Workshop on Technology Approaches for Current and Future Base Camp Sustainability
Sheraton, Raleigh, North Carolina
12th – 14th September 2007

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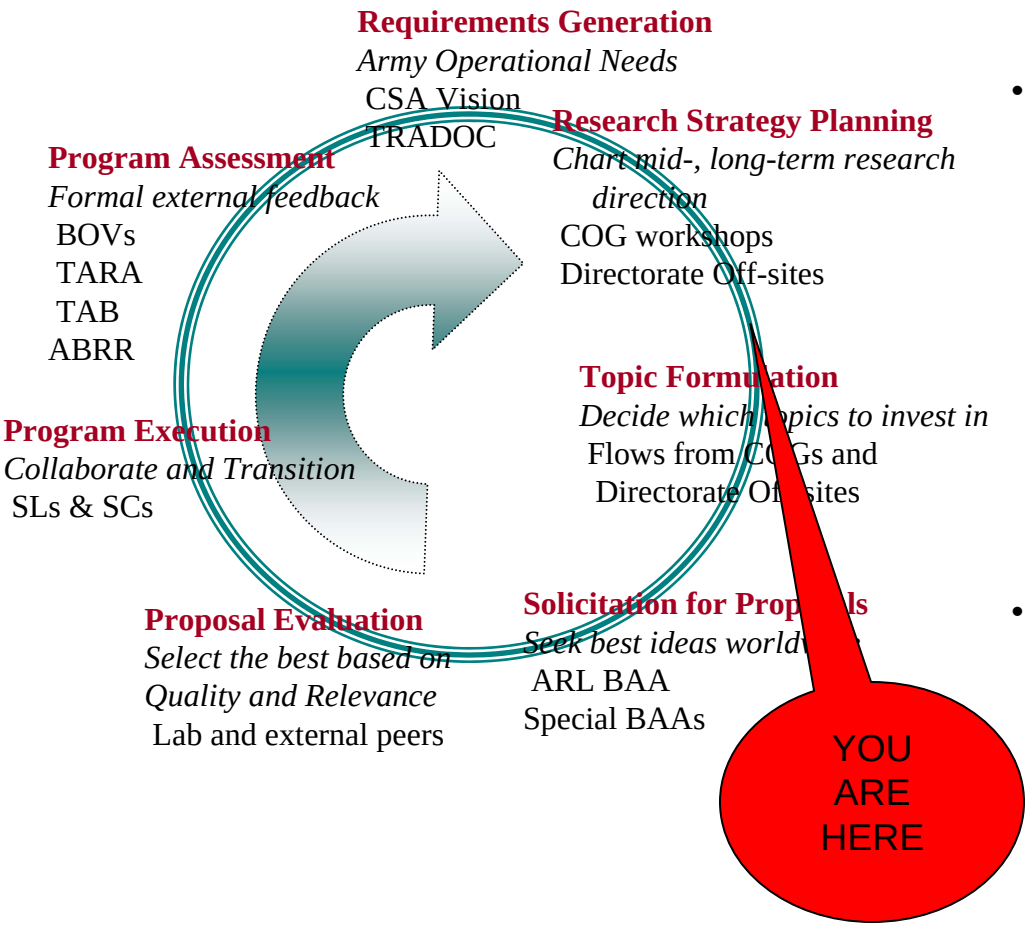
Who & Why?

Who? This meeting is composed of two groups:
Applied government scientist and program managers
(principally NASA and US Army)
Academic and industry leaders in the relevant fields.

Why? This meeting is being held to determine whether a new basic research thrust should be supported by the Army Research Office.

How?
Peer Review/Evaluation Process



- **Program Formulation**
  - **Requirements/Operational Needs/Vision**
  - **Strategy Planning/COGs**
  - **Topic Formulation**

- **Each ARO proposal is reviewed minimally by three peer review subject matter experts and one Army subject matter expert. Army scientists request (SL/SC) status.**

Selection Criteria
  - **Scientific/Technical Merit**
  - **Potential contribution to Army needs**
  - **Facilities and resources**
  - **Investigators qualifications**
  - **Past Performance**
  - **Cost analysis**

- **Programs undergo a biennial peer review by an independent Board of Visitors (BOV).**

Evaluation Criteria
  - **Motivation**
  - **Approach**
  - **Innovation**
  - **Coherence**
  - **Accomplishments**
  - **Relevance/Transitions**

Basic Research

Budget Activity 1, Basic Research. Basic research is systematic study directed toward greater knowledge or understanding of the **fundamental aspects of phenomena and of observable facts** without specific applications towards processes or products in mind. It **includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in** those fields of the physical, **engineering, environmental**, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress. **Basic research may lead to:** (a) **subsequent applied research** and advanced technology developments in Defense-related technologies, and (b) **new and improved military functional capabilities** in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support.

You role is to determine whether the Army should establish a basic research thrust, <u>tentatively</u> called "Habitation."

