whole range of systems might cost £10,000 to £30,000 to develop, but the institute could find the money from the profession at large. It could punt out the systems to 100 firms to operate on a year's trial, get an evaluation and then produce almost a *Which* report. Then, with the systems fully refined, they could be distributed to accountants up and down the country so that the small practitioner need only put his hand into a drawer and pull out a suitable accounting system for his small business client.

'I am highly critical of the profession for not having crossed this frontier', says Mr Warnes. 'These problems are in desperate need of solution. Companies are failing or not growing as they should; they are remaining small and vulnerable, weak and nervous because they are not getting the right kind of business guidance. The profession should be moving into this field very fast.'

Once a real time accounting system is developed, the accountant must then make the best use of it; interpreting it for the managing director, explaining the significance of what is happening, forecasting what is going to happen. The system becomes a sensitive barometer which enables a firm to pick-up the changing pattern of business behaviour and to tailor output and pricing accordingly. 'If the accountant can adapt to the needs of the day and develop a real understanding of business there is an enormous role for him to play in the revival of British industry.'

But at the moment the accountant's advice is often far from accurate; it does not tie-up with what actually is happening and his credibility is prejudiced. A firm about to embark on a major contract will ask the accountant what cash needs are likely to be. He prepares a cash-

THE PROFESSION

flow forecast but six months later the firm runs out of money. 'How come', asks the managing director. 'Well of course the cash-flow prediction is wrong', says the accountant, 'time scales were different six months ago and your sales have not come up to expectations'. 'This is no valid excuse for not achieving forecasting accuracy', says Mr Warnes. 'It highlights a serious deficiency in accountancy training.'

The problem is that both the accountant's training and his conventional tools equip him to deal with static problems, with historic figures. But business life is fast moving and dynamic and what is required is a man trained to cope with changing patterns, to get cash-flow forecasts right in spite of fluctuations in the market-place. There is a great difference between the engineer who understands dynamics and the one who is limited to statics; the first can design a missile to hit a moving target, the second can only hit a stationary one.

'The average accountant is good at statics', says Mr Warnes, 'but he hasn't got the training to enter the world of dynamics. Conventional accounting systems are not suitable. Technically they are just not able to cope with the dynamics of business life.'

MBVC has introduced a simple accounting system to the 55-odd firms that it has invested in, and 'it has had a dramatic effect. Some of MBVC's best investments are light engineering firms, so many of which are in trouble'.

The MBVC cash-flow plan is the distillation of 14 years business experience. 'I started out in company doctoring work, in rescue operations', says Mr Warnes, 'and I had to develop a format of cash-flow to help me understand what exactly was happening in the company. It proved a useful tool for teaching the managing director, for sharpening his business understanding. Now we put a system into every company we touch, explain it to the managing director, watch him while he tries it out, and suddenly realisation dawns and he's on his way.'

The cash-flow plan applies barrow-boy knowledge to a company. It explains that breakeven point is the

level of sales needed to cover overheads, shows where it lies and what value-added-per hour a company needs to breakeven. A managing director can tell at a glance whether monthly sales and order levels are running above or below breakeven point and he can adjust output and prices until he gets the equation right.

An electronic components firm, with a good product and full order books, ran into a cash-flow problem and MBVC was called in. The business was analysed and tabulated in the cash-flow format which showed that while running costs amounted to £10 an hour some of the biggest jobs were only earning £5 an hour value added. The managing director saw the point, redesigned the layout of the electronic unit so that assembly took 40 minutes instead of 1½ hours. He effectively doubled output and income through the same cost structure and could now meet customer demand.

'Why didn't you do this in the first place', asked MBVC 'It didn't seem worthwhile. The extra 40 minutes seemed to be merely another £2 in production costs. The cash-flow plan has changed the focus of things and the business operates within a different framework. Six months ago I was an engineer making a loss of £15,000 a month', says the managing director. 'Today I'm a business man earning £30,000 and I can see £50,000.'

George Lingard, managing director of Severn Controls, ran into trouble when a major contract went wrong — due to a sub-contractor's error — and had to be redone. The business cost £10,000 a month to run but while the remedial work was going on nothing was being earned. The cash-flow plan showed that given the orders, sales value, material and labour content the business had huge margins and could afford to double the workforce to keep the main core of work flowing through.

