

A Common Market Lure

Britain and Europe each could gain from closer technological cross-channel links.

Britain's second attempt to join the European Common Market, currently the center of a diplomatic gavotte, is vital to the Island Kingdom—and important to the Continent as well.

Britain and continental Europe are already deeply involved with each other technologically. And, French resistance to the idea notwithstanding, both sides of the English Channel would appear to have much to gain from any arrangement that would consolidate gains already made and make British technology more freely available to Common Market nations.

"Make no mistake," says Sir George Edwards, boss of the British Aircraft Corp., "we are way ahead of all other Western countries except the U.S.A. And in a number of respects, especially in basic thinking, we are ahead of them too."

Britain may be broke, but paradoxically she's still one of the richest nations on earth. To quote the NEW SCIENTIST, "What Britain does have to sell is the outcome of a large and often inspired research effort—an advanced technology that at its best is equaled only by that of the USA."

What, then, has inspiration given Britain, that she might tender, if she hasn't already, as passport to membership in the European Economic Community? Four technologies head the field today: aerospace, weapons, nuclear power and computers.

Aerospace and weapons: There are over 30 cooperative aerospace projects among European nations today, either in design or production, most prestigious of which is the Anglo-French Concord SST. It originated in the British Government laboratory at Farnborough, as spin-off from a powerful engine being developed for another craft and subtle work on aluminium structures also in progress. The French were already thinking of a smaller SST when Britain proposed collaboration.

Britain can also lay claim to two of the most advanced modes of vertical take-off craft: Bristol Siddeley's system of vectored thrust, used in the RAF's Harrier jump-jet, and Rolls-Royce's system of lightweight lift engines built partly of plastics and now jointly being developed with Allison in America. Rolls-Royce's new turbofan, to power the Anglo-French-German airbus, is perhaps the most advanced aero-engine in the world today.

Europe's collaborative space projects ELDO—European Launcher Development Organization—and ESRO—European Space Research Organization—began in 1962 as cooperative ventures aimed at giving Europe a place in space. ELDO's first-stage launch vehicle was a development of the British Blue Streak missile.

One further major weapons system developed with a Common Market member is the Anglo-Dutch three-D surveillance radar, due to be installed in Britain's new gas turbine powered Type 82 destroyer.

Nuclear power: Britain's Minister of Technology, Sir Anthony Wedgwood Benn, told a Select Committee on Science and Technology investigating the United Kingdom reactor program recently that "The basic aim of her civil atomic energy throughout has been to encourage the sure and safe development of a low-cost energy source for the UK economy. The lines of advance have been threefold: to secure the general development of the new technology as rapidly as possible; to seek to meet the requirements of the generating boards; and to develop and exploit export markets."

The British program aimed to develop a family of reactors that began in 1956 with Calder Hall, the world's first nuclear power station, proceeded through a further ten gas-cooled, graphite moderated stations (two of them exported, to Italy and Japan), to an advanced gas-cooled concept, the AGR. The latter provides potentially the cheapest nuclear power today.

Beyond this, Britain is well ahead of the rest of the world (with the possible, doubtful, exception of the U.S.S.R.) in developing the fast breeder system, expected to take over power generating during the 1980's.

Next to Britain in Europe, France's nuclear program has developed along similar lines though some years rearward. Additional, there are two collaborative projects: EURATOM, the Six's joint research effort based in Brussels, which Britain has now applied to join; and the European Nuclear Energy Agency (ENEA) which has such joint research projects as the highly successful Dragon high-temperature gas-cooled reactor in Britain, and the Eurochemic fuel reprocessing project in Belgium.

Computers: Britain now has a major

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