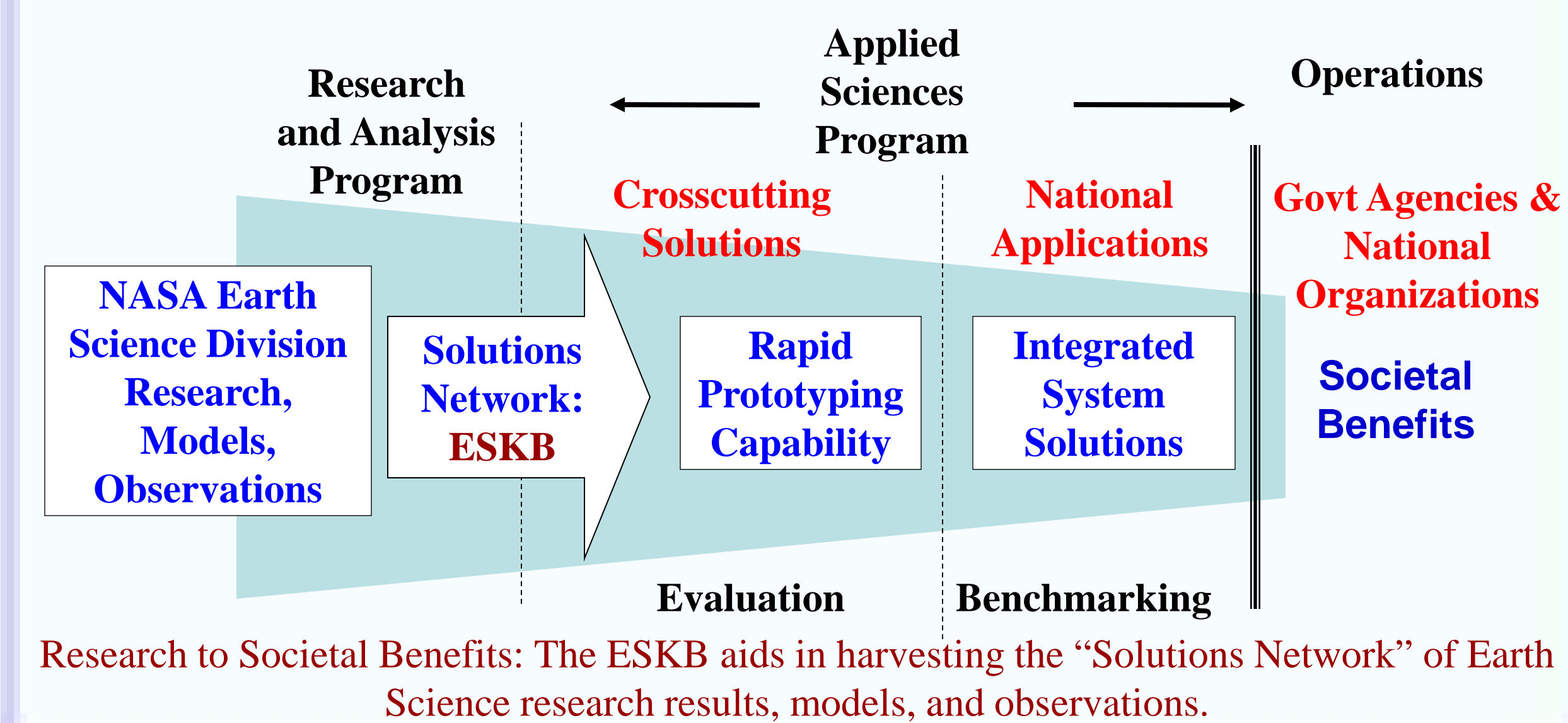


INTRODUCTION

The NASA Applied Sciences Program has funded the Mississippi Research Consortium (MRC) to develop information technology that will facilitate searches for potential applications of NASA assets to various needs in the earth sciences community. In particular, it will help generate ideas for new ways to use NASA missions, research, and/or models in conjunction with operational decision-making processes (or decision support systems) to achieve a particular benefit to society. In this paper, we describe the development of information technology that will facilitate that ability. The resulting system is called the Earth Science Knowledge Base (ESKB).