Doubling the workforce while debts mounted seemed to violate common sense but it made good business sense and the firm pulled through. 'We wouldn't be here today without the system', says Mr Lingard. 'I was very sceptical about the extra figure work initially, but



Brian Warnes, managing director of Midland Bank Venture Capital (MBVC). He is a chartered accountant, having qualified with Peat, Marwick and Mitchell. He read physics at Oxford, has worked for the Foreign Office and the Commonwealth Development Corporation. His practical experience in company doctor, rescue operations gives him a sharp insight into the problems of British business.

now I've got it down to one day a month and it gives tremendous day-to-day control.'

The Japanese understand this approach and its one of the reasons for their outstanding success. Perhaps it is because nearly all Japanese businessmen are engineers, says Mr Warnes. 'About 77,000 Japanese engineers graduate every year compared with 6000 or so in the UK. They understand about dynamics and the country grafts on a sound business training; and once you have an engineer designing a product in the financial context you have a real business.'

The British business climate is breaking and changing and Mr Warnes is optimistic about the future. He believes that the accountancy profession is pre-eminently well placed to lead the country forward provided it is prepared to adapt to the needs of the day. 'If the accountant can develop a real understanding of business, there is an enormous role for him to play in the revival of British industry.' □



Prime Minister (4)

Ms 21/9

W.A. MALLINSON C.B.E., VICE CHAIRMAN
765 Finchley Road, Childs Hill, London NW11 8DS Telephone 01-458 3232 Telex 928761 Telegrams Esseye London Telex

Our ref: WAM/JS

16 September 1983

The Rt. Hon. Margaret Thatcher, F.R.S., M.P.,
Prime Minister,
10 Downing Street,
Whitehall,
LONDON.

UC mark (initials)
[Handwritten signature]

Dear Prime Minister,

Thank you for inviting me to your Seminar on Science, Technology and Industry last Monday. As one of those unable to catch your eye, I hope it is in order to write to you with a few additional observations which I hope may be helpful.

The Marketing - Development Interface

I agree with the comment made that nationally we are weaker at marketing than we are at technology innovation.

It is very important to keep the marketing and product development functions very close to each other, and not allow them to be separate entities.

No matter how brilliant a technical development may be, it is of no commercial value unless it satisfies the needs of customers willing to buy it. Equally, marketing personnel must be sufficiently familiar with the details of the trends of new technology to make it attractive to the customer and to persuade him of the benefits it will bring.

You asked what can be done to improve the marketing situation. I suggest only by continually dripping the message of the importance of marketing on to the Chief Executives of our Companies and Organisations so that they will recognise this even more and hopefully take appropriate action in their own organisations.

The Creation of Corporate Awareness

We are living in a changing world and if our Companies do not change in step, they will inevitably decline.

I have recently been talking to a number of Research Managers in different companies involved with the application of microelectronics to their own product lines or processes.

The problem uppermost in their minds was how to influence the Company's Senior Executives to be sufficiently sensitive to recognise the effects that changing technology will have on their business and on the skills of the people they will need to employ. In many instances, this would require a change in culture in the organisation and the "creation of corporate awareness" was regarded as a major problem in most companies.

cont'd

The Communication Gap

This is frequently one of the difficulties encountered when trying to influence the creation of corporate awareness referred to above.

Engineers and Scientists often fail to recognise the importance of conveying their ideas and recommendations to non-technical Corporate Executives in ways that they understand. Many non-technical executives find difficulty in understanding the impact of advanced technology if it is a subject in which they have not been trained.

It is understandable that managers are unlikely to become the "enthusiastic Project Champion" if they do not understand the fundamentals of the new business they are being asked to sponsor.

The Calibre of People in Industry

In the end, the relative success of any enterprise is determined by the flair and calibre of its people.

I personally agree with the diagnosis of the Finniston report, in that for generations, parents, schools and universities have regarded Industry as a dirty and undesirable place and have therefore guided their most talented and able children and students towards the medical, legal and other high status professions such as banks and other financial institutions in the City. Indeed, may be this is one reason why our financial services in the City are regarded internationally as being so excellent.

However, it is vital to the future of the nation to ensure that a proper share of our high calibre people do enter our wealth creating sectors.

