CDP 7/4

MR. POWELL

AIRBUS

When Sir Jeffrey Sterling came to see me he left with me the document attached, which is a very late draft (unlikely to be changed in substance) of the Four Wise Men's report on the Airbus. I told Sir Jeffrey that I would not show this to the Prime Minister until Lord Young made a formal submission to her; otherwise there would be all manner of awkward complications and crossed wires.

Sir Jeffrey Sterling said that he saw no alternative to the adoption of the main recommendations for the future management organisation of the Airbus project. BAe had perhaps the greatest interest in their adoption, since they were the only private sector plc in the venture. He repeated his view that Airbus was capable of bringing BAe down. The Spaniards certainly, he thought, the Germans in the shape of Strauss, and the French Government, at least in general terms, were prepared to adopt the approach. Aerospatiale were the obstacle. In the last resort, the four governments' aerospace Ministers would have to say that the report's recommendations had to be implemented within a defined period of time; if there was a refusal, future support should be declined. Unless the changes recommended were made, the project could never be an economic success and it should be allowed to collapse. That would be a great pity. Its technology was very good, perhaps better than Boeing's. The project's success went well beyond pure commercial considerations. It offered the prospect of a viable market and profit-oriented high-tech industry with technological and scientific spin-offs that would reach down into the universities and to the schools.

N.L.W.

N. L. Wicks
6 April 1988

DG2ANZ

A REPORT ON THE AIRBUS SYSTEM

by

Jacques Benichou
Emilio Gonzalez Garcia
Dr Peter Pfeiffer
Sir Jeffrey Sterling

This short report, which fulfils the remit placed upon us by our Ministers' letters of appointment, has been compiled after meetings between January and April 1988, with the following principal parties responsible for the Airbus programmes:

- Herr Strauss, Prime Minister of Bavaria and President of Airbus Industrie;
- senior managers of Aerospatiale;
- senior managers of British Aerospace;
- senior managers of CASA;
- senior managers of Deutsche Airbus Industrie and MBB; and
- the Administrateur Gerant and directors of Airbus Industrie in Toulouse.

The report is preceded by a summary of our main recommendations.

All the people we spoke to in our researches for this report recognised the need for fundamental change in the Airbus system. We believe that our recommendations will help to eliminate the frustrations which we have detected among managers throughout the Airbus system at the lack of clear decision-making processes. Having discussed the broad thrust of our recommendations with Herr Strauss and the presidents of the four partner companies, we believe that our report will, in general, be welcomed by all the parties to the Airbus project.

We would like to express our thanks to all those whom we have met in our researches for their unfailing courtesy and co-operation.

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Summary of main recommendations

Airbus as a public limited company

- Airbus is not yet suited for reconstitution as a PLC, but such a development can be envisaged in the future, particularly after 1992;

A new management structure for Airbus:

- it is necessary for the partners and Airbus to consider how relationships between them may be simplified;

- reconstitute Supervisory Board of Airbus as the main instrument of overall policy control;

- the partners to be represented on the Supervisory Board at the most senior level;

- Airbus' managing director and finance director to report to the Supervisory Board;

- day-to-day management of Airbus, as far as possible to mirror that of a public company;

- day-to-day responsibility for implementing system to rest with a managing director who is chairman of an Executive Board;

- a new post of financial director to be created, the holder to report direct to the Supervisory Board and to be a member of the Executive Board: he will control a central accounting function comparable with that of the head office of a PLC;

- the financial director to ensure full open accounting throughout the Airbus system;

- the financial director to have mandatory right to full details of partners' programme costs, invoiced prices and profits and losses arising from Airbus work;

- the Executive Board to consist of a managing director, who will also be 'administrateur gerant' of the G.I.E., a senior manager of each partner, plus the two senior managers of Airbus, financial and commercial;

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Decision-making processes

- Supervisory Board to meet at least quarterly;
- Executive Board to meet at least monthly;
- Board decisions to be reached by consensus or by vote as appropriate;
- partners must accept binding nature of Executive Board decisions;
- reserving of jobs for particular nationalities should cease;

Airbus administrative and technical functions

- need to evolve career structure within Airbus;

Finance and management issues

- profits and losses should be shared by partners in proportion to invoiced workshares;
- for speed of decision-making, it is necessary for a small proportion of development funds - say 5% of total development costs - to be made available by the Supervisory Board for use at the discretion of the Executive Board for modification work;
- a strong element of flexibility on contracts between partners should be introduced;
- where appropriate, Airbus should consider direct purchasing of equipments;

Recommendations to governments

- abolish territoriality of equipment supply;
- consider the founding of a European export credit agency;

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1. Foreward

1.1 For the first time in the history of the aircraft manufacturing industry, a European aircraft manufacturer has made a significant breakthrough in the field of commercial transports with:

- more than 1,100 firm orders and options (among which 400 are already delivered) and roughly 15/20% of the world market, making Airbus Industrie the second civil aircraft manufacturer in the world;

- 5 out of the 10 largest US airlines among its customers.

