

***E-Grants  
Business Case  
Summary***

E-Grants Program Management Office  
Department of Health and Human Services

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## II. Executive Summary

Despite the growing integration of computing services into daily business processes in many industries, Federal grants processes remain primarily paper-based. This is particularly true for the processes that confront customers, such as grant application, which puts a heavy burden on applicant organizations and Federal agencies alike. Compounding this antiquated mode of doing business are the disparate processes, forms, and certifications required by the 26 Federal grant-making agencies. The President's Management Agenda says "*Agencies will allow applicants for Federal grants to apply for and ultimately manage grant funds online through a common web site, simplifying grants management and eliminating redundancies in the same way as the single procurement portal will simplify purchasing.*" E-Grants is the initiative through which this transformation of our grant processes will be done.

The E-Grants program manager is Mr. Charles Havekost, Senior Technology Advisor to the Assistant Secretary for Administration and Management at the Department of Health and Human Services.

### II.1 BACKGROUND

The Federal government awards over \$350B in grants annually. The grants are awarded through over 600 programs managed by 26 Federal agencies. The administration of these grants varies from program to program. The need to standardize and streamline grants management processes is reaching a critical mass.

By allowing applicants to apply for Federal grants through simplified, unified E-Grants systems, grants management will be simplified and redundancies eliminated in the same way, as the single procurement system will simplify purchasing. The E-Grants systems will make transactions with the government for obtaining financial assistance easier, cheaper, quicker, and more comprehensible.

The E-Grants initiative will establish new Government-wide standards, including electronic processes, for relationships with grantees. Through work teams empowered to question and challenge the bases of current practices, the agencies will develop common data standards and provide a common electronic storefront for the grantee community. In addition, the agencies will seek to identify and disseminate best practices, change organizational paradigms to enable acceptance of these changes, and evaluate progress and performance in grants processes.

### II.2 PROJECT DESCRIPTION

E-Grants, a major component of the overall E-Gov initiative, is intended to transform the Federal grants environment through a combination of simplification of process, standardization of data, and creation of a single electronic storefront. E-Grants will put a single, simple face on the currently complex tasks of finding Federal grant opportunities and applying for Federal grants. E-Grants will create a unified electronic application mechanism for grants, using simplified processes and standard data, which will eliminate redundant, paper-based processes currently required of grant applicants. In addition, E-Grants will associate a single identifier with grant applicant organizations, allowing information about the organization to be collected once and have it included with every application submitted by that organization. By collecting standardized data, including applicant identifiers, into electronic repositories, the application process will become less burdensome and the subsequent analysis of government-wide grants-related data will be facilitated. While all grant-making agencies will participate in the E-Grants development and integration with existing systems,

the 11 E-Grants partner agencies will share responsibility for providing the bulk of E-Grants funding and staffing resources. The 11 partner agencies are: HHS (managing partner); Defense; Education; HUD; Justice; Transportation; Agriculture; Commerce; Labor; FEMA; and NSF.

### **II.3 IMPORTANCE**

As users of the E-Grants electronic storefront, members of the public will have easier and more complete access to the information they need to achieve success in efforts to apply for Federal grant funding. These transformed grants processes will be citizen-centered and results-oriented. As a result of the government-wide simplification efforts, E-Grants will provide the user community with more efficient processing of applications, allowing funds to be put to use in the community faster, while enhancing the ability of Federal and local users to evaluate program effectiveness through statistical analysis of common data.

The E-Grants initiative is intended to reduce the current administrative burden on grantees. States, local and Indian tribal governments; universities; public housing agencies; and non-profit organizations have been vocal on their concerns in this area; Congress mandated change in 1999 via Public Law 106-107, the Federal Financial Assistance Management Improvement Act. P.L. 106-107 work groups are developing simplified processes and data standards to be used in applying for and reporting on Federal grants being managed by any agency. The simplified processes to be implemented by the E-Grants initiative will result in more efficient application and reporting processes, a direct benefit to Federal grantees. E-Grants will also allow grantees easier access to the information needed to manage Federal grants.

In addition, the E-Grants initiative offers the Federal government more efficient management of its resources by providing a tool for the simplification of an existing administrative process that has become unnecessarily complex. Potential applicants, applicants, and awardee organizations expend significant effort finding, applying, and managing Federal grants, effort that could otherwise be used in performing direct grant related activities. Using technology throughout the grants process, the E-Grants initiative will enable the agencies to simplify their own processes and spread their achievements across the Government. As a result, the agencies will have better access to important performance information and will achieve financial savings from a streamlined administrative process. However, the initiative's benefits do not end there. E-Grants will facilitate the efforts of agency program managers to see their activities in the context of similar activities across the Government. E-Grants will facilitate the efforts of program managers to see activities in the context of similar programs and activities across all programs. Thus, E-Grants can be an effective management tool for community and organization officials and the Federal government to understand how programs of similar purpose can work more effectively together, duplicative efforts can be eliminated, administrative costs reduced and program effectiveness maximized. In addition, E-Grants can aid in determining which programs can be effectively consolidated into a single funding stream.

### **II.4 POTENTIAL IMPACT**

The E-Grants initiative is far-reaching in both its scope and its potential impact on the grant-making process. For the grantee community, E-Grants will make transactions with the government or obtaining financial assistance from the government easier, cheaper, quicker, and more comprehensible. E-Grants will have a significant impact on the grant-making agencies, which will face challenges as they examine the ways they currently implement their grant programs, update internal systems to accept electronic applications submitted via the E-Grants systems, share best practices, and look for areas of common interest and concern (both administrative and

programmatic). The E-Grants systems will be the common face of the government for all Federal grant programs.

From a technology perspective, the impact of E-Grants will be particularly significant. Currently many Federal grants processes depend on paper forms, often tailored to a single program or agency. The E-Grants initiative will leverage technology to drive the agencies to establish new Government-wide standards, including electronic processes, for their relationships with grantees. Common data standards and a unified electronic storefront for the grantee community will transcend today's stovepipe processes.

## **II.5 E-GRANTS SUBSEQUENT PHASES**

The E-Grants objectives, the bulk of the projected costs, and the benefits of E-Grants deal with two main deliverables: a unified storefront to find grant opportunities, and a unified electronic application mechanism. These two deliverables are the heart of the first phase of E-Grants, as delineated by the 24-month timeline of the E-Gov initiatives. It is clear, however, that there are significant areas of effort that will extend beyond this first phase of E-Grants. While the objectives of the second phase of E-Grants are clearly out of the scope of the first phase, there is need to identify the steps and objectives that are anticipated for the 3<sup>rd</sup> and 4<sup>th</sup> years of E-Grants.