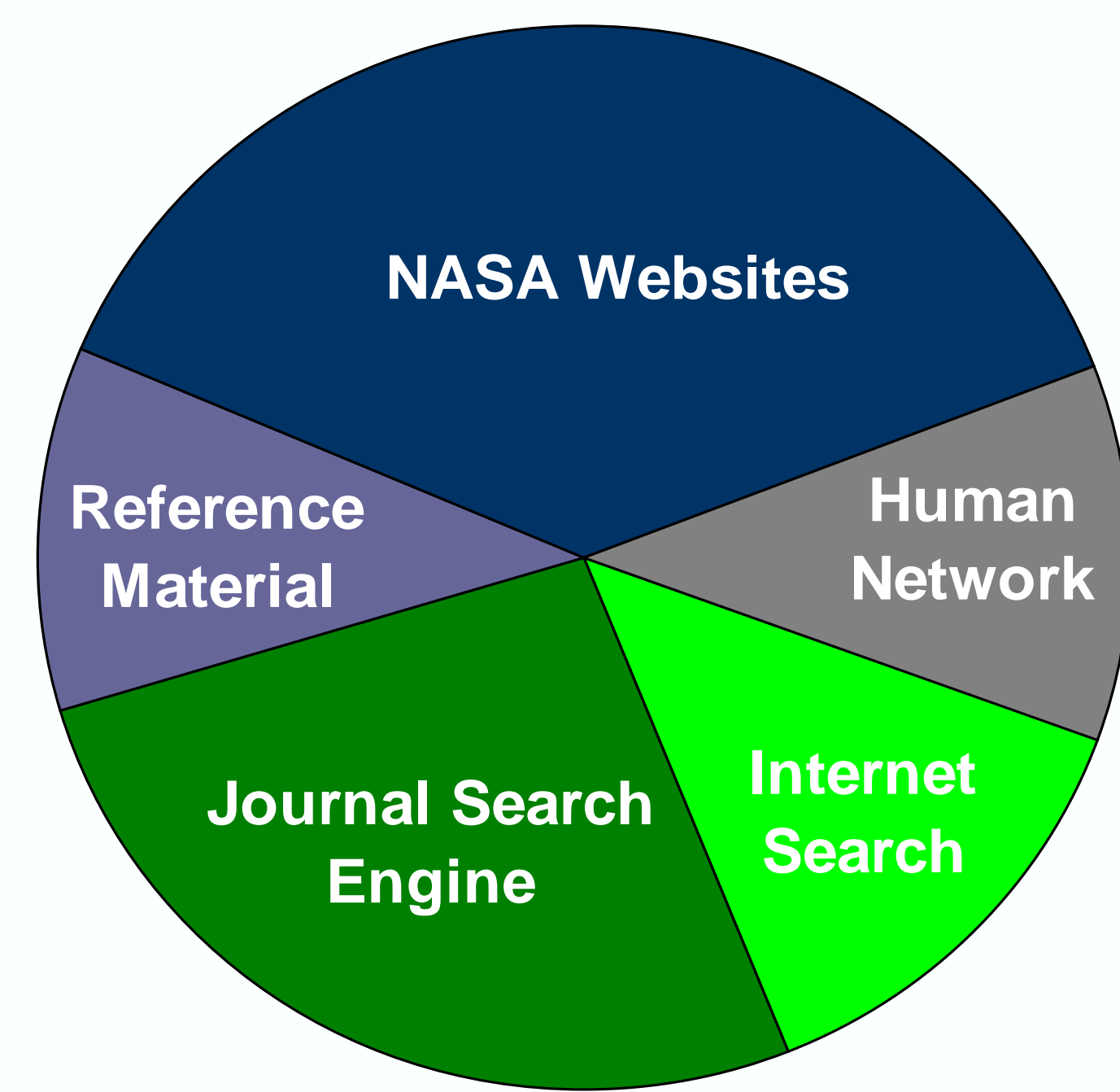
The ESKB

The ESKB contains an index of relevant NASA research result publications in a database that is compatible with the evolving NASA "Mission to Models" (M2M) database and shares relevant table space with it. In particular, fields from this system identifying relevant NASA missions, models, and data products are used to cross-index the data collected on published results of research projects. Fields characterizing the research results based on the six earth science focus areas and the twelve applications of national priority are included. In the course of developing the ESKB, novel uses of existing online databases and search tools have been developed. In addition, data mining tools have been developed for facilitating the proper characterization of research results. In addition to research results, the ESKB includes data that characterizes the current network of NASA earth science partners. This includes information on organizations and agencies funded by or partnered with NASA to conduct earth science research, technology, and applications projects. The relationships between NASA programs and project sponsors are also captured in this knowledge base.

