

	CONTRACTING R&D TO INDUSTRIAL PARTNERS	WORKING WITH INDUSTRIAL CONSORTIA	LICENSING TO INDUSTRY	INFLUENCING KEY DECISION-MAKERS	WORKING WITH BROKER ORGANIZATIONS	GENERATING END-USER DEMAND
ADVANTAGES	<ul style="list-style-type: none"> •carries technically feasible inventions into commercial production •overcomes "not invented here" syndrome •allows protection of proprietary information •potentially reduces tech transfer costs •enhances resources through cost sharing 	<ul style="list-style-type: none"> •focuses on market needs leading to more transferable technologies •gains access to enhanced resources through sharing of equipment, funds and expertise •disseminates information quickly to industry 	<ul style="list-style-type: none"> •provides reward for effective technology transfer •allows many firms to benefit when the market is large 	<ul style="list-style-type: none"> •can achieve greater impact than broadcasting untailored information •provides logic for designing specific marketing approaches 	<ul style="list-style-type: none"> •often provides an effective channel for assessing the needs of the industry and sharing OBCS R&D results •can be inexpensive •enhances resources through cost sharing 	<ul style="list-style-type: none"> •consumer education can achieve long-term behavioral change •some consumer education activities are low cost
DISADVANTAGES	<ul style="list-style-type: none"> •may be difficult to choose a partner •risk and equitability problems associated with reliance on a single firm or partner 	<ul style="list-style-type: none"> •may require special organizational units to be established which may be expensive to coordinate •proprietary interests may discourage the sharing of information •the nonproprietary dissemination of information may discourage product development 	<ul style="list-style-type: none"> •may select inappropriate licensees 	<ul style="list-style-type: none"> •may be expensive to conduct necessary background research •may be expensive to implement 	<ul style="list-style-type: none"> •may be ineffective or inequitable if organization's membership is limited •"vested interests" of the organization may distort or limit information transfer •loss of control over information transfer 	<ul style="list-style-type: none"> •direct market interference can create unintended distortions •some consumer education activities are ineffective •wide variability in effectiveness
APPROPRIATE SITUATIONS	<ul style="list-style-type: none"> •product oriented R&D •potentially useful at all stages of the R&D process but particularly appropriate during development of basic technology for products and product development 	<ul style="list-style-type: none"> •when a group of firms faces a generic R&D problem critical to their international competitiveness •when the risks and capital requirements are too great for a single firm to "go it alone" 	<ul style="list-style-type: none"> •with spin-off technologies •later stages of technology development •with small or large potential markets 	<ul style="list-style-type: none"> •when specific groups of decision-makers hinder diffusion •when R&D findings are technically intricate or difficult to communicate •when R&D findings need to be targeted for use by diverse audience segments 	<ul style="list-style-type: none"> •when an effective communication network already exists within an industry's associations •at all stages of the R&D process, but particularly for long-range, utilization, application and impacts research •when limited resources are available for technology transfer 	<ul style="list-style-type: none"> •when rapid changes in consumer behavior are required •when products are technically difficult to understand •when actual energy savings are difficult to observe •when R&D relate to utilization, application or impacts

Fig. 2.1. Technology transfer strategies: pros, cons, and appropriate situations for use.