



## The Assessment Process

### Section F

## Introduction

We can achieve assessment for both co-development and follow-on applications through a series of questions about the technology starting with more general topics (Is this technology a potential product?) to more specific (Can this technology penetrate the market?). Each technology needs to be evaluated independently. No two will have the same list of questions or the same answers. Those doing the assessments need to rank their questions by determining the most likely problems in transferring or commercializing a particular technology. Because of the extent and costs of a technology assessment, the Air Force needs to do a preliminary evaluation of its technology. Basically, all of the Air Force technologies are available for transfer. So it is necessary to assess only those technologies that have higher potential for a successful transfer.

## Preliminary Assessment

The first aspect we evaluate is whether we have something someone might want or need. To find out, one needs to ask:

- Is it a potential product? Can a company manufacture, package, and sell it at a profit?
- Are there some potential partners that have similar technology needs?
- Is it a product or process technology? Commercial activities may use process technologies to manufacture or test products or as research tools/methods for developing new products.
- What is the need for this technology?
- What are the potential applications for the product?
- Can a process improve a product?
- How significant is the need?
- What is the intellectual property position? If information about the technology has been

published (before a patent), is it in the public domain?

- How mature is the technology? How much development is required before fielding the technology?
- Is this an enabling technology?
- Does this have co-development potential?

You may find answers to these questions from a variety of resources: from your own knowledge and experience, initial information supplied by inventors, other people within the organization, and if necessary, databases, literature (Thomas Register), or participation in technical societies. The goal of this preliminary evaluation is to decide whether or not to invest the time and resources to evaluate the transferability of a technology. A sample technology assessment process using a tiger team approach is provided.

## Sample Technology Assessment Process

### Technology Assessment Process—A Tiger Team Approach

Assemble a tiger team to assess the commercial potential of technology in order to identify and prioritize our technology transfer opportunities. The team should be comprised of individuals (primarily scientists and engineers) from diverse backgrounds.

The first step in the process is to fill out worksheets to assist in the evaluation of the various technologies. The worksheet (Attachment F1) is the key to identifying worthy candidates. The questions on the worksheet are designed to capture the essential information about a specific technology to enable the team to fully evaluate its commercial potential. The questions range from a basic description of the technology, to assessments of uniqueness, ownership, potential commercial markets, and the ability to support a transfer effort (personnel-wise). The team distributes worksheet throughout the organization and acts as liaison to other personnel (helping fill out worksheets, answering questions, brainstorming candidate technologies, and collecting the final product).

Candidate technologies are reviewed and assessed by the tiger team as a group. Categorize each technology as either available for immediate transfer or for future use (the “hold file”). A market analysis is required for each candidate. However, for some cases, enough will be known about the market that further assessment is unnecessary.

A valuable tool for the tiger team is an evaluation matrix (Attachment F2) used to track the assessment criteria. This allows the team to weigh various factors in determining the potential for transfer.

# Potential Tech Transfer Worksheet

**Technology:**

**Point of Contact:**

**Description:** (Describe in terms that someone not familiar with your area could understand.)

**Is this a military-critical technology?** (If "yes", proceed carefully.)  
[Technology does not have to appear on any specific list, but we should have a rationale as to why it should be protected.]

**At what stage is the technology (concept, bench test, prototype, etc) and is technology mature enough to easily transfer to industry? If not, when will it be?**

**Do you perceive any technical, market, or cost barriers to commercialization? What are they?**

**How unique is our work?** (Are we the only people working in this area? If not, what does it do better than alternatives and how? Be honest, do we *really* have something to offer?)

**Are there any other selling points for the technology besides uniqueness (environmentally friendly, user friendly, etc.)? Is uniqueness enough?**

**Do we own the intellectual property rights (e.g., patents) to the technology? If not, who does? Is it proprietary?**

**What are the possible commercial applications?** (Are there a limited number of applications? or are there a lot of possibilities? If there are a lot of possibilities, prioritize the markets you think should be explored first.)

