

Additional Information Required for the Human Systems Interchange:

**indicates a required field*

1) **How many months has this project been funded? (in months, up to 3 Numeric Characters) (not required)**

2) **Project Expenditures***

To help us understand the scale and depth of your human systems project effort, please provide the approximate expenditures on this project (*in thousands, up to 8 Numeric Characters each*) for:

- a. **Prior Year:** The total expended in prior year(s) (required for Follow-on and Completed projects)
- b. **Current Year:** The amount budgeted to be spent this current year (required for New, Follow-on and Completed projects)
- c. **Anticipated Future Year:** The anticipated amount to be spent on the project in the next year (required for New and Follow-on projects)

Note: \$150,000 would be entered as 150.

3) **Select the Primary Human Systems Defense Technology Subarea from the four below that best characterizes your project: ***

- Systems Interfaces and Cognitive Processing
- Personnel, Training and Leaders Development
- Social, Cultural and Behavioral Understanding
- Protection, Sustainment and Physical Performance

4) **Please select a primary area keyword from the list below: ***

System Interfaces

- Human-Machine Interfaces
- Human cognitive process modeling
- Decision-making models
- Human state modeling
- Applied Neuroscience
- Trust
- Metrics & measures of effectiveness

Personnel & Training

- Force management & modeling
- Selection & Classification
- Theory of learning
- Adaptive, tailored instruction
- Live, virtual, constructive sims
- Realistic immersive training
- Training methods, tech, & media
- Education & training strategies
- Innovative leader development
- Metrics & measures of effectiveness

Protection, Sustainment and Physical Performance

- Extreme Environment Protection
- Combat Clothing & Protective Equipment
- Extended Combat Rations & Field Feeding Equipment

- Physical Aiding
- Performance Enhancement
- Vehicle Escape & Crash Safety
- Survival & Rescue
- Aerial Delivery
- Warrior-System Integration
- Metrics & Measures of Effectiveness

Social and Cultural Understanding

- Cultural situation awareness
- Socio-cultural models & synthetic entities for:
- Socio-cultural data in denied areas
- Social network analysis
- Building partnerships
- Metrics & measures of effectiveness

5) **Select up to 10 secondary keywords from the list above (*not required*)**

6) **If applicable, select a Technology Gap that your technology may address from the list below: (*not required*)**

TRAINING TECHNOLOGY GAPS

- Estimated operational effectiveness via training scenarios
- Verification & Validation of advanced training models
- Measures and assessment of long term (lifelong) performance
- Automated, adaptive, and individualized tutors
- Automated knowledge elicitation to develop responsive instructional content
- “On the fly” assessment in dynamic environments
- Training systems which adapt to individual needs
- Standardized data protocols for operation in multi-level classified environments
- Scalability across complex domains

INTERFACE TECHNOLOGY GAPS

- Non-verbal cue understanding between the interface and the operator
- Natural interfaces to manage multiple scale (one to many), multiple role systems
- Metrics (systematic, scalable, relevant) for free form interactions
- Interfaces which adapt to the user’s mental state
- Heuristics to determine relevant information to be exchanged during operations
- Human-centric parameters for management of autonomous systems
- Goal-oriented interfaces for simultaneous multiple domain operations

7) **Please provide the following details to further describe your Human Systems project: *** (*Note: This is a further breakdown of the Project Summary you provided with your IR&D submission*)

- a. What Problems are you trying to solve? (*Up to 1,000 Alpha Numeric Characters*)
- b. What is new about your approach over current state of the art? (*Up to 2,000 Alpha Numeric Characters*)
- c. If you succeed, what difference will it make to the Department of Defense? (*Up to 1,000 Alpha Numeric Characters*)
- d. What new capability will it provide to the DoD? (*Up to 1,000 Alpha Numeric Characters*)