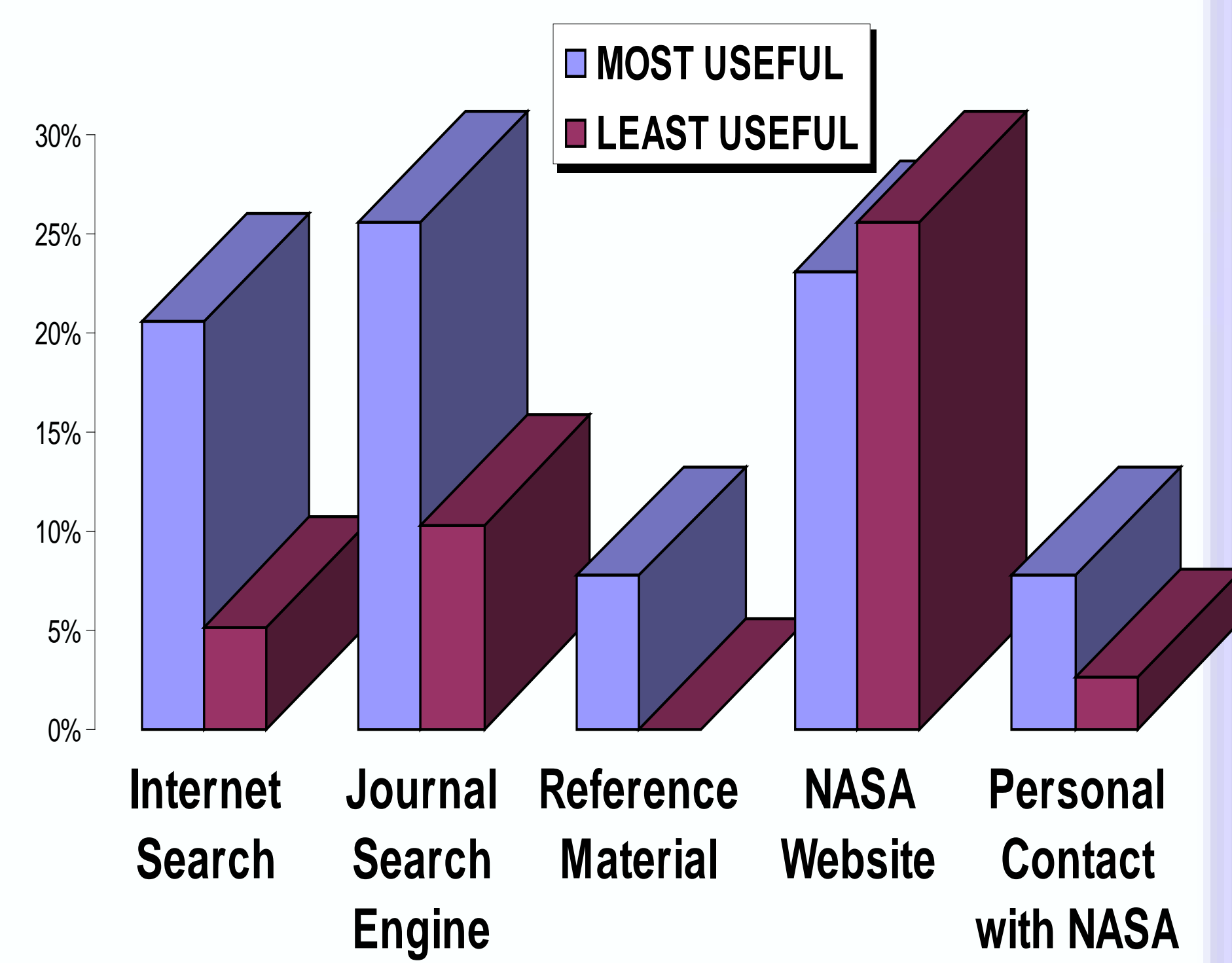


User Needs Assessment Results