Again, continually influencing our Chief Executive to employ high calibre people and to be prepared to pay the price, is the best we can do in the short term.

Prime Minister, I believe your Seminar served a very useful purpose in bringing together so many people of influence for one complete day in order to air a naturally important subject. In your next Seminar, how about exploring some practical industrial topics, such as:-

The interface between Marketing and Technical Departments

The Creation of Corporate Awareness

The Communication Gap

The importance of ensuring that an adequate share of our high calibre people go into Industry?

Yours sincerely,

W. A. Mallinson

W A MALLINSON
Vice Chairman

Unilever House
Blackfriars
London EC4P 4BQ

c Dr. Nicholson

Prime Minister (4)

I have replied
on your behalf

Telephone 01-822 5252

ms 27/9

22nd September 1983

R26

The Right Hon. Mrs. Margaret Thatcher, M.P.
Prime Minister,
Downing Street,
London, SW1

ms

Dear Prime Minister,

Re: Seminar on Science, Technology and Industry

Thank you very much for your kind letter of Saturday, 17th September.

I am sure the very fact that you called that particular group of people together on the 12th September will have done much to make them re-think their attitudes on the development of Science and Technology in Industry in the U.K.

You asked for suggestions about a follow-up. I would prefer this to happen with smaller groups of, say, thirty people. Furthermore, it might be worth using Sunningdale for a meeting starting at, say, 6 p.m. with scene setting and some evening syndicate work, and following through with discussions on the next day.

One possible topic would be the development of a Rothschild system with Industry as a major partner; I do not think an elaborate management mechanism would be necessary for this, but certainly an S.E.R.C. type broker could help to promote the activity between Universities, The Research Councils and Industry, and especially for small companies.

Yours sincerely,

Geoffrey Allen
Geoffrey Allen

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London EC3P 3DQ
Telephone 01-283 7500
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Prime Minister (2)

I have replied in
your reply

MUS 27/9

Cogent Limited

A TECHNOLOGY COMPANY WORKING WITH AICRO

224
21st September 1983

The Prime Minister
10 Downing Street
London SW1

Dear Prime Minister,

Seminar on Science, Technology and Industry

Research and Development Limited Partnerships

May I say how very much Sir Ieuan Maddock and I enjoyed the seminar held on Monday 12th September at Lancaster House. We were pleased to have been asked to attend.

The discussion on innovation through research and development and on the maintaining of the strength of the science base covered important ground and the points raised in discussion were valuable. I wonder, however, if I might comment on the Session dealing with financing.

I believe that there is some danger of a misconception arising on the availability of risk capital from private sector sources for support of technological innovation. The misconception I refer to is about the role of venture capital organisations in this area.

Venture capital organisations, as you know, are primarily concerned with equity investment in private companies, either in the form of start-up finance for new companies or development capital for established companies. This implies the existence of developed or nearly developed products selling into identified markets. Although from time to time these institutions back research companies, it is not the general rule; moreover, when they do it is generally in such fashionable areas as biotechnology or fancy electronics and usually on an ad hoc basis. Venture capital organisations fill a very important gap in the market, but they do not have a long term commitment to the 'direct' financing of innovation. This has an important bearing on Michael Heseltine's initiative on the civil exploitation of defence research.

Continued ...

Registered Office: St Helen's, 1 Undershaft, London EC3P 3DQ
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J S Rattray, Dr I P Sword, A B Wyand

I hope you will not think it presumptuous if I enclose a chart which I think demonstrates the existence of a serious financing gap in the supply of funds for the support of innovation. It shows the relationship between various sources of funds, the application of those funds and their ultimate destination. As far as I know, at the present time there are only two purely private sector financially based companies set up and operating with a long term commitment of risk capital for support in this area; they are Cogent and Prutec. The contribution to this sector by these two organisations is still modest compared with that of BTG; in the meantime the financing gap remains a matter of concern to all.

One of the reasons for the lack of enthusiasm by financial institutions and private individuals for investment in the early stages of the innovative process is the perceived unacceptable net risk/reward ratio. Although I do not accept this is the case for certain types of financial institutions, it is a widely held view.