The second phase of E-Grants will continue to focus on the "Front Office" grants functions that most directly affect the customers (potential applicants, applicants, and awardees) of Federal grants. The second phase is expected to continue to move through the grants lifecycle, producing simplified, unified mechanisms for grant award, financial reporting, and performance reporting. The standards for these processes are being developed by P.L. 106-107 work groups, and will become available for E-Grants implementation once fully vetted in the Federal grants community and with the agencies.

### **III. Introduction**

The E-Grants project, one of 24 E-Gov initiatives, will create a simplified, unified electronic storefront for grants interactions. E-Grants is part of the government's endeavor to fulfill the initiatives in the President's Management Agenda. E-Grants will eliminate the disparate and paper-based processes that serve as hurdles to organizations attempting to find grant opportunities, apply for grants, and manage grants. By simplifying grants processes, standardizing data, and unifying the mechanisms for interaction with the grant-making agencies, E-Grants will transform the grant process for both the grantor and grantee communities.

The E-Grants initiative will allow potential grantees to apply on-line through a unified web site. Via this E-Grants electronic storefront, organizations will be able to transact grant-related business securely with any Federal granting agency. By allowing applicants to apply for Federal grants through a unified system, the grants management process will be simplified. Common data structures established for E-Grants will be the cornerstone for eliminating duplicative data collection for Federal grant programs and provide an electronic link to grant-making agencies which can use the common data.

#### **III.1 CURRENT ENVIRONMENT AND BACKGROUND**

The Federal government awards over \$350B in grants annually. The grants are awarded through over 600 programs managed by 26 Federal agencies. The administration of these grants varies from program to program. Announcements of grant opportunities are distributed in different ways by different programs, making the process of finding opportunities a challenge for potential applicants. Some of the same information about the grantee is collected by different programs within an agency and by the multiple Federal agencies to which the grantee has either applied or from which it has received an award.

Disparity among grant programs directly affects the grantee. The grantee/customer community is where all the various program requirements come together, and this community sees the disparity. The many sets of rules and procedures require time and constant information updating by grantees. States and recipient organizations must train workers to be proficient in one or more of the disparate Federal stovepipe systems. E-Grants is targeted directly at these deficiencies. Establishment of common data requirements and common business processes to be used by Federal grant programs can eliminate much of the redundancy and complexity experienced by the grantee community. Some recipients receive funding from different agencies, with each one having a different process for receiving or reporting the funding, even though some programs may be related. The current environment permits most of the over 600 programs to collect similar information from grantees, but the agencies do not share it. The need to standardize and streamline grants management processes is reaching a critical mass.

In Federal grant making, the entire line of business is governed by a series of authorization and appropriation bills, various Government-wide policy directives, program-specific implementation guides, and entrenched business processes. The 26 major Federal grant-making agencies, most of which have sub-agency level awarding components, which will all be participants in the E-Grants development and solutions.

The current system for awarding and administering grants is highly decentralized, involving thousands of Federal personnel. Moreover, Federal grant making represents a large inter-governmental exercise, with virtually every State and local government in the country participating as an applicant for, or administrator of, these programs. The purposes of grant programs range from basic research and health services to disaster relief and education. Grants take several different forms (i.e., discretionary and mandatory) and may be further characterized by different types (i.e., research, training, demonstration, services, or construction), each with potentially different statutory, regulatory, policy, and process requirements. Congress passed P.L. 106-107, the Federal Financial Assistance Management and Improvement Act, in 1999 to require agencies to develop streamlined processes. Although there have been past attempts at standardization and simplification of policies, such as the development of common rules for grants to universities and other non-profit organizations, none has approached the major reform that is called for in either Public Law 106-107 or in E-Grants. E-Grants will leverage the technological capabilities commonly available today to transform the Federal grants process.

The disparate mechanisms and processes among and within grant making agencies pose many difficulties for both the grant-making agencies and the grant recipient communities. For example, although there are standard forms for financial reporting, many agencies have received approval for deviations from those standards. In the research arena, as more agencies make more funds available to the university community, these grantees have been forced to dedicate full-time staff to the task of seeking information on these new funding opportunities, since no standards exist for the format and location of these announcements. The same is true of State and local government applicants.

Grant activities involve a multiplicity of data requirements intended to satisfy management's needs for information concerning project plans, project accomplishments, compliance with crosscutting policies, financial activity, and other forms of accountability. These requirements span the grant life cycle, from the planning and budgeting processes through reporting on award activity and performance. Some data needs are common to grants, acquisition, and/or other Federal operations (e.g., accounting), whereas others are unique to grant activities. Crosscutting policy requirements, including socio-economic, fiscal and administrative policy requirements, are currently implemented in various ways by each agency, with many requiring special administrative procedures in order to meet statutory and management reporting requirements. In addition, agencies and programs impose their own data requirements on projects.

The costs of redundancy, complexity, and paper-based processes are significant burdens on grantees. The redundancy in data elements is expensive to design and maintain, and produces poor data, as well as more expensive, less accurate and less coherent data collection. For example, the definition of poverty level may differ slightly from program to program because the definitions were developed independently at different agencies. E-Grants will make near-term improvements to the current paper-based environment, while work continues under P.L. 106-107 on grants streamlining across the entire grants lifecycle.

## **III.2 CATEGORIES OF GRANTS**

Illustrative of the complexities of the existing grant-making processes would be a short description of the categories of grants that currently exist. One way that grants are frequently categorized is as being Discretionary or Mandatory. Within each of those categories are including a variety of types:

### Discretionary

- Research
- Service
- Training
- Demonstration
- Other

(These can be competitive, non-competitive, formula-based, indefinite project duration, or earmarked)

### Mandatory

- Close-ended (such as Formula and Block grant programs)
- Open-ended (such as Entitlements)

(These generally are mandated by specific legislation related to particular types of recipient populations such as States, territories and Tribes and the way in which the award amounts are calculated are also mandated legislatively.)

