



Highlights of GAO-07-691, a report to congressional requesters

July 2007

## BUSINESS MODERNIZATION

# NASA Must Consider Agencywide Needs to Reap the Full Benefits of its Enterprise Management System Modernization Effort

### Why GAO Did This Study

Since 1990, GAO has designated the National Aeronautics and Space Administration's (NASA) contract management as an area of high risk in part because it lacked modern systems to provide accurate and reliable information on contract spending. In April 2000, NASA began a system modernization effort, known as the Integrated Enterprise Management Program (IEMP). When GAO last reported on the status of IEMP in September 2005, NASA had begun to implement disciplined processes needed to manage IEMP, but had yet to implement other best practices such as adopting business processes that improve information on contract spending. This GAO report addresses (1) actions taken by NASA to effectively implement the disciplined processes needed to manage IEMP and (2) the extent to which NASA has considered the strategic issues associated with developing a concept of operations and defining standard business processes. GAO interviewed NASA officials and obtained and analyzed documentation relevant to the issues.

### What GAO Recommends

GAO recommends five new actions directed at improving the processes used to manage IEMP, developing a concept of operations, and defining standard business processes. NASA concurred with all five recommendations and described steps it is taking to improve its enterprise management system modernization efforts.

[www.gao.gov/cgi-bin/getrpt?GAO-07-691](http://www.gao.gov/cgi-bin/getrpt?GAO-07-691).

To view the full product, including the scope and methodology, click on the link above. For more information, contact McCoy Williams at (202) 512-9095 or Keith Rhodes at (202) 512-6412.

### What GAO Found

Since GAO last reported on NASA's IEMP efforts, NASA implemented its IEMP contract management module and upgraded the software used for its core financial module. NASA has also taken steps to improve its processes for managing IEMP—including implementing improved requirements management and testing processes, enhancing its performance metrics related to tracking system defects, and developing an IEMP risk mitigation strategy. Further, NASA has developed quantitative entry and exit criteria for moving from one phase of an IEMP project to another—a recognized industry best practice. However, NASA has not yet addressed weaknesses in the areas of requirements development and project scheduling, which ultimately caused the agency to assume a greater risk that it would not identify significant system defects prior to implementation of the core financial upgrade. Despite these difficulties, NASA financial managers have stated that the core financial upgrade is now functioning as expected for most transactions. As of the end of GAO's audit work in May 2007, NASA was working to correct a number of system errors, including posting errors for certain types of transactions. Because NASA was still working to stabilize the system, GAO was unable to determine the significance of these weaknesses.

Further, NASA has not yet fully considered higher-level strategic issues associated with developing an agencywide concept of operations and defining standard business processes. With a planned investment of over \$800 million for IEMP, NASA must immediately and effectively address these strategic building blocks if IEMP is to successfully address long-standing management challenges—including overseeing contractor performance and properly accounting for NASA's property, plant, and equipment.

- NASA officials stated that they have begun developing a concept of operations to describe how all of its business processes should be carried out. According to NASA officials, they expect to complete the concept of operations by the summer of 2008. Ideally, a concept of operations should be completed before system development begins so that it can serve as a foundation for system planning and requirements development. Nonetheless, while NASA's IEMP efforts are already well under way, the completion of such a document remains essential for guiding the development of the remaining IEMP modules as well as any future upgrades.
- As part of developing a concept of operations, NASA should also define standard business processes that are supported by its IEMP software. NASA needs to ensure that its business processes and the information that flows from those processes support the enterprise's needs. Efforts that primarily focus on the parochial needs of a specific organizational unit, such as accounting, do not provide reasonable assurance that NASA's agencywide management information needs are addressed.