**If the extent of commercialization potential is not known, do we want help finding out?**

**What industries or companies do you think should be targeted? Have there already been industry contacts? If so, with whom?**

**How would the Air Force benefit from a commercialization effort (more mature technology, reduced cost to Air Force through volume manufacturing, retaining strategic U.S. industry, good public relations)?**

**Name 4-10 specific industry meetings or publications at/in which news of this technology should be publicized:**

**Are there any recent publications in the public domain? If so, give the reference sources or be prepared to provide copies.**

**Are there any other *government* agencies we should consider teaming with? Name them.**

The following questions will help determine our ability to support a CRADA or other transfer mechanism:

**Is anyone in your group interested in pursuing commercialization?** (The most basic rule is - no champion, no deal!)

**How many government people work in this area?** (If only one person works in that area, you should probably avoid it, unless that person is *really* a champion for commercialization.)

**What is the actual mission workload in the area?** (High mission workload leaves little, if any, time for transfer activities.)

**Do you have any money available to support a project, if required?**  
[Note: Air Force money can only be used to support in-house work under a CRADA, although under a cooperative agreement money can be given to outside partner.]

**How many hours per week can be committed to a technology transfer effort?**

**To which outreach team does this technology correspond?**

- Medical**
- Automotive**
- Public Safety**
- Education**
- Environmental**
- General Aviation**
- Other \_\_\_\_\_ (please specify)**

**Section to be filled out by Tiger Team**

**Technology recommended for marketing analysis? Yes  No**

**Immediate Transfer**

**Hold File**

# Evaluation Matrix

## 13 Criteria for Doing Technology Transfer

	CATEGORY	DEFINITION
1	Barriers, lack of (military critical technology, cost)	Are there factors (technical, cost, manufacturability, environmental, military critical technology, user friendliness, regulations, export control, etc.) that would make it hard to develop a commercial product from this technology?  A high score is given for a lack of barriers or for few barriers.
2	Champion, strong	Is there a strong Air Force champion? Does this person have the interest, desire, and energy, and will they make the time to support the commercialization?
3	Desire and ability to team	Are the technology owners (i.e., owners of the intellectual property) interested in commercializing their technology? Do they have the ability to effectively team with a corporate partner?
4	Good PR	Are there public relations benefits that merit an Air Force investment in commercialization?
5	Government resources	Are there government laboratory equipment or facilities, personnel, and management support to support commercialization of this technology?
6	Infrastructure, industrial	Will commercialization of this technology enable the US to retain or establish a strategic industrial infrastructure?
7	Market, size	Is there a large market for the end product? A high score indicates that many products can be sold.
8	Marketability	A high score in indicates that the product will be easy to sell e.g., established markets.
9	Maturity technical	At what stage is the technology in the technological development (i.e., concept, bench text, working prototype, etc.) cycle? A high score is given to a technology that is mature enough to easily transfer to industry.
10	Non-Mil government to team with	Have government agencies, excluding the Department of Defense, which may be interested in the technology been identified to the Tiger Team? Interest maybe from the standpoint of wanting to use the technology as it stands or in being a potential source of funds for furthering the technology or advancing its commercialization.  Examples of such agencies include, but are not limited to: Bureau of Alcohol, Tobacco, and Firearms; CIA; FAA, FBI, NASA; NIST; and Departments of Commerce, Education, Energy, and Transportation.

11	Patent	<p>Does a patent or some other protection of intellectual property rights covering this technology exist and, if so, who owns it?</p> <p>A technology for which the Air Force owns the patent, and which would therefore have the potential for bringing royalties back to the Air Force activity, is rated more highly than a technology for which a contractor owns the patent.</p> <p>However, both are rated more highly than a technology for which no patent exists. Patents awarded rate higher than patents filed. Multiple patents rate higher than a single patent</p>
12	Usefulness, commercial	<p>What is the magnitude of usefulness in the commercial market? A high score is given to a technology that is extremely useful to the commercial market. (i.e., VCR, coffee maker, microwave oven, etc.)</p>
13	Usefulness, military	<p>What is the magnitude of usefulness in the military market? A high score is given to a technology that is extremely useful so the military market (i.e., F-22, night vision goggles, etc.)</p>