Systems Engineering Research Center (SERC)
Capstone Marketplace Objectives

June 2018

SERC Capstone Marketplace Objectives

- The System Engineering Research Center is strengthening engagements with university undergraduates in engineering programs. SERC's objective is to reinforce system engineering "thinking" in students doing senior design projects, and to give students appreciation of the value of good system thinking in their approaches to solutions.

- SERC's Capstone Marketplace will connect student teams to real "customers" with real problems. Customers who will, in some cases, put students' solutions to operational use.

- Interactions between student teams and government "customers" will model industry practices for conducting and coordinating technical development efforts.

- "System" approaches to problem solving will be emphasized, but elaborate system engineering processes and overhead will be minimized.

- Involvement with SERC Capstone Marketplace projects will provide students exposure to DOD technology development activities

- **Multidisciplinary Team effort**—Ideal solutions to "problems" require teams to cut across engineering, management, business, and other disciplines

- **Direct contact with "real" customers**. The Marketplace provides direct contact with Subject Matter Experts who actively participate in guiding problem solutions

- **Critical thinking**. Emphasis on student skills in forming, justifying, presenting project decisions and outcomes

- **Mirroring business models of small entrepreneurships**—show organization, technical effort, schedules, status and reviews, financial tracking, risks, and reporting which duplicate usual business practices.

- **2 semesters of activity**. Nominally 3 hour credits each semester.

- **Value to government customers**. Student efforts produce research, analysis, prototypes, "out of the box" approaches and other technical data valued by their customers.