To establish a thrust area, two criteria must be met:

Habitation Sciences

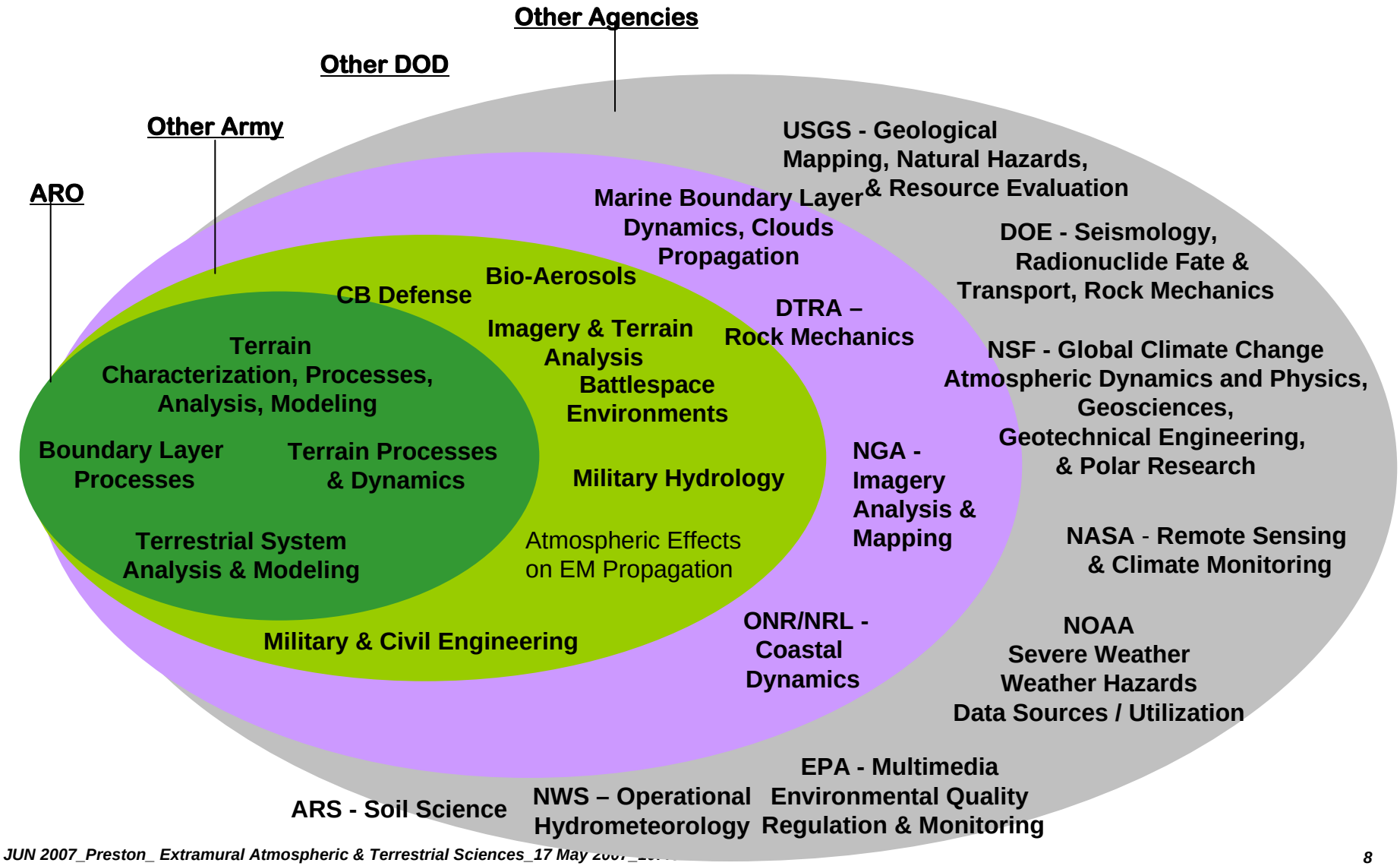
2.3. Habitation Sciences. Habitation Sciences program is concerned with basic research that will enable the Army to project power around the globe in a manner that supports operational needs in sustainable manner. Program interests cover a broad spectrum of habitation issues including scalability, modularity, interaction with terrain and climate, and force protection, broadly defined in the context of systems inhabited by soldiers.

Two Criteria Required

1) **Scientific/ Engineer Opportunity for the Army:** Is there a specific science and engineering opportunity to exploit that is relevant to the Army? In other words, what is new from the scientific/engineering perspective that makes investment important to advance an science/engineering area of relevance to the Army at this time? (The world is filled with problems, what is technically special about this one?)

2) **Is anyone else invested on that specific point?** ARO resources are modest, so they must be laser focused on particular problems where a modest investment can make a difference. (The world is filled with actors, why does this need our modest resources, when others are doing it for us?)