In the case of private investors, the situation is entirely different. It is here that the Government could play a useful role, as it has done recently by introducing measures to encourage private individuals to invest in the start-up of small companies. I refer to the possibility of the introduction in the UK of the research and development limited partnership arrangements which already exist in the US.

By way of example, I would draw your attention to the establishment of CommTech, a research and development limited partnership venture designed to commercialise proprietary technology and know-how offered to it by Stamford Research International. CommTech has a collaboration agreement with SRI which has much in common with the agreement Cogent has with twelve members of AICRO (the Association of Independent Contract Research Organisations). SRI described the new venture as "a milestone in the history of the Institute". It is gratifying to think that the CommTech and Cogent initiatives were going on at the same time and independently, particularly as the US is usually ahead of us in new developments in the risk capital area.

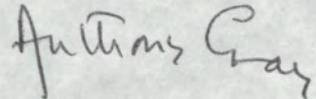
Research and development limited partnerships are probably the most successful source of funding for biotechnology as well as other high technology ventures. Through this mechanism investors buy an interest in a research establishment's or company's specific research and development projects rather than in the research establishment or company itself. Investors becoming limited partners get first year write-offs against taxable income and r & d tax credits. CommTech, using the limited partnership route, raised half its capital from financial institutions and the other half from private individual investors. I have written to the Bank of England asking whether they might take the research and development limited partnership matter up with the Treasury. Your added support would be very much appreciated.

I am at present personally involved with two further initiatives in the Energy and Health Care fields which I hope to structure along the lines of Cogent and CommTech and which will be greatly facilitated by some change in the present fiscal arrangements for the funding of research and development.

Continued ...

Sir Ieuan Maddock and I would very much appreciate the opportunity to organise a short presentation to you of the activities of Cogent and in particular to introduce you to some of the innovative products and processes that have been developed by the group of private sector contract research organisations who collaborate with Cogent.

Yours sincerely,

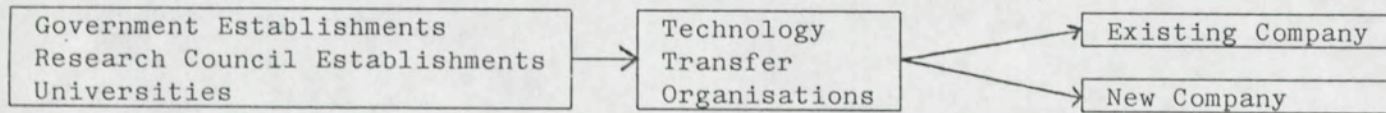
A handwritten signature in cursive script that reads "Anthony J Gray". The signature is written in dark ink and is positioned below the typed name.

Anthony J Gray

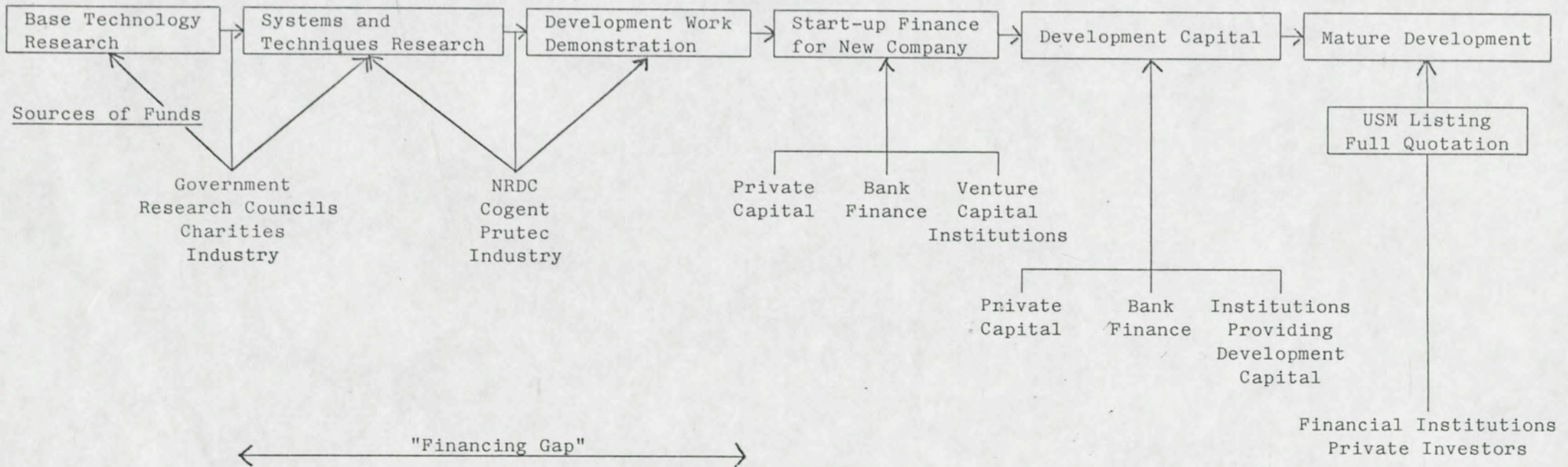
Encs.

