Each of these six strategies is briefly described below. A detailed description of the original five is provided in the prior report, including step-by-step information on how each has been used by government agencies in the past. Much of this information is summarized in Fig. 2.1 which lists the pros and cons of each strategy and also suggests appropriate situations for use.

2.1 CONTRACTING R&D TO INDUSTRIAL PARTNERS

In this strategy, an R&D product is commercialized as the result of a DOE-supported R&D subcontract to an innovative firm. The firm acts as an industrial partner in the technology transfer process. With this approach the firm is given the support to reduce its risk and the incentive it needs to develop and vigorously market a technology. Cost-sharing from the industrial partner is encouraged, both as evidence that the firm is committed to the commercialization process and as a way of enhancing the R&D effort. Since the potential manufacturer is an integral part of the development of the technology, the chances for its commercialization are improved.

2.2 INDUSTRY CONSORTIUM APPROACH

This approach involves DOE managers and laboratory scientists working closely with groups of firms to develop a particular innovation or R&D area. In a typical consortium arrangement, each company contributes only a portion of the cost of the research, but receives information on all of the work conducted. The consortium may retain patent rights on any new technologies, with member companies usually receiving nonexclusive, royalty free licenses. Nonparticipating firms may also be licensed, and royalties from them are shared based on annual firm contributions. Known as leveraging, this pooling of small investment justifies high-risk research by minimizing the