Visualization: The Egg Yolk Chart
Terrain and Atmospheric Example



***No* is an acceptable answer.**

But, if a group determines the answer is yes, then the following products are required:

Research Area Description (Product 1): Please provide a paragraph derived from your expertise in a technical area that supports Habitation Sciences that describes areas of basic research that should be explored to support and further the needs of the Army. The paragraph may be used in the Army Research Office Broad Agency Announcement as a vehicle to invite proposal submission.

Research Area Description Argument (Product 2): For each major element in the Research Area Description (Product 1), please provide your group's argument explaining why that element was included in the description and sources for further development of the respective element. Use the attached data sheet for each element.

What will be done with your products?

Short Term (3 months):

17-18 SEP 07: Army Environmental Sciences Co-Ordinating Group Meeting Discussion
17 SEP – 9 NOV 07: Development of Workshop Output by meeting organizers
13-14 NOV 07: Army Research Office, Environmental Sciences Program Review, Presentation of Proposed Trust Area(s)

Mid-Term (3-12 months):

2 QTR 08: Include language in the Army Basic Research Broad Agency Announcement
2 QTR 08: Publish workshop results in Habitation: International Journal of Human Support Research
3 QTR 08: Begin accepting proposals on an on-going basis in the respective areas
3 QTR 08: Begin review of received proposals on an on-going basis
3 QTR 08: Encourage proposals to programs that leverage resources DURIP, HBCU, etc.
3 QTR 08: Continue to build collaboration with other national actors

Long-Term (> 12 months) :

2009: garner additional Army resources as appropriate, for example if a particular area results in success in identifying an area of particular success needing additional resources (Example: MURI).

2009: Report progress to the 2009 Army Research Office, Environmental Sciences Program Review, and continue development.

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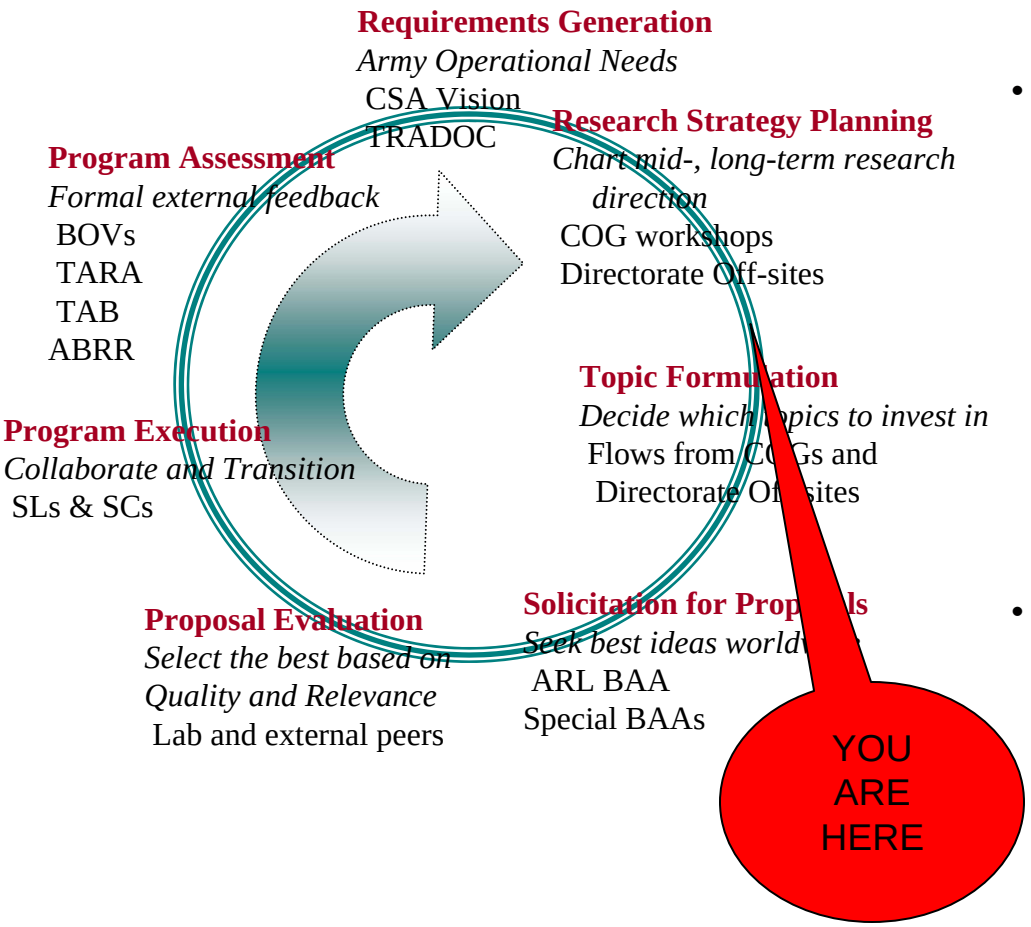

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