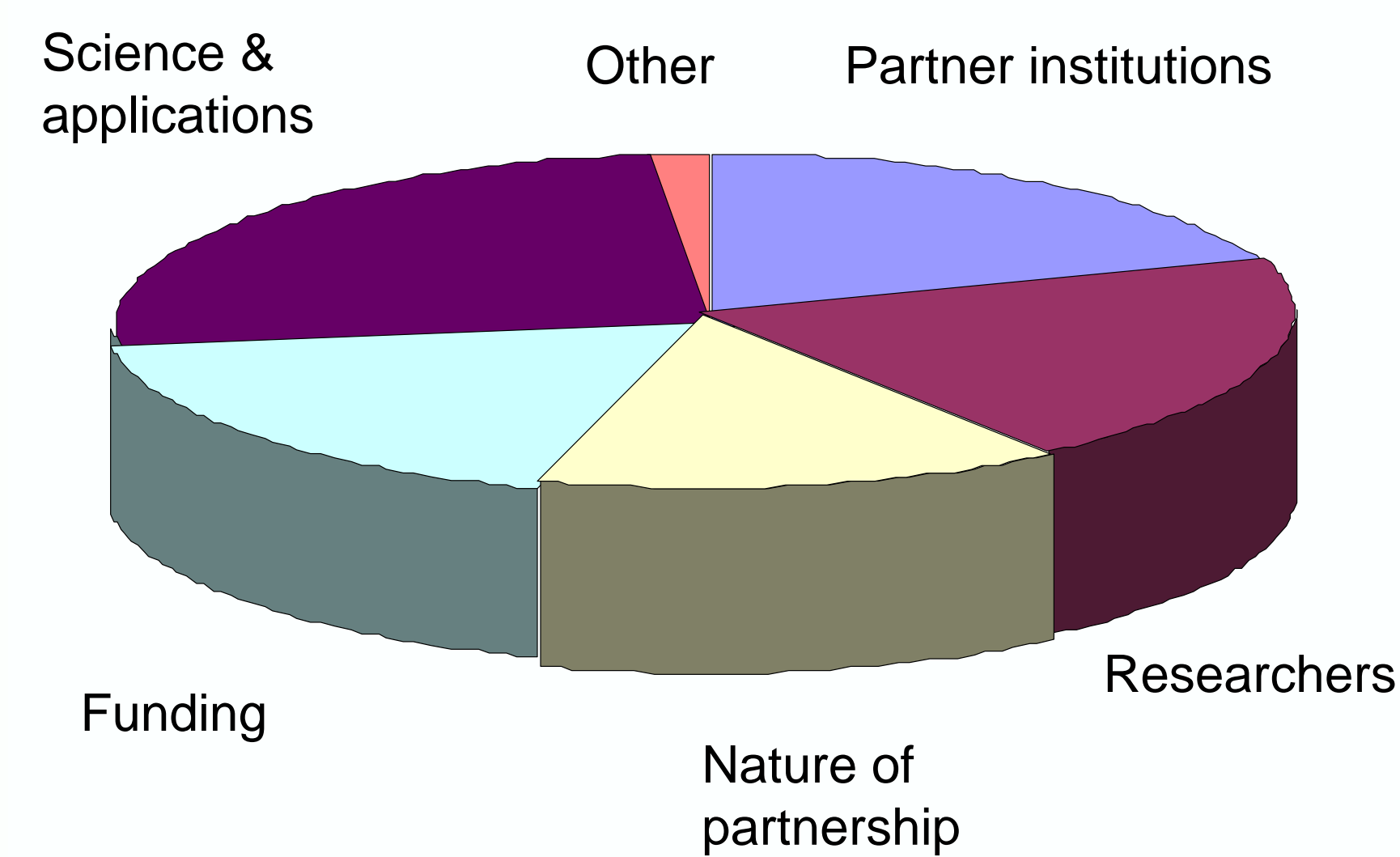
Methods currently Used to find relevant research results