This is a greater degree of success than might have been expected. It represents a success for

- a new kind of European cooperation;

- technological achievement; and

- a remarkable commercial strategy.

It is not yet an economic success. In this regard, it must be borne in mind that no aircraft company can be successful until it has produced a large number of aircraft. All aircraft manufacturers record losses in the early stages of programmes; Airbus is still at too early a stage in most of its programmes to have reached a break-even point. Moreover, Airbus has had to compete for market shares in a market dominated by aggressive US manufacturers, particularly Boeing.

But in addition to these inherent problems of the aerospace industry, problems have arisen from a certain lack of adaptability and organisational efficiency in the Airbus organisation. Airbus' problems have recently been exacerbated by the fall in the value of the US dollar.

After having started as a French-German bilateral cooperation, with only one programme (the A300), Airbus Industrie is today a four-country organisation (Germany, France, United Kingdom, Spain) with three large programmes running (A300-600, A310, A320) and two programmes being launched (A330, A340). We believe it is absolutely necessary to revise the structure and the operating rules of the organisation, which was born on December 12, 1970 as a Groupement d'Interet Economique (GIE) under French law, between Aerospatiale and Deutsche Airbus, and extended to CASA in 1972 and to British Aerospace in 1979. This structure and these rules appear to be ill-adapted for consolidating the remarkable technical success achieved so far into an economic success.

Airbus Industrie is already a symbol of European success and has played a vital part in keeping for Europe its rightful "place in the sky". This success goes much wider than Airbus Industrie itself: universities, colleges of technology and research establishments must share in the credit.

1.2 The numerous previous studies of the Airbus system have exposed three major problems:

a) a lack of correlation between the marketing of Airbus programmes (sales and support are essentially an Airbus Industrie responsibility) and the financial aspects of the programmes (the four industrial partners negotiate their prices amongst themselves and with Airbus Industrie but do not communicate their actual costs to each other or to Airbus Industrie);

b) the absence of an overall balance-sheet at the level of Airbus Industrie and hence of the governments, in order to bring forth objective decision-making criteria; and

c) the unwieldy organisation, with decisions requiring the agreement of partners holding 81% of the shares - in effect a unanimity requirement - and the predominance of committees.

All the different studies and reports conducted so far have reached similar conclusions; what is required is an Airbus Industrie structure which would be more responsible for all parts of the programmes, more concerned with profit and loss, and less dependent in its day-to-day operation on each industrial partner (MBB, Aerospatiale, British Aerospace, CASA). The partners, on the other hand, need to control more closely Airbus Industrie's decisions, since they bear all the risks.

2. Airbus as a real commercial aircraft manufacturing company

2.1 Before the possibility of Airbus becoming a public limited company can be considered, it is necessary to implement a management structure which will enable it to compete successfully and profitably in the market place. But in the coming years - and especially after 1992, it could well be possible seriously to consider transforming Airbus into a PLC.

Such a decision would, however, encounter a fundamental reality of the aeronautical industry; every major civil aeronautical manufacturer (including Boeing, McDonnell Douglas and Lockheed) benefits from - and could scarcely be profitable without - :

- the indispensable contribution from advanced technology derived from Defence and Space research;

  and

- the welcome military orders which usually bring in better returns and dampen the civil aircraft order cycles.

Setting up an "Airbus PLC" would also take a long time to be implemented, and would raise difficult problems of valuation and of capitalisation (made all the more difficult by the mix of private and state-owned companies).

Moreover, at the present level of penetration by Airbus Industrie in the market, a positive cash flow could not be guaranteed for some years and the Company would consequently have to be supplied with capital during these years.

2.2 However, after 1992 such a solution can be envisaged. Airbus might, for example, take the form of a holding company with national subsidiaries (see Annex 1).