SOURCES AND APPLICATIONS OF FUNDS FOR PRODUCT DEVELOPMENT

Destination of Funds



Application of Funds



COGENT

L I M I T E D

SUPPORT
FOR THE NEW
TECHNOLOGICAL
PROJECT

British scientific and technological research and development are acknowledged internationally as being among the best in the world. However, the excellence of British innovative and research skills has not always been matched by the successful transfer of technology from our centres of research to the market place. Too often, commercial exploitation of British innovation and research has fallen to foreign companies, with little benefit to the UK economy or UK industry. There is an urgent need to reverse this trend.

April 1982

Anthony J. Gray
Chief Executive
COGENT Limited

THE **COGENT** AIM

COGENT Limited is a technology company formed by the Commercial Union Assurance Company and the Legal & General Assurance Society. COGENT's aim is to provide a service to British Industry which will speed the transfer of technology to the market place in the form of new products and processes.

The initiative was taken in association with AICRO (the Association of Independent Contract Research Organisations), the largest and most comprehensive concentration of independent UK based research and development skills, offering a worldwide service to industry and governments. AICRO represents COGENT's technical and development arm.

COGENT SUPPORT

COGENT has been set up to support the exploitation of selected research and development projects. With two leading financial institutions as shareholders, the collaboration with AICRO and a highly qualified management team, it is well-placed to do this.

COGENT thus offers companies access to a unique combination of skills and resources to assist them in the development, financing arrangements and commercial exploitation of selected commercially viable projects.

COGENT is concerned with innovation, progress and profit. Whether you are a small business or a multi-national concern, successful growth will depend on retaining a competitive edge in the market. This means obtaining the best practical and financial support and advice. COGENT enables you to keep ahead of the competition.

THE **COGENT** APPROACH

We will consider projects that would benefit from support by COGENT and an AICRO member; thereby bringing the technology to the market place more quickly.

COGENT, while expecting a commercial return from such projects, recognises that considerable time can elapse between the development of potential applications and final commercial exploitation.

Projects presented to COGENT should be advanced to the stage where the technology is established and an industrial partner can see clearly the benefits and risks of commercial exploitation. The maximum period for development through to exploitation will therefore not normally exceed three years, which leaves room for flexibility in particular cases. The average size of projects is expected to be in the region of £250,000. Programmes comprising more than one project may be considered.

The contractual arrangements between COGENT, the particular AICRO member concerned, the originator and/or the industrial partner will vary depending on the nature of the project. It is COGENT's policy to adopt a flexible approach to the commercial arrangements and thereby create the incentive necessary to secure the maximum commitment by all parties to the successful outcome of the project.

COGENT maintains a close involvement at all stages in the projects which it supports. This involvement is designed to provide a constructive catalyst between those responsible for the development project and those concerned with its commercial exploitation, so as to expedite the process of technology transfer.

THE **COGENT** PARTNERSHIP

COGENT SHAREHOLDERS

Commercial Union – 50 per cent
Legal & General – 50 per cent

COGENT LIMITED

A technology company with initial capital of £6 million.

Projects are matched to an industrial partner – manufacturer, marketing company or licensee – at an early stage.

AICRO PARTNER

The AICRO Partner will be responsible for carrying out the technical development work involved in any project. AICRO (the Association of Independent Contract Research Organisations) is the largest and most comprehensive concentration of independent UK research and development talents. The results of AICRO projects supported by COGENT are available for commercial exploitation by selected industrial partners through, for example, licensing arrangements or the formation of joint companies.

