Funding for FY2010 PITA has been provided to the Institute for Complex Engineered Systems (ICES) at Carnegie Mellon by the Commonwealth of Pennsylvania. ICES is now soliciting proposals for projects that fit within the seven PITA Technology Areas (see attached Mission Statement). Proposals are due on December 4, 2009 and we expect to issue approval memos for selected projects by January 31, 2010.

We invite proposals that satisfy the PITA mission and ICES strategic objectives. The mission statement for the PITA program is attached as a separate document. The anticipated start date for selected projects may be as early as January 1st, 2010 depending on the final State funding timing. This year, project start may be later than January 1st if the State funding is delayed due to the late nature of the State budget's approval. If the project's start date is on January 1st as usual, the typical award period will run from January 1st, 2010 to June 30, 2011. Even if the project start is delayed, the project conclusion date will remain as June 30, 2011. A list of previously funded PITA projects can be found at http://www.pitapa.org/. Typical project awards for PITA funds are in the range of $25,000 to $60,000.

The PITA emphasis for FY2010 is once again the “Active Participation of Pennsylvania Companies” (see 1.a. below). For these collaborative projects, PIs are required to supply “support letters” from the participating companies as an attachment to the proposal. Additionally, PIs are required to submit a contact name and full address for a member of the participating company to serve as the company's PITA point-of-contact for the duration of the project. The point-of-contact will be invited to attend PITA events during the course of the project, and will be asked to periodically provide feedback on the PITA program.

An additional PITA objective for FY2010 is to seed projects to develop new research initiatives, foster research collaboration among faculty, develop follow-on funding opportunities and incubate collaborations with Pennsylvania companies. In lieu of current Pennsylvania company participation, these seed projects should clearly define the technical objective as well as the strategy for using the outcomes to develop follow-on funding and future Pennsylvania company collaborations.

Attached is the required format for FY2010 project proposals. Proposals are limited to 4 pages. Proposed projects with strong technical content and/or innovation AND with the following features have the best chance to be selected for funding (in general order of importance):

1. **a. Collaborative Projects**
   i. **Active Participation of Pennsylvania Companies** with projects benefiting either established Pennsylvania-based companies or start-ups with new technologies. Examples of active participation include cash cost matching and in-kind use of company facilities and/or personnel to conduct experiments, demonstrations, or other research tasks directly related to the project. Cash cost matching is particularly encouraged for projects that partner with larger, more established Pennsylvania
companies. The support-letters from industry must explicitly list the type and amount of their participation. Any cost match that is provided by the industry participant should be administered through a ICES University account.

b. **Seed Projects**
   i. **Clearly defined strategy** for using the project’s technical outcomes to generate follow-on funding and future collaborations with Pennsylvania companies, and augmenting the follow-on funding plans described in item #5 below.
   ii. **Clearly defined relationship** of project objectives with the PITA and ICES missions.

Please note that PITA award scoring favors “collaborative” proposals.

2. **Active Participation of Graduate and/or Undergraduate Students.** Part of the mission of PITA is to link students with Pennsylvania companies and agencies to increase the retention of well-educated students in the Commonwealth. Projects with clear plans for interaction of graduate students and/or undergraduate students with Pennsylvania companies are strongly encouraged.

3. **Interdepartmental Collaboration and Clustering.** Projects with clear plans for collaboration with two or more PI’s from different departments are encouraged. Additionally, technical interactions between two or more PITA proposals to promote research clustering may be proposed. However, each PITA proposal should target a unique description and anticipated results that can be achieved independent of other proposals.

4. **Leveraged Funds.** Leveraged funds fall into four broad categories (in general order of importance):
   a. New cost matching from Pennsylvania industrial partners
   b. Existing cost matching from Pennsylvania industrial partners related to the proposed project goals
   c. New cost matching from non-Pennsylvania sources (e.g. federal government, out-of-state industrial partners)
   d. Existing funds related to the proposed project goals that do not fall into the categories above and that are not from Pennsylvania State government sources.

As a guideline, the overall PITA program goal is $2 of expended leveraged funds for each $1 of expended PITA funds. The leveraged funds identified in a project proposal must be in place before PITA funds are released to the project and must be expended during the period of performance of the project. Also, the relationship of leveraged funds to the project must be stated in the proposal.

5. **Follow-on Funds.** Follow-on funds are generated from future grants or contracts that result from concepts or technologies enabled by PITA funding. The proposal should briefly outline any existing plans to seek follow-on funds based on your project. You are also asked to submit information on follow-on funding enabled by PITA grants received in prior years.

6. **Budget.** For most projects, PITA funds should not be used to support tenured or tenure-track faculty, although faculty salary from non-PITA sources can be included in the leverage funds for the project. Budgets should place an emphasis on graduate and undergraduate student effort. Leverage sources should be clearly identified.
7. **Renewal or New Project.** Please note that PITA award scoring discourages renewal PITA projects, but does not expressly forbid them. PITA awards are intended to support an effort for only one cycle, so that the effort can establish itself and be able to fund further research without PITA support in future years. In some cases, renewals are awarded under circumstances where an additional award has a high likelihood of significant follow-on funding.

If your project is funded, the PITA program and its sponsor, the PA Department of Community and Economic Development (DCED), require project PIs to assist in identifying and measuring PITA program effectiveness **for five years after the completion of the project**, including the following:

- Providing university impact information (e.g., students involved, patents, publications, presentations, leverages funds, follow-on funds)
- Assisting PITA staff in collecting economic impact information (PA companies and agencies involved and economic impact at these companies and agencies) for the project. Impacts will be tracked for five years after project completion.
- Identifying PITA and DCED as project sponsors in all project presentations, publications, and discussions of the project with the media.

Please submit proposals electronically to Daniel Shapiro at daniels@andrew.cmu.edu, using the Carnegie Mellon-PITA proposal forms. Questions regarding the proposal content should be addressed to either Matthew Sanfilippo at mattsanf@cmu.edu or Gary Fedder at fedder@ece.cmu.edu.