This large European commercial aircraft manufacturer would be responsible for:

- sales and support (1)
- Programme coordination (1)
- most research and development
- manufacturing or at least assembly of the main elements and final assembly line.

(1) already carried out by Airbus Industrie

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It would be necessary to assign the following assets of the partners to the new Company:

- the design facilities of the four partners;
- a few laboratories for general research and development trials;
- the main plants (Hamburg, Toulouse (St Martin), Chester and Filton).

It would thus be possible to bring together, on the one hand, all commercial aspects, and, on the other, the main development and production facilities, permitting full coverage of all commercial and financial aspects of the programme and all related responsibilities.

The four partners would exercise control as main shareholders; additional participants (such as other aerospace companies or financial institutions), might, despite the difficulties of doing so[(1)] gradually join the company and lower the risk and the expense borne by the present partners through their contributions.

2.3 Any solution of this sort, if it limited the new PLC to commercial aircraft would <u>necessarily</u> have to include technology exchange agreements between the commercial aircraft company and its parent companies.

2.4 While this solution at present raises insoluble or at least very difficult problems, the idea certainly cannot be given up for the future, especially if cooperations wider than the strict commercial aviation field are envisaged.

(1) this is an industry of high risks and low margins

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3. Proposals for change in the present Airbus structure: a management structure for Airbus

If the solution of a public limited company seems difficult to achieve at present, it is necessary to consider certain improvements in the present operating structures of the G.I.E. (a legal entity very supple in this respect).

These changes could and should prepare the way for the eventual creation of a PLC.

It is imperative to establish as soon as possible a system in which decisions, the power to take them, and the background knowledge appropriate to the decisions vest clearly in particular managers or groups of "managers" inside a tightly defined reporting system.

It is clear to us that, unless such management changes take place immediately, problems for Airbus can only increase, leading in particular to serious production delays, severe extra costs and worst of all, the loss of goodwill of major airlines.

After such a promising start, it would be a tragedy were Airbus to founder upon problems of management and administration.

3.1 The Partners and AI

We believe it will be very important for the efficiency of the system that the relationships between AI and the partners are simplified and streamlined.

3.2.1 The Supervisory Board and the President

At present the Supervisory Board consists of around 20 senior managers of the partners and AI (Toulouse) meeting about twice a year largely to ratify decisions taken elsewhere.

We believe that the Supervisory Board must play a far more dominant role in decisions concerning programmes, co-operation agreements and strategic control not just in AI (Toulouse) but in the partner companies.

The Supervisory Board should be the main instrument of overall policy control of the whole Airbus project.

For this, the Board will need streamlining; it should consist of five members, the President of AI and the Presidents (or Chief Executive Officers) of the four partner companies.

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Because the Supervisory Board will from time to time need to organise urgent ad-hoc meetings to consider various aspects of the programmes as they arise, each of the company Presidents should appoint an "alternate" Board member, who should be empowered fully to speak for and commit the partner company in the absence of that company's Board member.

3.2.2 The main inter-face with Governments should be through the Supervisory Board.

3.2.3 It is important for Airbus to have as its President a familiar and respected international figure. We acknowledge, though, that under the system of management recommended in this paper, the President of Airbus may find himself - as will all the partner Presidents - having to devote much more of his time than hitherto to Airbus business.

We consider that the role of the Supervisory Board is the key role in Airbus Industrie.

3.3 The Managing Director

We believe the management system of Airbus should as far as possible resemble the structure and operations of a PLC. In the majority of companies, the main day-to-day seat of power is either with a single Chief Executive or an Executive Board presided over by a Managing Director. This Manager has, within the disciplines imposed upon him by the Directors of the company and the Executive Board, if any, full control over all aspects of the company.

In an organisation like Airbus, when agreement between partners is the key-note, we recommend the appointment of a Managing Director, who is the 'Administrateur Gerant' of Airbus Industrie GIE and the Chairman of an Executive Board and directly responsible to the Supervisory Board. He should have day-to-day responsibility for implementing the Airbus system.

3.4 A Finance Director

In order for the Managing Director to be able to assume the role which we outline above, it will be necessary for a central accounting function comparable to that within the Head Office of a PLC to be set up. At present, the central accounting of the Airbus system is restricted to the management accounts of AI (Toulouse), covering sales and service functions only. The Airbus books of partners are not open either to other partners or to AI (Toulouse).