INDUSTRIAL PARTNER

The Industrial Partner will be responsible for the commercial exploitation of the project. It may be a company selected by COGENT and an AICRO member as having the appropriate resources and experience to contribute to the successful outcome and commercial exploitation of a particular AICRO project. Alternatively, it may be the originator of an idea which it wishes to see developed with an AICRO member participation and COGENT support into a marketable product which it will then manufacture and sell.

THE RESEARCH PARTNER

Members of AICRO are independent research contracting organisations carrying out, in total, £70m per year of contract research. They employ some 5,000 people and their expertise encompasses practically every area of technology and industry. They represent COGENT's technology arm.

A list of those AICRO members who collaborate in the COGENT scheme and a description of their main specialities are given on page 6.

AICRO development projects can arise in an exceptionally wide range of industrial, scientific and technological fields. It is obviously unwise to limit by specification the areas of possibility, and the following list is merely a guide to some of the more important sectors:

Aerospace	Energy	Mining
Automation	Environmental Control	Oil Industry
Automotive Industry	Extraction and Refining	Process Control
Biotechnology	Fluid Engineering	Product Design
Chemicals and Plastics	Foundries	Robotics
Composites	Instrumentation	Software
Computers	Mechanical Engineering	Telecommunications
Electrical Engineering	Medicine	Textiles
Electronics	Metals	Welding

COGENT welcomes direct approaches from potential industrial partners with suitable projects, preferably when such projects are at a fairly advanced stage of development.

AICRO members also submit projects to COGENT arising from their own research or a project on behalf of a client. Submitting projects to COGENT through AICRO members can help speed the appraisal process.

THE INDUSTRIAL PARTNER

Projects supported by COGENT will be matched to an industrial partner—a potential manufacturer, marketing company or licensee—at an early stage. The project should form a significant part of the partner's corporate development plan and not simply be of peripheral interest. The industrial partner may or may not be the originator of the technical idea.

The industrial partner in any COGENT/AICRO project will already be established in the market sector—or in allied activities—in which the innovatory product or process will be applicable, and its management will have a proven commercial and technical track record. The industrial partner may, on occasion, be a company wishing to extend into a new business field by exploiting technology it already possesses in new applications for which there is a market.

COGENT will discuss with an industrial organisation any particular technologically based project it may have, establish which AICRO member could carry out the development work required to advance the project, and assist in the preparation of the proposal. A proposal will cover such matters as a technical appraisal, an assessment of the market data, the finance to be arranged, the establishment of the project and the structure of the commercial arrangements for exploitation.

In whatever way a project arises or the financial package is agreed, the industrial partner must show real commitment, including contributing to the resources necessary to ensure the successful outcome.

THE AICRO PARTICIPANTS

The following members of AICRO participate in the COGENT scheme.

Institute	Research specialities
BCIRA	Foundry and allied industries: design and operation, instrumentation, environmental effects.
BHRA Fluid Engineering	Fluid engineering, including design and development.
BNF Metals Technology Centre	Technology of metals: production, processing, applications.
ERA Technology Ltd.	Electrotechnology, including radio frequency technology, electro-optics, power-engineering, materials sciences and electronics.
Fulmer Research Institute Ltd.	Science and technology of all engineering, building and chemical materials; product and process development; technology transfer.
International Research & Development Co. Ltd.	Mechanical and electrical engineering, instrumentation and control engineering, materials technology and biotechnology.
Inveresk Research International Ltd.	Biomedical science, toxicology and biotechnology.
MIRA	Automotive research, development and general scientific work.
Robertson Research International Ltd.	Exploration and development services to energy and other natural resource projects.
Shirley Institute	Fibres, textiles, polymers: materials technology: product and process development and evaluation.
SIRA Ltd.	Measurement and information technology: electro-optics, electronics, computing, engineering, testing and calibration.
The Welding Institute	Research and development into all aspects of welding.