While the issue of nomenclature can be problematic when categorizing grants, of more concern to the E-Grants initiative are the radically different application requirements between Discretionary and Mandatory grants. So different are those requirements, including the data collected as part of the application process that separate processes may have to be developed for Discretionary and Mandatory grants, although efforts to identify common data standards will be made wherever possible.

Mandatory grants handle about 80% of the grant dollars disbursed each year, while Discretionary grants attract about 66% of the grant applications. Determining the right focus for E-Grants will require weighing the “money spent” versus the “number of transactions.”

## **III.3 SUMMARY OF INEFFICIENCIES IN THE CURRENT ENVIRONMENT**

- Lack of standard application for similar programs or common data needed.
- Lack of standard data accessible to agencies for reporting and analysis.
- Grantees submit same information over and over—on profile and organization information.
- Ineffective data exchange between programs and among agencies at the Federal, State, and local levels
- Lack of coordination among similar programs

### **III.4 SCOPE AND IMPACT**

The E-Grants initiative is unparalleled in both its scope and its potential impact on the grant making process across the 26 grant-making agencies and across the many and varied customers of Federal grants. E-Grants will affect agencies as they examine the ways they currently implement their grant programs, share best practices, and look for areas of common interest and concern (both administrative and programmatic). For grantee organizations, E-Grants will dramatically simplify the processes for finding Federal grant opportunities and applying for grants.

The E-Grants initiative will leverage technology to establish new Government-wide standards, including electronic processes, for their relationships with grantees. Through work teams empowered to question and challenge the bases of current practices, the agencies will develop common data standards and provide a common electronic storefront for the grantee community. In addition, the agencies will seek to identify and disseminate best practices, change organizational paradigms to enable acceptance of these changes, and evaluate progress and performance.

The availability of technology to automate manual processes and allow for sharing of common information makes the E-Grants initiative of mutual benefit to both the Federal and non-Federal constituencies. The availability of technology makes it feasible to revolutionize the way we conduct business, operating with the premise that information need only be submitted once to a single location. The E-Grants initiative will benefit many governmental organizations, universities, and other grantee organizations by eliminating redundant application processes and thereby reducing the training, information technology, and other costs associated with the support of them. A single point of reference for grant opportunities will broaden the number of citizens and organizations that are aware of and participate in the grant process.

By allowing applicants to apply for Federal grants through the simplified, unified E-Grants systems, grants management will be simplified and will eliminate redundancies. Via the E-Grants systems, transactions with the government and obtaining financial assistance from the government will be easier, cheaper, quicker, and more comprehensible. The E-Grants systems will be the common face of the government for all Federal grant programs. It will be the “one stop point of service” by:

- Providing an aggregation of all grant opportunity information, including descriptions of grant programs and grant funding opportunities. This solution will be achieved via integration of the existing FedBizOps announcement mechanism with the electronic Catalog of Federal Domestic Assistance (CFDA).
- Simplifying and unifying grant processes by providing a government-wide grant application, reporting system and ultimately allowing the management of grant funds online.
- Reducing the paperwork burden on the grantee and the Federal agency and enabling new services such as on-line inquiry of grant application status.
- Providing standards for organizational and individual applicant information and identifiers.

The Federal Financial Assistance Management Improvement Act enacted on November 20, 1999 (Public Law 106-107) in conjunction with the President’s Management Agenda necessitates the need for electronic processing in the administration of the agencies’ grant programs. These two directives intend to ensure strong fiscal management of Federal grant funds and reduce the burden on grantees. The “one stop point of service” provided through the E-Grants management storefront will facilitate the government-wide effort to provide:

- Common applications;
- Common reporting systems for grant programs; and
- Common data for grants payment processes

The E-Grants initiative is necessary to compile funding opportunity information by beneficiary groups and will eliminate redundant processes across the government. The E-Grants systems will bring to fruition many of the streamlining activities required by Public Law 106-107 and is a necessary requirement in order to fulfill the intent of the legislation by providing for:

- A common set of opportunity announcement data elements and a unified view/search capability for potential applicants to find those announcements.
- A common application data set or common application data sets for similar types of programs, whereby a non-Federal entity can apply for Federal grants from multiple programs that serve similar purposes and are administered by different Federal agencies.
- A common system, including electronic processes, whereby a non-Federal entity can apply for, manage, and report on the use of financial assistance funding from multiple Federal programs that serve similar purposes and are administered by different Federal agencies; and
- Uniform administrative rules for Federal financial assistance programs across different Federal agencies.

By providing “one stop point of service,” many of the small to mid-size communities will realize significant benefits. For example: smaller communities do not have full time staff dedicated to “finding” and preparing grant applications for Federal funds. It is possible for service providers to earn upwards of 20% of the awarded amount for their services. Within one program office where the funds available are approximately \$100 million, the service provider has the potential to earn approximately \$20 million from communities. The grants management storefront will centralize and simplify the process allowing the smaller grant communities to save the cost of the service providers by locating and completing the applications themselves.

### **III.5 E-GRANTS IS PART OF THE E-GOV EFFORT**

The President’s Management Agenda for FY2002 necessary improvements to grant making in the following way:

*Agencies will allow applicants for Federal grants to apply for and ultimately manage grant funds online through a common web site, simplifying grants management and eliminating redundancies in the same way, as the single procurement portal will simplify purchasing.*

In addition, the President’s Management Agenda states that:

*“grant-management portals will make transactions with the government—or obtaining financial assistance from the government—easier, cheaper, quicker and more comprehensible.”*

The E-Grants initiative is one of the 24 E-Gov initiatives outlined in the “E-Government Strategy” document published by OMB (see <http://www.whitehouse.gov/omb/infoereg/egovstrategy.pdf>). That document outlines many of the general issues, inefficiencies, and goals that brought about the E-Gov initiatives. The document describes E-Grants as follows:

This initiative will create an electronic grants portal for grant recipients and the grant-making agencies that will streamline, simplify and provide an electronic option for grants management across the government. This effort will include the work of the 26 Federal grant-making agencies to implement P.L.106-107.

**Value to Citizen:** A single grant portal will simplify the application process and increase awareness of grant opportunities resulting in a reduction of time spent preparing and searching for grants.

**Value to the Government:** Save \$1 billion in Federal funds currently devoted to the administration of grants. Consolidated Web site will save as much as \$20 million in postage costs.