We consider that our recommendations concerning the remit of the finance director and his place on the Executive Board are at the heart of our proposals. Indeed, if Airbus Industrie does not take steps to constitute itself in the organisational manner we propose and to introduce full transparency of costs and profits together with producing comparisons between AI and its partners, we doubt whether Airbus can ever reach long-term profitability.

We believe that a new post of financial director must be created within Airbus. He should head an accounting function separate from any other central administrative functions of the Airbus programmes and the Airbus accounts of all the partners, of AI (Toulouse) and of the remaining Airbus administrative functions should be fully open to him.

The finance director should have mandatory rights to require from all four partners full details of their programme costs, invoiced prices and profits and losses arising from work contracted to them by AI.

He should report to the Supervisory Board, the Managing Director and the Executive Board. He should be a full member of the Executive Board. He should ensure full openness of accounting throughout the Airbus system.

The finance director should have full control and authority over all cash-flows within AI. That is, while he should not be in a position himself to issue instructions to any of AI's operational directors, all plans and programmes should be cleared by him prior to implementation.

3.5 The Executive Board (see Annex 2)

While considerable day-to-day power over the Airbus programme would rest with the Managing Director and Financial Director, it is not our intention that they should exercise full control, subject only to the Supervisory Board. Rather they should report to an Executive Board meeting regularly and representing the main instrument of control over agreed programmes with agreed prices - as it were the Board of Directors. It should consist of seven members; the Managing Director and Finance Director and also the Managing Director's second-in-command (the Commercial Director, representing the marketing and sales organisation) and the remaining members should be one Senior Manager from each of the partners. These managers should be the most senior men within each partner with day-to-day input into Airbus programmes and should be remitted by their companies so that they are in a position absolutely to commit their companies to the agreed policies and decisions of the Executive Board.

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The Executive Board should have full responsibility for implementing the strategic decisions of the Supervisory Board and, in particular, for pricing policy. This Board would replace the present Executive Committee, but with a wider remit.

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4. Decision-making processes

We outline below our proposals for the "rules" of the system of administration which we have outlined above (and which is shown diagramatically in Annex 2 to this report).

4.1 Supervisory Board Decisions

The Supervisory Board should meet at least 4 times per year, (and with provision for additional ad-hoc meetings if necessary). All questions concerning the launching of a new programme, work-sharing or the setting of parameters for price invoicing are the responsibility of the Supervisory Board, based on recommendations from the Executive Board. While we would expect most Supervisory Board decisions to be reached by consensus, we recommend that the Board should be able to make decisions by vote if necessary; voting procedures should be as follows:

- for major strategic decisions on new programmes or the cancellation of existing programmes

  voting should be on the basis of partnership shares, with a 75% vote in favour;

- for other major decisions

  voting should be on the basis of a simple majority of partnership shares; and

- for all other decisions

  voting should be by simple one-man-one-vote among the four company Presidents and the President of AI.

4.2 Decision Making by the Executive Board

We believe that the Executive Board, which should meet at least once a month, should generally seek to proceed by consensus. But when necessary, it should take decisions on the basis of a simple majority vote of its members. For decisions with financial consequences for the partners, beyond the 5% of development funding for modifications specified in paragraph 5.2, at least two partners, controlling at least 51% of the shares, must be in favour of the decision.

Each partner must accept that the decisions of the Executive Board are binding upon them.

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The first task of the newly constituted Executive Board should be to devise a rule book for its own decision-making and operational processes, for submission to the Supervisory Board for ratification.

4.3 At present some roles within Airbus are reserved for particular nationalities: the President is "traditionally" German, the Executive Head is French, the Head of Accounting of Toulouse is British etc. We recommend that all such reserving of jobs for nationalities should cease, both at the Executive Board level and within the administrative and technical functions. "The best man for the job" should be the only selection criterion. However, as many jobs as practicable - and all senior jobs - within the Airbus system should initially be advertised within the partners; only if no suitable internal candidate is identified should the vacancies be openly advertised.

4.4 The Administrative and Technical Functions

We believe that it would be highly desirable for all Airbus workers to have contracts of employment directly with Airbus. This would lead to the evolution of a career structure within the Airbus system, with benefits in terms of morale, and a greater spirit of co-operation.

We believe that a problem of the present system of administration has been that a secondment from a partner company to Airbus has been looked upon as a short-term commitment and loyalties have remained primarily with the partner.

