

NASA Advisory Council Recommendation

NASA IT Technologies Partnerships with Other Federal Agencies and Public/Private Opportunities 2012-01-08 (ITIC-01)

Recommendation:

To enable NASA to gain experience on emerging leading-edge IT technologies such as:

- Data-Intensive Cyberinfrastructure,
- 100 Gbps Networking,
- GPU Clusters, and
- Hybrid HPC Architectures,

the Council recommends that NASA aggressively pursue partnerships with other Federal agencies, specifically the National Science Foundation (NSF) and Department of Energy (DOE), as well as public/private opportunities. We believe joint agency program calls for end users to develop innovative applications will help keep NASA at the leading edge of capabilities and enable training of NASA staff to support NASA researchers as these technologies become mainstream.

Major Reasons for the Recommendation:

NASA has fallen behind the leading edge, compared to other Federal agencies and international centers, in key emerging information and networking technologies. In a budget constrained fiscal environment, it is unlikely that NASA will be able to catch up by internal efforts. Partnering, as was historically done in HPCC, seems an attractive option.

Consequences of No Action on the Recommendation:

Within a few more years, the gap between NASA internally driven efforts and the U.S. and global best-of-breed will become a gap too large to bridge. This will severely undercut NASA's ability to make progress on a number of critical application arenas.

NASA Response:

NASA concurs. The Office of the Chief Information Officer concurs with the recommendation to aggressively pursue partnerships with other Federal agencies, as well as other public/private opportunities in order to gain experience in emerging leading-edge technologies.

To this end:

- The NASA Chief Technologist Office (CTO) for IT has the responsibility for identifying and assessing emerging leading-edge technologies. Forming partnerships with other Federal agencies and public/private endeavors has been initiated and will continue to be pursued by the CTO for IT and his extended staff of CTOs at the various NASA Centers in order to gain experience with emerging technologies.

Enclosure

- The NASA Deputy Chief Information Officer for IT Security is actively partnering with the Department of Homeland Security, other Federal agencies, and industry to incorporate leading-edge technologies and practices into the NASA IT Security Program and will continue to evaluate partnering opportunities with others on an on-going basis.