E-Grants will prove beneficial to the broad range of grant recipient stakeholders, including state, local, and tribal governments; educational institutions; non-profits; public housing agencies; and other grantee organizations. In addition, all grant-making agencies will benefit from the success of E-Grants through enhanced awareness of grant opportunities and standardization of interactions with grant applicants and awardees. E-Grants will serve to transform government business by simplifying and unifying grants processes for our customers as well as within the grant-making agencies.

The E-Grants project will:

- Produce a simple, unified “storefront” for all customers of Federal grants to electronically find opportunities, apply, and manage grants.
- Facilitate the quality, coordination, effectiveness, and efficiency of operations for grant makers and grant recipients.

This combination of customer-facing vision and Federal internal improvement, as defined by the consensus of the grant-making agencies, provides a solid foundation for the efforts of the E-Grants initiative.

### **III.6 E-GRANTS VISION**

The E-Grants project will:

- Produce a simple, unified “storefront” for all customers of Federal grants to electronically find opportunities, apply, and manage grants.
- Facilitate the quality, coordination, effectiveness, and efficiency of operations for grants makers and grant recipients.

This combination of customer-facing vision and Federal internal improvement, as defined by the consensus of the grant-making agencies, provides a solid foundation for the efforts of the E-Grants initiative.

### **III.7 E-GRANTS GOALS**

Four goals for the E-Grants initiative were defined by consensus among the grant-making agencies:

1. Eliminate the burden of redundant or disparate electronic and paper-based data collection requirements.
2. Define and implement simplified standard processes and standard data definitions for Federal grant customer interactions.
3. Protect the confidentiality, availability, and integrity of data.
4. Standardize the collection of financial and progress report data in support of audit and performance measurement activities.

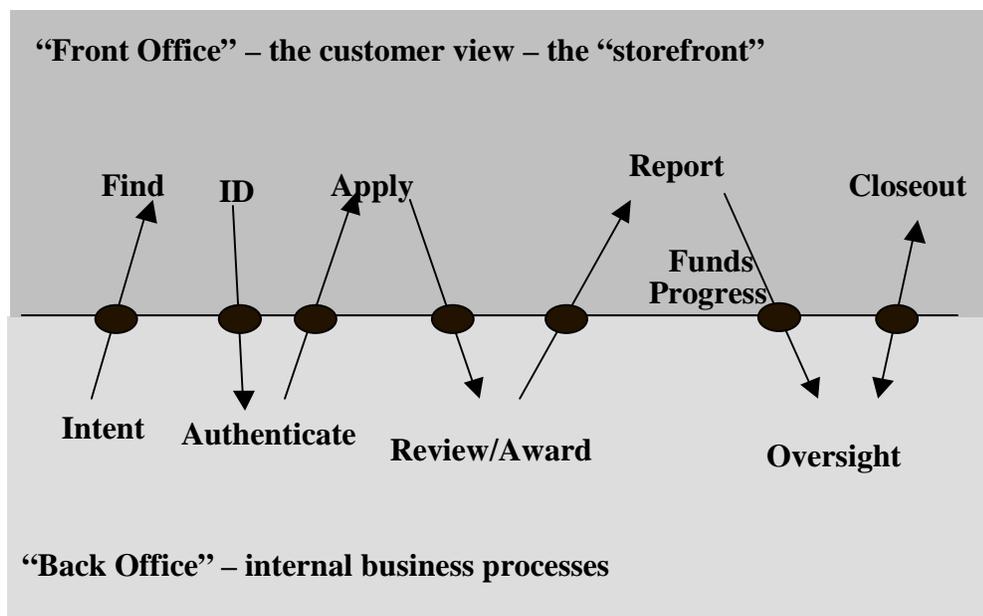
### **III.8 E-GRANTS OBJECTIVES AND TIMETABLE**

Six major objectives for the E-Grants initiative were defined by consensus among the grant-making agencies, along with the dates for completion of those objectives:

1. Finalize the E-Grants Business Case in support of partner requirements and other participant input (4/15/02).
2. Pilot a simple, unified way to find Federal grant opportunities including standardized format and data elements via the Web (7/1/02)
3. Deploy simple unified find system (12/1/02)
4. Evaluate the use or expansion of interagency and agency specific capabilities including COTS packages for discretionary grant programs (6/1/02)
5. Work with E-Authentication PMO and privacy groups (ongoing)
6. Define application data standards (10/1/02)
7. Pilot simple, unified application mechanism (3/31/03)
8. Deploy simple, unified application mechanism (10/1/03)

### **III.9 E-GRANTS SCOPE: FOCUS ON THE "FRONT OFFICE"**

In taking immediate and measurable steps to address the vision, goals, and objectives defined by the consensus of the grant-making agencies, the E-Grants initiative will focus on the "Front Office" – the customer-facing aspects of the grant lifecycle. The following Figure represents a two-sided view of the grant lifecycle that identifies parts of the lifecycle that are customer-facing ("Front Office") as well as those that are solely internal agency processes ("Back Office"):



By focusing on the “Front Office” aspects of the grants lifecycle, the E-Grants initiative will make a unified, simplified single set of processes available to potential applicants, applicants, and awardees. This will become the one-stop, electronic “storefront” where emerging e-business technologies and best practices are used to give grantees full service grants processing across all functions in the grants life cycle. The E-Grants storefront will be the single point of entry for grantees, offering both full general information exchange and secure e-business transaction processing.

### III.10 SOLUTION CONCEPTS

As the E-Grants project team undertakes to simplify and unify grants processes to meet the initiatives in the President’s Management Agenda and the consensus goals and objectives defined by the grant-making agencies, a discussion of solution concepts is necessary. This discussion lays out the strategy and techniques that will make it possible for the E-Grants effort to meet the ambitious challenge of transforming the grants process for all agencies and all Federal grantees. Three overarching approaches will guide E-Grants: “Single System,” “Data Standards,” and “Single Identifier.”