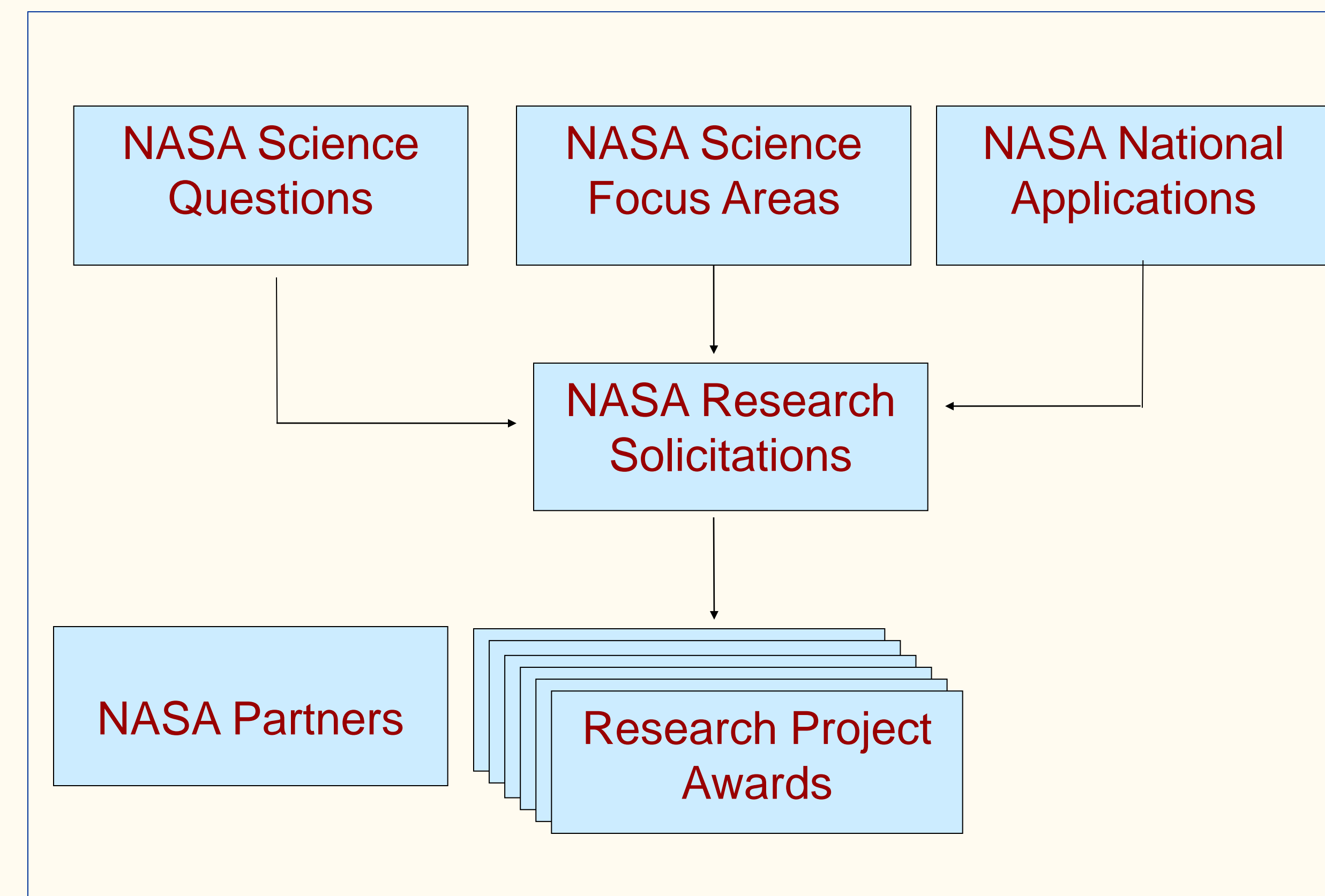
Usefulness rating of current methods



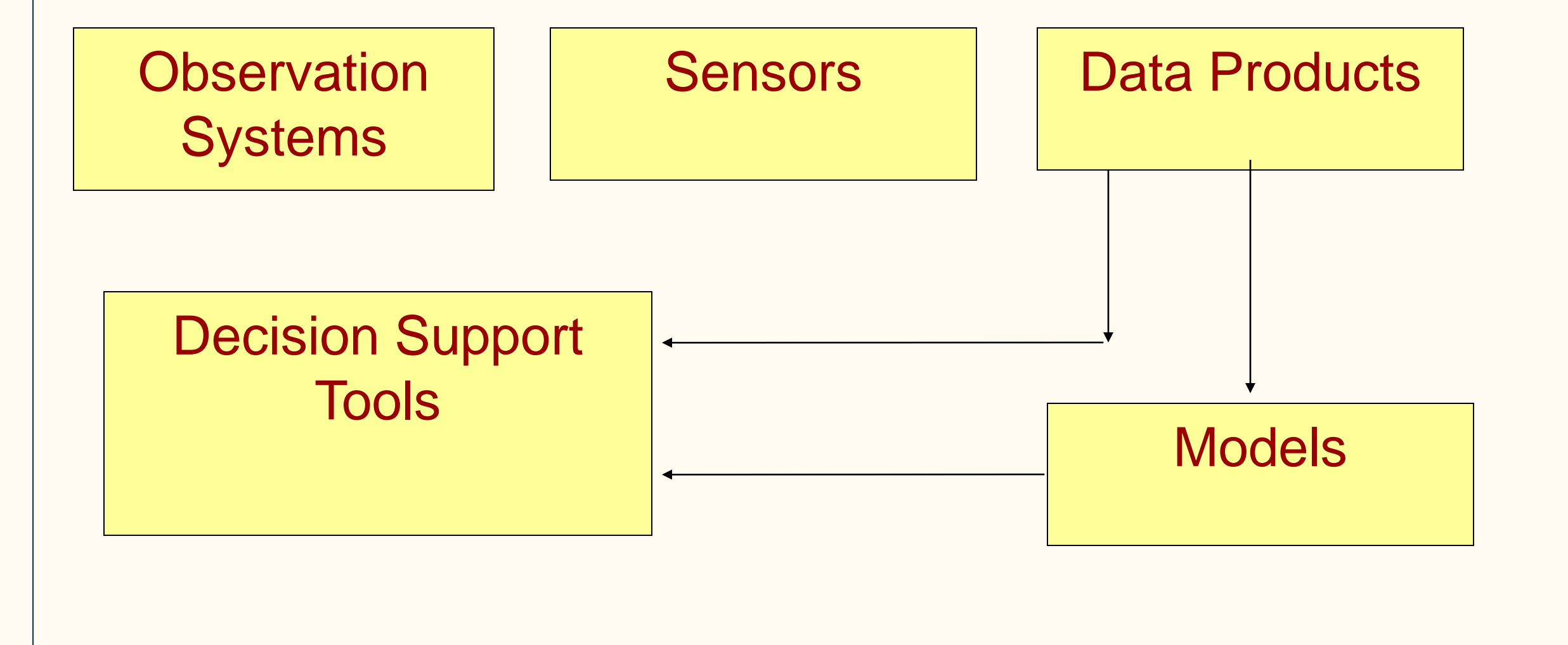
More partnership details desired



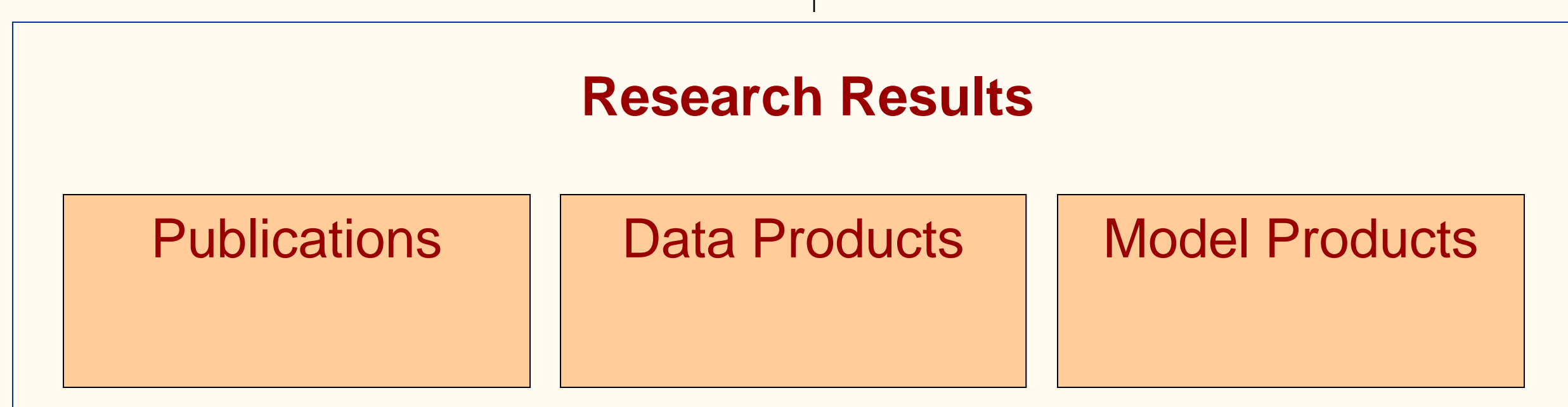
ESKB ARCHITECTURE



NASA Science Mission Directorate

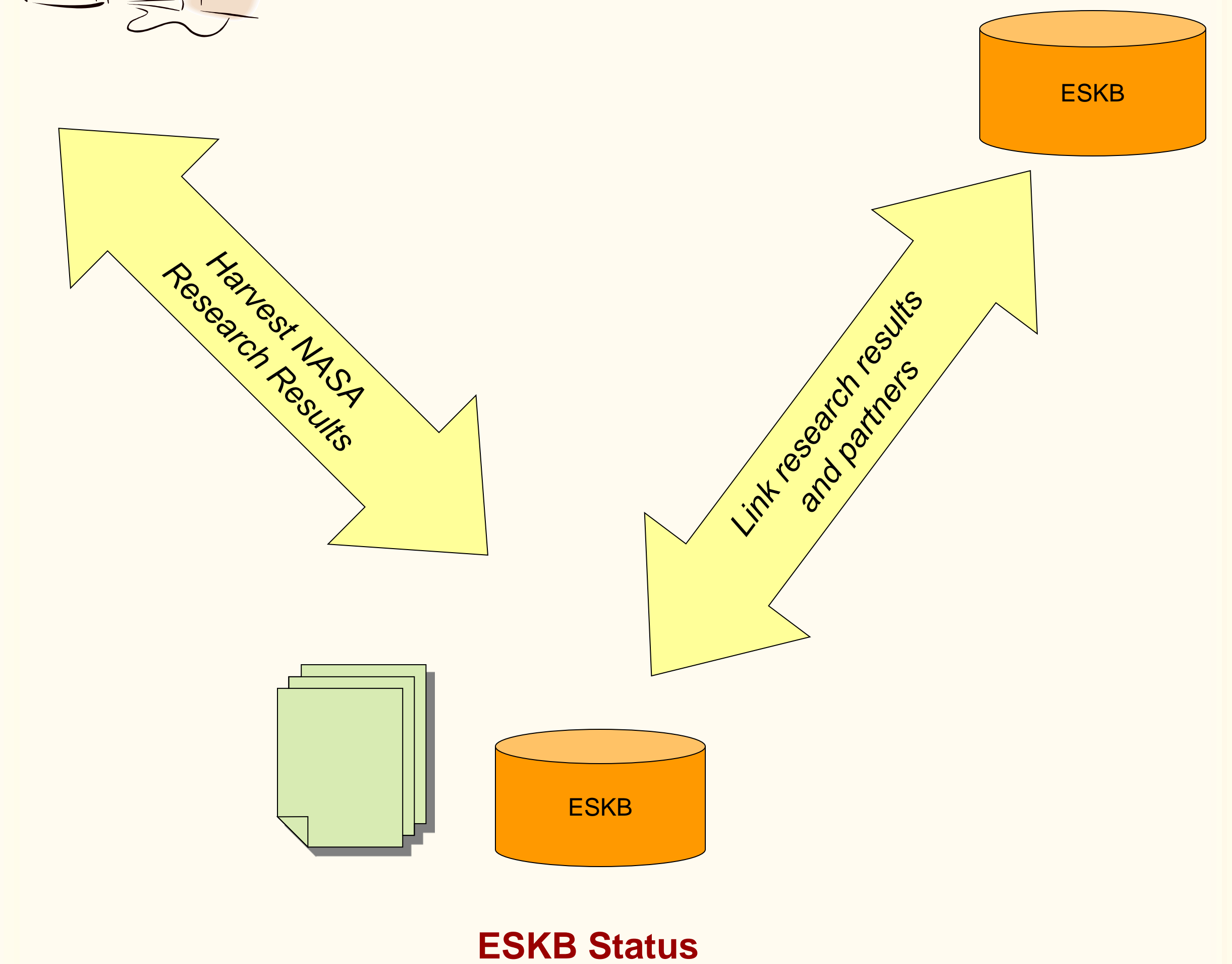