We also recommend that new executives within the partner companies who are likely to work on Airbus should, as part of their initial training, serve short (one or two years) secondments with Airbus.

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5. Recommendations on particular finance and management issues

We believe that the management system proposed above necessitates a number of fundamental changes:-

5.1 AI Profit and Loss Sharing

We believe that AI's profits and losses should be shared by partners in proportion to their invoiced workshares and not in proportion to their partnership shares.

Under the previous system where, it seems, a partner's only prospect of profit from Airbus work is to perform contract work on advantageous terms, the partners have tended to try to ensure that their share of work as subcontractors is at least equal to their partnership share in AI, in order to ensure that any losses incurred as partners can, at least in theory, be counterbalanced by profits made as subcontractors.

Without question this has been a disadvantage to AI as a whole and has not lead to contracts being placed always with the most appropriate supplier.

5.2 Funding for Modifications

At present all development funding is derived from the partners or their Governments and all development work takes place at the partners' factories. We strongly recommend that the Supervisory Board makes available a sum of money (say 5% of total development funding) to be used at the discretion of the Executive Board on developing modifications to solve problems as they arise. With such money behind it, AI could embark on the development of modifications considered necessary by the Executive Board and avoid the sort of frustrations which have arisen recently, for example over the proposed wing drag modification for the A320.

5.3 Flexibility on Subcontracting

We believe that the efficiency of the Airbus programmes would be strongly enhanced by an element of flexibility between partners on subcontracting.

We accept that by its nature this co-operative venture should not include competition on mainstream contracts. But there is room for competition on marginal items. We recommend that a system be introduced where each partner is guaranteed subcontract work up to a proportion of its partnership share (say 80%), while the remaining contract work is awarded by AI (the Executive Board presiding) on a competitive basis, initially in the country of the partner who is in the lead on the part of the aircraft in question. But if, in the opinion of the Managing Director and the Finance Director, tenders from the home country are not competitive, bidding should be opened to tenderers in the other three partner countries or, failing that, to all comers.

5.4 Competitive tendering for equipment

AI already benefits from the operation of competitive market forces in its purchases of engines, a cut-throat market where non-recurring costs are directly borne by the engine manufacturers (whether or not with government support).

Although it might raise some difficult problems, it would be a logical development to extend direct tendering by AI to certain other equipment, with more open and widespread putting out to tender.

If necessary funding for the direct purchasing of equipments could be added to the allocation recommended at section 5.2 above. Any such putting out to tender by AI should be limited to equipment which is easily integrated into the aircraft.

6. Recommendations to Governments

6.1 Territoriality of Equipment Supply

As at present, choice of equipment suppliers should rest with the leading contractor. Choices should be reported to the other partners and ratified by the Executive Board. But we believe the system of territoriality of equipment supply works against the best interests of Airbus and should be abolished. At present, when a contracting partner deals with a subcontractor from another participating country, the partner is not required to assist that subcontractor with non-recurring costs; instead, these fall to the partner in the subcontractor's country. Whilst it can be argued that equipment supply territoriality has worked satisfactorily in the past, we do not believe that it remains the most appropriate system for the future. It offers no incentive to the negotiating partner to achieve the most cost-effective, tightly negotiated contract. We recommend that, in order to ensure that subcontracts are awarded by partners on strictly commercial bases, and are seen by the other partners to be so awarded, subcontractors' non-recurring costs should fall upon the partner awarding the contract.

6.2 Export Credit - a European ExImBank

In order truly to compete with the USA civil aviiation industry on sales credit packages for the world's airlines we believe it vital that a European import-export-bank should be available to provide full export credit facilities for Airbus, comparable with those available from ExImBank, without the need to involve four separate export credit agencies, with all the delays and inefficiencies this entails.

The founding of such a credit agency would be a major step towards a united Europe.

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7. Conclusions

After a remarkable beginning - more successful, perhaps, than anyone could have hoped - we should not allow present problems, whether inherent in Airbus or external, to detract from the impact of one of Europe's most important joint ventures, or cast doubts over its future.

Deliveries of Airbus aircraft will triple or quadruple over the next few years: having already won a significant place in the market (15-30%) and having as a result less need than formerly to achieve sales at the same rate as before, it should be possible to achieve a break-even point over the next five years, particularly for the A320, provided that the new management structure for Airbus is rapidly implemented, leading to increased competitiveness, substantial reductions in programme costs, increased efficiency and above all the encouragement of a reappearance of a true spirit of cooperation in the Airbus programmes as a whole.