Single System is an approach to unifying systems that leads to all agencies and customers using one system to perform a task then passing the result of that task off to other systems in the background. A good example is in the area of grants application. A “single system” approach calls for all grants applicants to use one system to create grants applications; applications created via the single system would then be passed electronically to the appropriate agency. This is in contrast to a “compatible system” approach in which each agency would create its own separate iteration of a system, purportedly compatible but separate nonetheless. In a “compatible system” approach, agencies would run their own application systems, perhaps with a government-wide portal that guides potential applicants to the appropriate agency system. The problem with “compatible systems” is that, no matter how similar they are at deployment time, they will diverge and eventually present non-identical formats to applicants. In addition, the agency systems would require each agency to retain application system hardware, software, and personnel, thus missing out on the economies of scale associated with a “single system” approach. A “single system” is discussed within the context of a person-to-system framework. The “storefront” would provide a view of a

“single system” to the user, for specific grant processing activities. The storefront will enable customer interactions via web-based person-to-system interfaces as well as via system-to-system electronic data streams. Agencies would then use a “system-to-system” approach to draw the needed data from the “single system” storefront, thereby creating the use of a unified, simplified single set of processes made available to the applicant and/or grantee. The users would see one interface for the front office, while the granting agencies would be able to maintain their current back office systems until the opportunity for back office re-engineering arises.

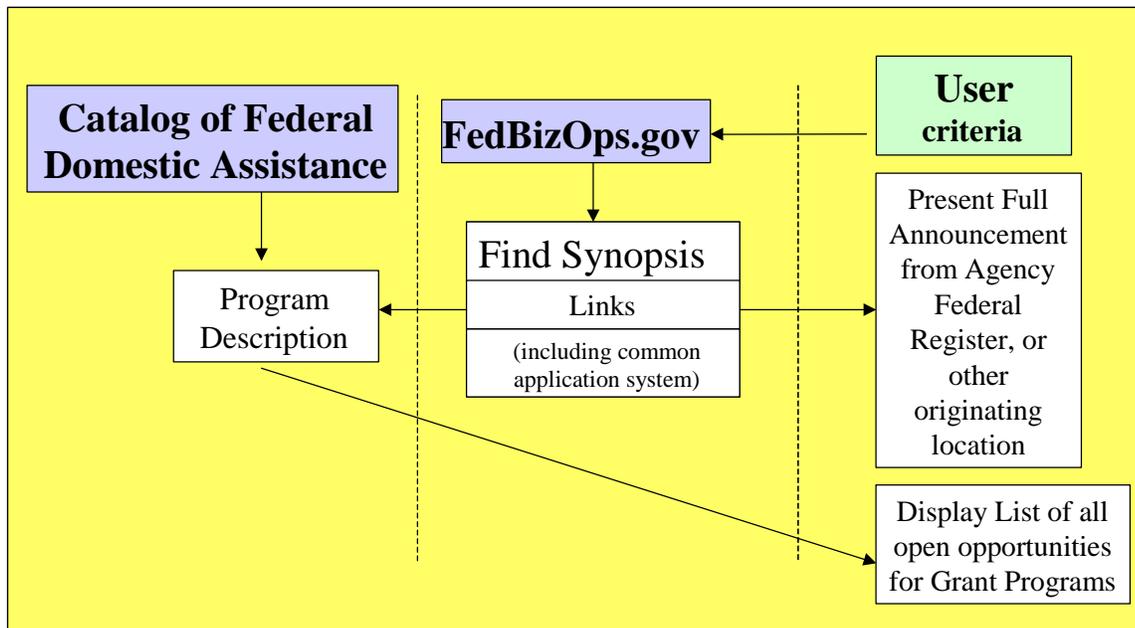
Data Standards will be the glue that ties together the components of the E-Grants storefront, defining the data that will be passed from the “single system” used by grants customers to find, apply for, and manage grants to the agency-specific systems for back office processes like review and oversight. The standard data associated with announcements, applications, and reports will present a simplified, unified view of Federal grants to the many and varied organizations that apply for and are awarded grants. Data standards will be challenging for grant-making agencies to agree upon, yet those very data standards will provide the cohesion and reference-ability necessary to transform Federal grant processes. Once agreed upon, agencies will integrate the grants data standards into their agency’s enterprise data architecture. In addition, the E-Grants systems must be capable of handling agency-specific or program-specific application data that is required due to legislative or regulatory mandates.

Single Identifier, using unique identifiers for organizations, people, and grants that are accepted by all the grant-making agencies, will benefit both the grantee and grantor communities. For applicant organizations, single identifiers will carry a set of standard information about the organization, thus reducing the redundant information entry currently required with each application. For the government, single identifiers can be used to track grants across agencies, identify commonalities among grant programs, and facilitate statistical analysis of grant information over time.

The single source will also allow grantees to update or change information regarding their organization, eliminating multiple mailing of forms to different agencies. Federal agencies will be able to access the information either to validate current data or use it directly.

The Catalog of Federal Domestic Assistance (CFDA) is a resource used to identify Federal programs that provide Federal financial assistance to the wide range of federal grantee organizations. The CFDA information is a necessary component of E-Grants to ensure all funding opportunities are described accurately and provide the necessary information to help customers determine whether or not the submission of an application would be beneficial.

In order to present a simplified, unified mechanism for potential applicants to find Federal grant opportunities, the solution concept is to use the existing mechanism used for contracts, namely to announce grant opportunities via synopses in FedBizOps, with links to full announcements and to CFDA program descriptions. Standard grant announcement and synopsis formats have been proposed, and an E-Grants collaboration is under way to bring this solution concept to completion. The following diagram shows the interaction of the FedBizOps and CFDA components of the “Find an Opportunity” solution concept.



More uncertain is the solution concept for a unified, simplified electronic grant application mechanism. Several agencies have existing electronic application systems, and several pilot implementations have also been created. Clearly an application system will need a web-based person-to-system interface as well as one or more system-to-system interfaces. E-Grants will utilize current efforts to identify an existing government-created or COTS solution for electronic application that meets the requirements of the grantor and grantee communities. E-Grants will use an existing system or buy a COTS solution if appropriate, and will resort to building a system only if no other alternative mechanism can be found.

### III.11 E-GRANTS LEADERSHIP AND OVERSIGHT PLAN

In order to effectively address the requirements of the E-Grants initiative, managing partner HHS has designated an E-Grants program manager. The E-Grants program manager provides the leadership, executive sponsorship, and programmatic interaction needed to ensure the successful planning, implementation, deployment, and utilization of E-Grants solutions.

An E-Grants Executive Board will be made up of executive representatives of the 11 partner agencies participating in the E-Grants initiative. The E-Grants Executive Board will ensure strategic input from the partner agencies, provide executive sponsorship for E-Grants outcomes in the partner agencies, and serve as the arbiter of business process differences between grant-making agencies. In general, the E-Grants Executive Board will be charged with providing oversight and partner agency buy-in for E-Grants strategies and implementation efforts. In addition, the Executive Board will serve as the official point of contact and communication between the E-Grants initiative and groups representing States, Academia, and non-profit organizations that will be the customers of the E-Grants simplified, unified storefront. In addition, the E-Grants Program Manager will be a member of the CFO Council's Grants Management Committee, which oversees the work to implement P.L. 106-107.