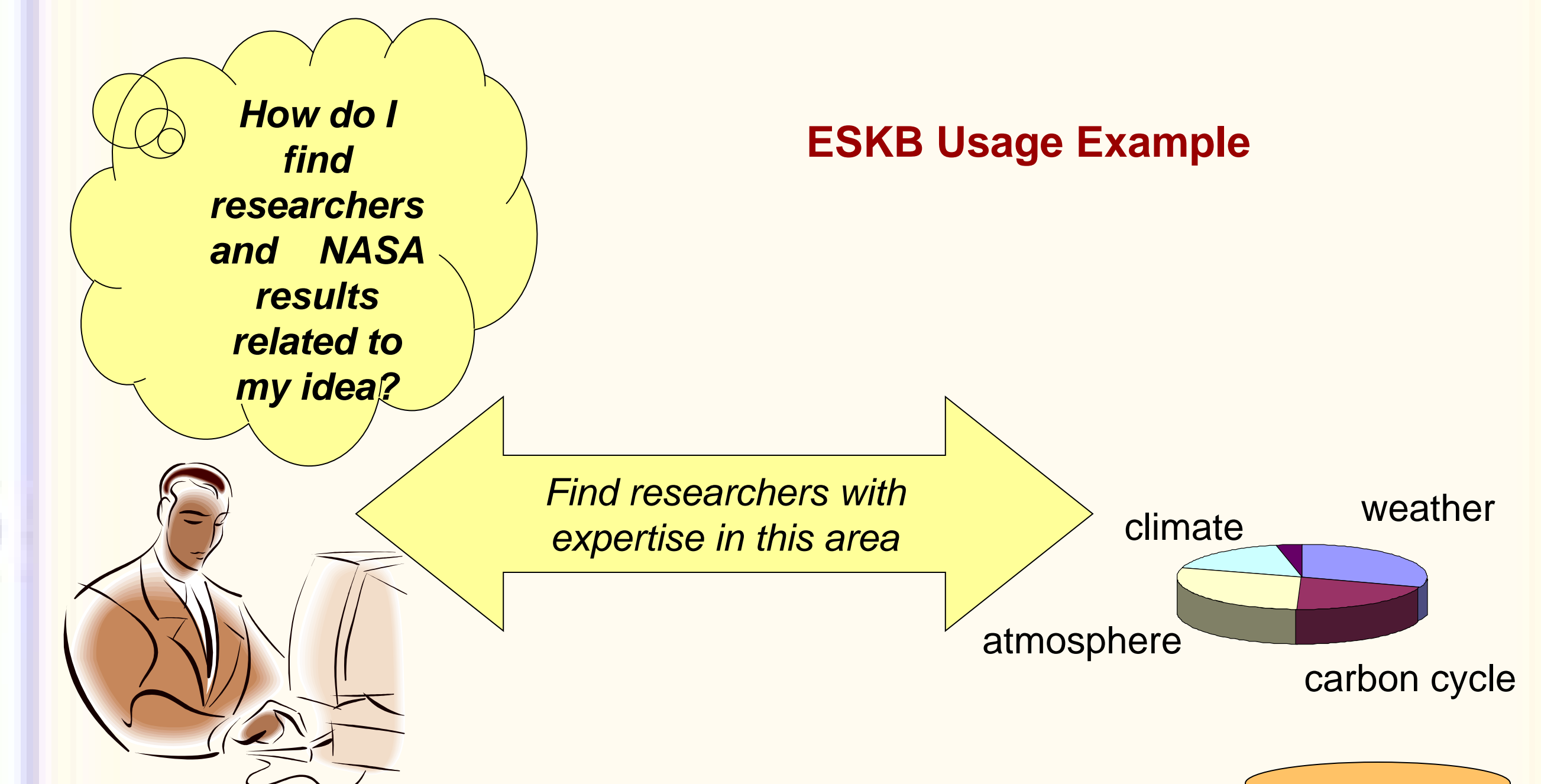
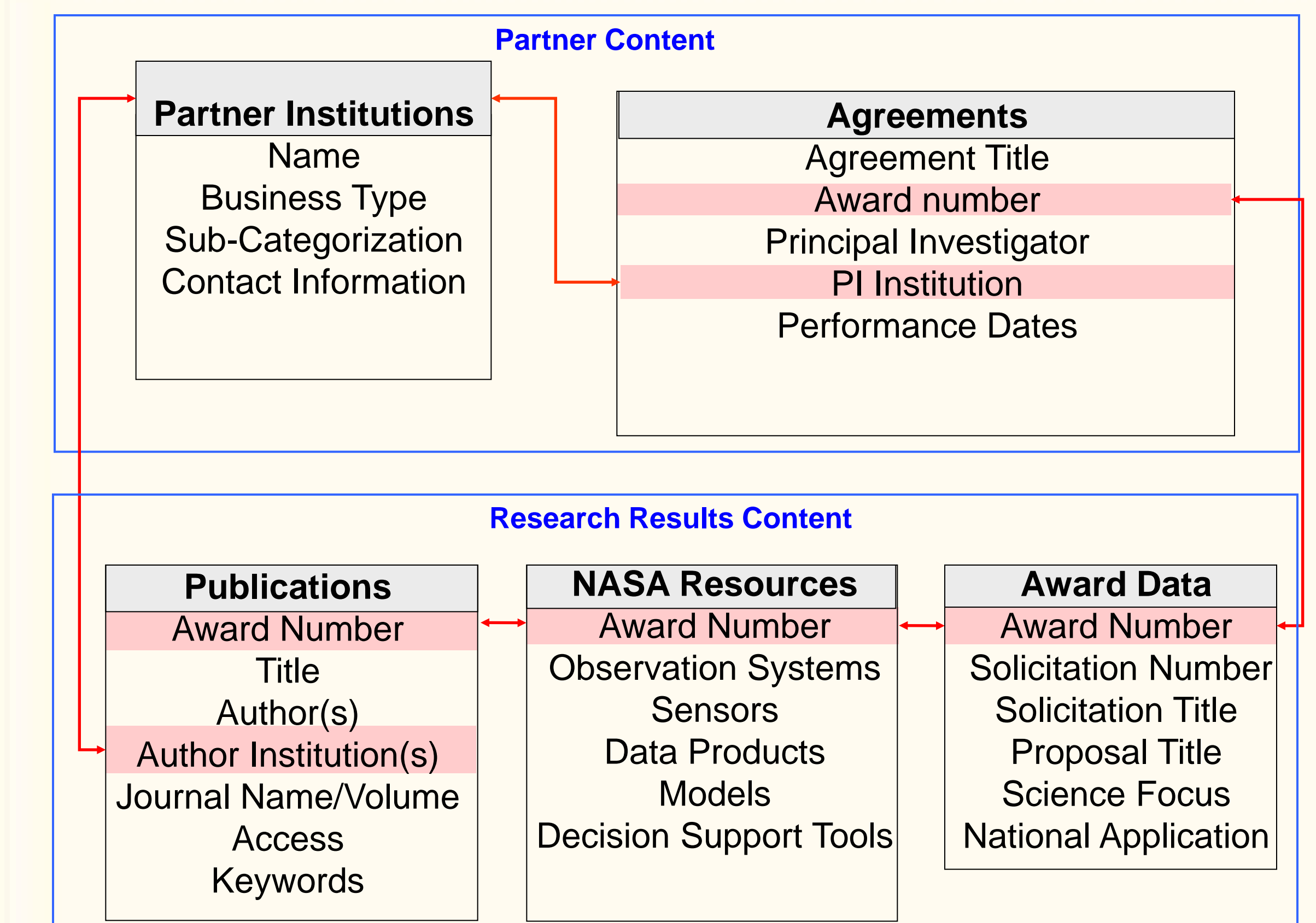


Earth Science Knowledge Base (ESKB)



Authors affiliation:

- 1 GeoResources Institute, Mississippi State University
- 2 Spatial Information Solutions, Starkville, MS
- 3 NASA, Stennis Space Center, MS
- 4 Institute for Technology Development, Stennis Space Center, MS
- 5 University of Mississippi, University, MS



The ESKB client software is available in a beta release. Interested parties will soon be able to download the latest version of ESKB from the NASA Solutions Networks Hub:

<http://www.artpo.ssc.nasa.gov/SNH/>

Contact Information:

Jim Aanstoos
GeoResources Institute
Mississippi State University
email: aanstoos@gri.msstate.edu

The 12 Applications of National Priority



Triangle Chart approach to document a particular research-to-operations solution.