HOW TO APPROACH **COGENT**

To speed up the process of appraisal and decision, initial proposals sent to COGENT should contain the following information:

Proposer—

Name

Address

Project description

Amount of finance required

Purpose of finance

Time scales

Market estimates

Patent position

Identity and brief details of Industrial Partner

Strategy for commercial exploitation

COGENT will also be involved in collaborations with other organisations and may be involved in a very similar idea or project developed by someone else. It is not COGENT'S intention to disclose any details of any proposal to anyone else without authority, but COGENT cannot accept any obligations of confidentiality in respect of information submitted.

Initial proposals should be accompanied by the form enclosed with this brochure.

Those seeking further
information should write
or telephone:

Mr Anthony J. Gray
Chief Executive
COGENT Limited
St. Helens
1 Undershaft
London EC3P 3DQ
01-283 7500 Ext. 2956

COGENT
LIMITED

Directors

W K Evans (Chairman), P W Simon (Deputy Chairman), A J Gray (Chief Executive)
P B Bell, E G Davis, F S N Falkner, Sir Ieuan Maddock CB, OBE, D.Sc., FRS
J S Rattray, Dr I P Sword, A B Wyand

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PA Technology

Corporate Group
Melbourn
Royston
Herts SG8 6DP
United Kingdom

Telephone 0763-61222
Telex 81561

PA

*cc Nicholson
(CO)*

PA Technology

Prime Minister

(4)

I have replied.

Mrs 22/9

The Rt Hon Mrs Margaret Thatcher, MP
10 Downing Street
London

20 September 1983

mt

Dear Prime Minister,

Thank you very much for inviting me to your seminar on innovation at Lancaster House last week.

Whilst I was pleased to see two PA innovations included in the visual presentations during the day I was unable to make any points during the discussions and I have therefore invited Mr Baker to visit us for an exchange of views.

I am sure you will be pleased to know that the laboratory which we established in Princeton, North America, five years ago has proved outstandingly successful and is now second largest in our group of five (Cambridge, Brussels, Madrid, Melbourne and Princeton). In terms of revenue from industrial developments we are now at least comparable in size to the largest US groups and size is important to us in our markets as it enables a wider and deeper technology base to be supported within our organisation.

The existence of a significant laboratory in the USA has also helped Cambridge division to increase its own market share in the US directly and we have, for example, been able to develop some important products in the medical field for US companies. A current example is the development at Cambridge division of an expert system controlled pyrolytic mass spectrometer for health screening, which we are undertaking for Warner Lambert. This system will be capable of identifying organisms present in blood samples without human intervention (except to take the blood!).

cont..../



A member of the
PA consulting group

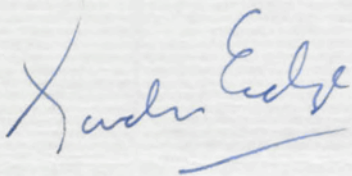
Management Consulting
Technology
Computers and Telecommunications
Personnel Services

Europe
North America
Australasia
Japan
South-East Asia

PA Technology Ltd
Registered no: 1701805
Registered office: Hyde Park House
60a Knightsbridge, London SW1X 7LE

I think that the initiatives which you are taking in stimulating innovation within industry and science in this country are just what is needed and I think they will be successful, though I personally feel that the major opportunity for innovation is in the larger companies rather than the small ones.

Yours sincerely

A handwritten signature in blue ink that reads "G M Edge". The signature is written in a cursive style with a long horizontal flourish underneath the name.

G M Edge
Group Chief Executive

Confederation of British Industry
Centre Point
103 New Oxford Street
London WC1A 1DU
Telephone 01-379 7400
Telex 21332

From
Sir Terence Beckett CBE
Director-General

R1419

CBI
CONFEDERATION OF
BRITISH INDUSTRY

c/ Dr Nicholson

Prime Minister (4)

ms 14/9

13th September, 1983

Dear Prime Minister,

mb

Thank you for inviting me to the Seminar on Science, Technology and Industry yesterday at Lancaster House. I very much agree with your conclusion at the end of the seminar that the overall picture that emerged was encouraging and the fact that several speakers from the universities, the research councils and industry all agreed that more had to be done was an indication that there was no complacency.

I think we were all most appreciative of your initiative in arranging the seminar. Thank you again.

*Yours sincerely,
Terence Beckett.*

The Rt. Hon. Margaret Thatcher MP,
Prime Minister,
10 Downing Street,
London, S.W. 1.