### III.12 INITIAL E-GRANTS CAPABILITIES

As identified in the consensus E-Grants objectives, in the 24-month timeframe for E-Gov projects, E-Grants is slated to provide two main deliverables:

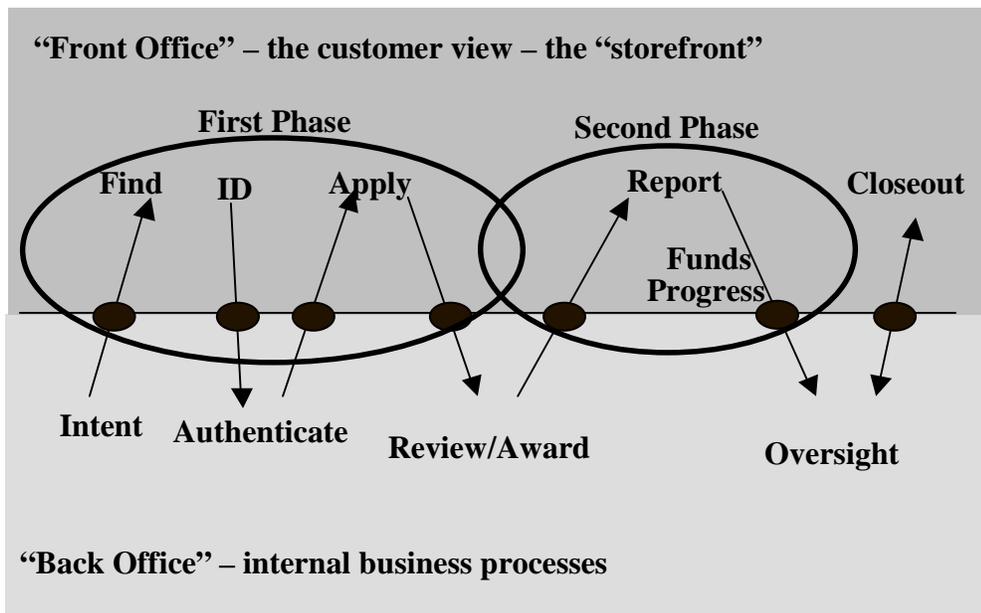
1. A simplified, unified mechanism for the potential applicant community to find opportunities. This deliverable will use a combination of portal searching capabilities along with grants capability in the FedBizOps system and links to the CFDA grant program index.
2. A single, simplified, unified mechanism to apply for grants, with those applications being accepted by the many grant-making agencies in the Federal government.

Both of these deliverables will require significant consensus on process and data standards among the grant-making agencies, as well as process and technology implementations that are compatible with the requirements of the grantee and grantor communities.

### III.13 INITIAL E-GRANTS CAPABILITIES ARE BUILDING BLOCKS FOR THE FUTURE

By defining the standard sets of data that are passed between the E-Grants storefront systems and the agency-specific “Back Office” systems, the E-Grants initiative will be defining the input and output for those agency-specific systems, thus positioning the Federal grant-making agencies to subsequently simplify and unify their “Back Office” systems and processes. This will result in significant increases in efficiency and trans-agency commonality of best practice, as well as assisting agencies in meeting PL106-107 streamlining requirements.

In addition, defining the standard sets of data via the E-Grants storefront will create a layer of common grant information, such as single identifiers for grantee organizations and single application tracking numbers that span agency boundaries, that will enable analysis and measurement across the many Federal grant-making agencies, a capability that today is hindered by differences between agency processes and data elements. The single identifier will also make it possible for grant applicant organizations to input standard business information “one time, one place” and have it included with grant applications in response to many agencies; this elimination of redundant data entry will be an effectiveness and efficiency gain for grantee organizations.



The depiction of overlap in the phases of E-Grants in the graphic is purposeful – there are tasks that will be undertaken in the first phase in order to be prepared for the second phase. Most notable of these preparatory tasks are the following:

- Support work on data standards for the grant award document. This award document is one of the main outputs of the review process to the customer. This data standards development has been started under the auspices of P.L. 106-107, and that work will be fostered and supported by the E-Grants effort in preparation for meeting the second phase objectives.
- Support work on the data standards for progress and financial reporting. Ensure the dovetailing of the announcement and application data standards with the standards for progress and financial reporting. This data standards development has been started under the auspices of P.L. 106-107, and that work will be fostered and supported by the first phase E-Grants effort in preparation for meeting the second phase objectives.

While an exact cost accounting for the second phase of E-Grants is not part of this business case, the E-Grants partners have requested an estimated cost of the second phase for budgeting purposes. The second phase will be expected to build upon the foundation of the first phase and use much of the analysis and the infrastructure, including servers and service providers, developed in the first phase.

### **III.14 KEY RISKS AND HURDLES**

- **Legislative and Regulatory Barriers:** Many of the agency-specific grants business processes and data requirements are attributed to legislative and regulatory requirements. Such requirements would prove to be a risk to the effort of creating standard cross-agency systems and data standards. Along with the E-Grants initiative, each agency needs to be addressing legislative changes required to streamline their grants management (as required by Public Law 106-107).
- **Entrenched Business Processes.** Efforts by the E-Grants initiative to simplify and unify the grants processes will require change. Specifically, this effort will require agencies to change the data they collect and the way they interact with applicants and awardees. This change will require communication among the participants and intra-agency support from executive and program levels.
- **Agency Legacy Systems.** In defining data standards for opportunity announcement and electronic grant application, the standards will need to be implemented as enhancements to agencies' existing legacy grants systems, which may prove challenging and costly.

### **III.15 KEY ASSUMPTIONS**

- **Technology.** The technological solutions put in place by the E-Grants initiative will conform to the architectural guidelines and technology standards documented by the E-Gov Enterprise Architecture initiative, including security and privacy.
- **Expanded Electronic Government.** The simplified, unified electronic storefront for grants interactions will fulfill one of the major initiatives in the President's Management Agenda. The assumption must be made that Federal grant-making agencies will endorse and implement the simplified, unified electronic grant systems created by E-Grants as well as provide staff and funding resources for the initiative.
- **Identification, Authentication, and Digital Signature.** Defining a single, unique identifier for applicants and grants will be challenging, but will be absolutely necessary in order to facilitate information that "tracks" with applicants and grants as well as to enable cross-

government analysis and measurement of grant effectiveness. Authentication and digital signature will be necessary for trusted interactions, which will be addressed as part of the E-Grants collaboration with the E-Authentication project.