There can never be large margins in commercial aircraft manufacture, but we must work urgently towards the time when Airbus will cease to be a subsidised loss-maker. We believe that, after the launch of the A330/340, it will not be necessary to launch a further new major programme for 10-12 years unless a strategy of cooperation with a US manufacturer should prove to be desirable. We firmly believe, however, that a "gateway" into the USA to increase the market share of Airbus in that market is strongly to be advocated.

Through Airbus, Europe is now soundly established in commercial aerospace. Whatever the future, European pessimism in this area would amount to suicide for the technological and industrial future of Europe.

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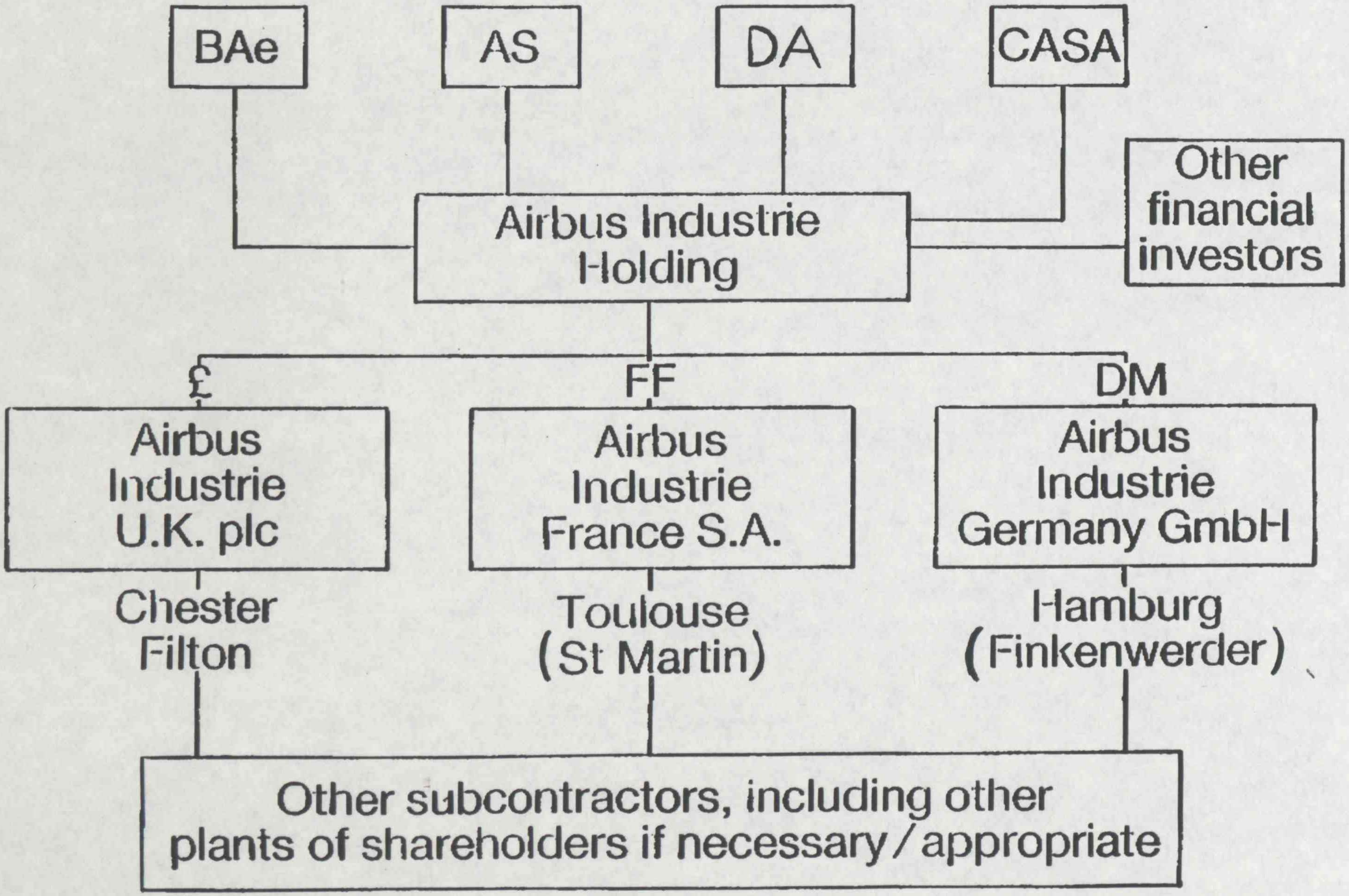
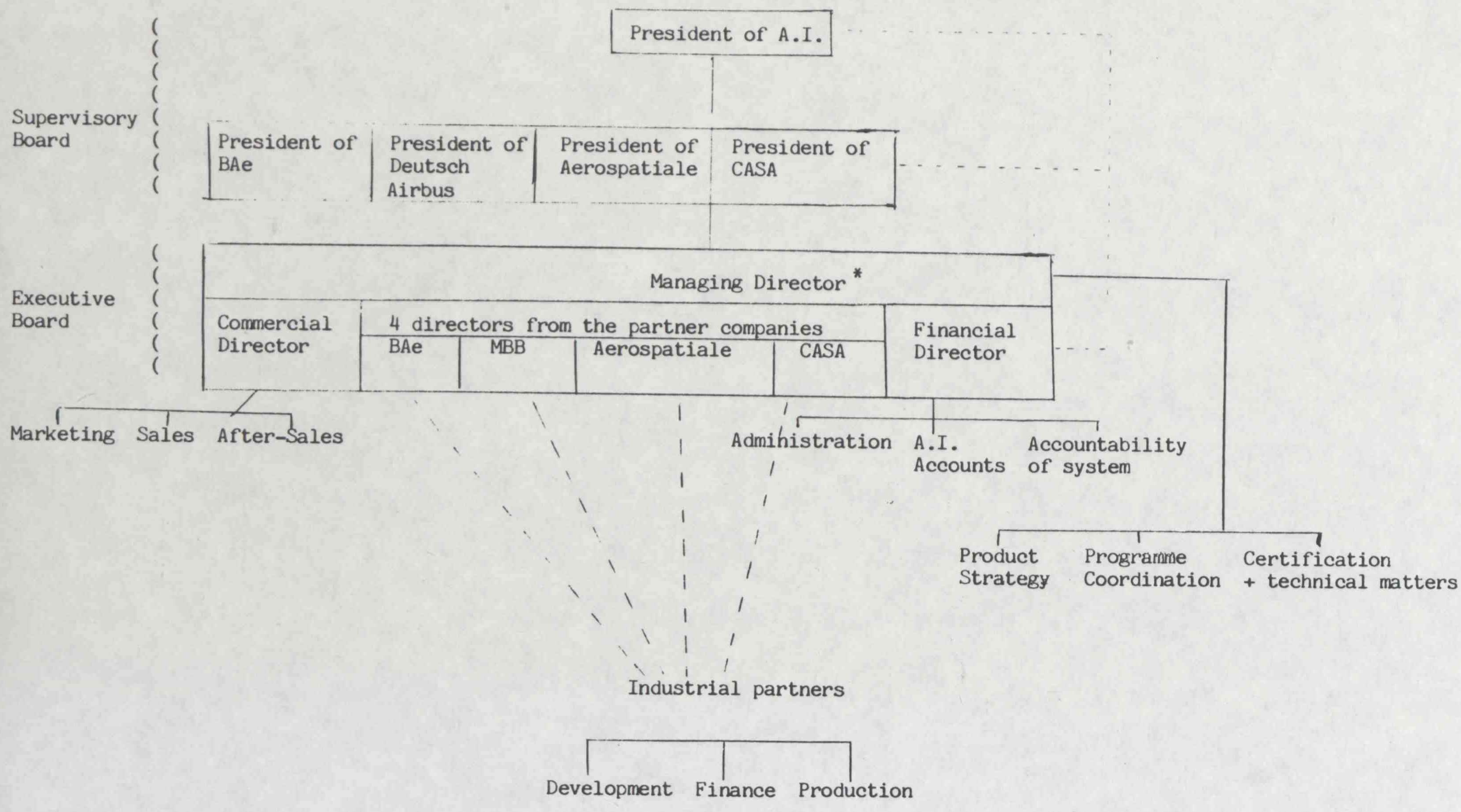
ANNEX 1 : A POSSIBLE STRUCTURE FOR A FUTURE AIRBUS INDUSTRIE PLC



ANNEX 2

The recommended management structure for Airbus Industrie G.I.E.



* For as long as AI continues as a GIE , the managing directer should also be administrateur gerant.