## IV. Justification

### IV.1 THE VALUE PROPOSITION

The value resulting in common data sets and common processes for grants management should be realized on both sides of the equation. For the grantees, common applications and management processes will reduce time spent on the application process for multiple programs and the same for managing grants. The time spent either looking up procedures, maintaining different software; filling out redundant information could be used directly on grant-related work. For those administering the programs in the agencies, it will provide a much faster means to evaluate financial and progress status, plus communication will be more direct with the grantee. Processing of applications electronically will help programs move through the review process faster as well as making awards in a much more efficient manner. The use of personnel will be better focused on needed analysis and evaluation of grants used to support program initiatives

The effort to automate many of the management processes associated with grants management has been undertaken by agencies, program offices, and administrative offices. However, automation or using an electronic means has been developed and implemented in a very parochial manner. That is, grants management automation has been implemented in very narrow confines of a program, agency, or reporting/payment process. Today's environment requires automated processes be made to interface and integrate with other agency systems, that have developed a technological and data architecture, plus move more to an environment of web-based systems. Web-based systems provide much more capability of reaching outside customers and interconnecting various government agencies.

Improvements to the Current Environment:

- Standard application for similar programs and standard common data.
- Standard data and processes for grant reporting and analysis.
- Single-point submission of same information for organizational profile information.
- Easier and more effective data exchange among agencies.
- Ability to better coordinate similar programs.

### IV.2 E-GRANTS PROGRAM MANAGEMENT OFFICE

In order to effectively address the requirements of the E-Grants initiative, managing partner HHS has set up an E-Grants Program Management Office (PMO).

**E-Grants Program Manager:** The E-Grants Program Manager will be responsible for the following functions relative to E-Grants development:

- The Program Manager will oversee development of an overall E-Grants project plan, pilot implementation plans, integration and testing plans, performance measurement, deployment plans, operations and maintenance plans in support of E-Grants implementation. The Project director will also oversee development of SOWs for specific E-Grants services.

- 26 Federal agencies and a large, eclectic grantee/customer base will be using the E-Grants systems for electronic grants processing activities. The Program Manager must coordinate the dissemination of information, deployment of system modules, training, and operational support to this user group.
- Reporting - The Program Manager will report as required to the E-Grants Executive Board, E-Grants Partner agencies and other grant-making agencies, the Secretary of HHS, OMB, the President's Management Council.
- **E-Grants Executive Board:** The Executive Board, composed of senior management from the 11 E-Grants Partner agencies, will assist The Project Director in oversight of the project across the government. This will include receiving input from grant customer representatives of academia; state, local, and tribal governments; and non-profit organizations.

**E-Grants Business Process and Policy Team:** This team, will be responsible for identifying and addressing grants business processes and policies that need to be addressed in the development of government-wide electronic grants systems.

**E-Grants Technology Implementation Team:** This team, will be responsible for identifying and implementing the systems and technologies necessary to bring about the electronic grant mechanisms for E-Grants.

**E-Grants Liaison Team:** The E-Grants Liaison Team, will consist of staff from Federal agencies. The primary role of the Liaison Team is to coordinate communication efforts and to be the liaison to other organizations. In addition, this team will promote the E-Grants initiative (and be the point of entry for E-Grants inquiries) to both grantee users and Federal agencies.

### **IV.3 ACQUISITION STRATEGY**

The E-Grants project office continues the development of the necessary acquisition strategy for this project. The first component of strategy is a Request for Information that was issued in December 2001, describing the vision and preliminary results of analyses and decision-making, and requesting industry's response to our current thinking as well as assistance in determining the best approach from an information technology perspective to accomplish the vision.

Pre-procurement activities include: continuing development of functional, programmatic, and technical requirements; risk analysis associated with potential solutions in terms of functional and technical performance, schedule and cost; developing an integrated acquisition solution; and definition of next steps and required activities for contractor selection.

#### **Contract Use**

Currently plans are to award several contracts. In addition to the development contract(s), Independent Verification & Validation (IV&V), project management (PM) or systems integration contractor (SIC) contracts are anticipated to oversee the design, analysis, procurement and implementation of the E-Grants solution through end to end life cycle acquisition, system design and implementation, system performance, testing, and change management resulting from further grants streamlining results.

## **IV.4 ALTERNATIVES ANALYSIS**

The E-Grants storefront will make transactions with the Federal government or obtaining financial easier, cheaper, quicker, and more straightforward. E-Grants will also be the source of information for Federal managers on government programs that cut across different agencies.

Both granting agencies and grantees will benefit from electronic grants management systems. They can expect to see reduced costs and cycle times and improved management capabilities of grant activities, while meeting the legislative mandates of P. L. 106-107.

To ensure that the technical architecture chosen to support the project was the most suitable, four alternatives were analyzed and consider.

### **Alternative 1: Status Quo**

The Status Quo alternative would result in each of the 26 grant-making agencies continuing their legacy processes, with any electronic grants advances being deployed on their own agency-specific timetables.

Status Quo Feasibility--The Status Quo alternative is not a viable alternative, as it does not expand electronic government as directed in the President's Management Agenda, nor does the Status Quo meet the vision, goals, and objectives of the E-Grants initiative.

### **Alternative 2: Enhance Existing System**

Enhancing an Existing System is a particularly attractive option, if available and feasible for E-Grants. In this solution, an existing agency development investment is leveraged to meet the requirements of the E-Grants initiative. A particular challenge in this alternative is to find an existing grants system that, while developed to meet agency-specific requirements and business processes, provides sufficient flexibility and generality of design as to be configurable for multi-agency use without completely re-writing the system.

There are several specific scenarios of this alternative that are currently part of the E-Grants set of solution concepts:

- Leveraging the existing FedBizOps and CFDA mechanisms for the unified "Find an Grant Opportunity" outcome needed by E-Grants. Using the Integrated Vendor Profile, being developed by the Integrated Acquisition E-Gov initiative, as the identifier for organizations that are sending in grant applications or other electronic transactions.
- Authenticating users via the services provided by the E-Authentication E-Gov initiative.

Enhance Existing System Feasibility--For the requirement to establish a single electronic storefront to find Federal grant opportunities, the E-Grants solution concept of enhancing the existing FedBizOps and CFDA systems is recognized as a viable and achievable alternative. The existing production systems, the acceptance of FedBizOps across government for acquisition purposes that are similar to the grant requirements, the opportunity to converge agency announcements, the participation of system-owner GSA in the process, and the existence of an ongoing multi-agency FedBizOps grants pilot all point to Enhance Existing System as the preferred alternative for meeting the "Find an Opportunity" requirement.

### **Alternative 3: Buy E-Grants System**

Like the alternative to enhance an existing system, buying an E-Grants system is an effective way to leverage previously performed work to meet the requirements of the E-Grants initiative. In the case of Commercial Off-The-Shelf (COTS) software, the leveraged work includes the vendor's up-front development work as well as any additional work done in support of existing customers.

Buy E-Grant System Feasibility--For the common electronic application mechanism, while there are substantial risks associated with the alternative to Buy an E-Grants System, the cost saving in both time and dollars are attractive enough to warrant an evaluation of COTS grants systems and capabilities.

### **Alternative 4: Build E-Grants System**

Building system specifically for E-Grants – that is, development of a custom system for E-Grants – holds the promise of a system that most closely fits the needs and requirements of the E-Grants initiative, the grant-making Federal agencies, and the grantee community at large. A system built for E-Grants could be designed in a way that accurately fits the E-Gov architecture, utilizes appropriate and up-to-date technologies, and is wholly owned by the government for use by multiple agencies.

Build E-Grants System Feasibility--Building a custom E-Grants system, however, is an alternative of last resort, due to the costs of development, ongoing operation, and maintenance that will be incurred. In particular, given the tight time schedule of the E-Grants objectives, building a system, which would not have as much prior work to leverage as would an existing or COTS system, will prove challenging from a deliverables timeline perspective.

### **Status**

Analysis to date indicates that Alternative 2 is the most feasible. Work will continue to ascertain its viability while at the same time exploration of Alternative 3 will continue. If neither can achieve the program goals Alternative 4 or a combination may be necessary.

## V. IT Architecture Overview

The E-Grants IT architecture will be compatible and compliant with the standards documented by the E-Gov Architecture initiative and with overall Federal IT standards and architecture. E-Grants will support the Federal Enterprise Architecture Framework (FEAF) as the framework for the system architecture. The use of a standards-based logical architecture also serves to facilitate integration with other agencies systems and architectures.

The E-Grants storefront will provide a common set of business processes within a robust framework that ensures system security. Grantee users will access the E-Grants storefront to perform pre-award and eventually post-award grants business processes through various interfaces. The E-Grants storefront will eventually interface to agency legacy systems to interface documents such as grant applications and project status reports submitted by grantee users.

### V.1 RECOMMENDED INTEGRATION STRATEGY

Providing two tiers of services as outlined in the table below allows easier integration with smaller agencies that cannot support or afford a sophisticated grants management system and real-time application status module. The approach to support these agencies is to allow easy retrieval of grant applications and reports via low-cost COTS software (e.g., e-mail client) and to simplify application status checking by providing a “proxy server” which smaller agencies can update on a periodic basis. A SOAP-based interface can be defined so that agencies can develop automated tools to upload their internal status data to the proxy server.

Process	Small Agencies	Large Agencies
Grant Application	Asynchronous retrieval via IMAP/POP	Retrieval via SOAP (or IMAP)
Status Checking	Send periodic updates via SOAP	Synchronous query via SOAP
Reporting	Asynchronous retrieval via IMAP/POP	Retrieval via SOAP (or IMAP)

### V.2 SECURITY AND PRIVACY

Security and privacy are of fundamental importance to the E-Grants. For this analysis, security is divided into two main categories. First, server security deals with protecting the E-Grants servers from unauthorized access or malicious attacks. Second, transaction security deals with protecting the privacy and integrity of data transmitted between the grantee community and the E-Grants storefront, and between the E-Grants systems and Federal agencies. Both aspects must be addressed jointly to develop an effective and unified security strategy.

Furthermore, the E-Grants project understands that individual security practices and controls cannot be planned in isolation. A coherent, comprehensive, and integrated security policy and framework is required to develop effective security controls. On these grounds, the following assumptions and guidelines will be taken into account while developing the E-Grants systems:

While the E-Grants systems may use initially an enhanced system of usernames and passwords as the initial user authentication mechanism, it is planned that the E-Grants initiative will eventually leverage other Federal projects to provide public-key infrastructure (PKI) authentication mechanisms. Particular care has been made in the design of the E-Grants systems to provide a clear upgrade path to PKI. In addition, the E-Grants project team will work closely with the E-Authentication team to ensure that E-Grants solutions are compatible and compliant with overall E-Gov requirements and capabilities.

## **VI. Cost, Schedule and Performance Goals**

### **VI.1 DESCRIPTION OF PERFORMANCE-BASED SYSTEM**

Enactment of GPRA in 1993 made it clear that government must monitor its ability to achieve its goals, make changes when it does not, and maximize what works. In the e-Government, where what is right today may not be right in six months, monitoring and analyzing performance must be ongoing real-time event.

The PMO needs to track not only performance of the investment but also a structure for making trade-off and sourcing decisions as the program progresses. Because the E-Gov environment is stakeholder-centric, one must consider not only internal financial benefits (i.e., cost savings or cost avoidance), but also the non-cost benefits, the value, that agencies, stakeholders, and citizens may realize. The PMO will use a multi-perspective framework to ensure that the solutions continue to be analyzed from all points of view. This framework will ensure that each decision contributes to the total transformation.

### **VI.2 E-GRANTS PERFORMANCE MEASURES**

The following are the Performance Measures that will be evaluated annually against the E-Grants objectives.

1. Present to customers a unified electronic interface for three functions:
  - Finding grant opportunities
  - Identification/authentication
  - Electronic grant application

### **VI.3 E-GRANTS CAPITAL ASSET PLAN**

#### **Analysis**

To determine if existing components are reusable, the E-Grants Team must survey the Federal government, representative vendors and solution providers, and representative constituents. Therefore, one of the first objectives is to evaluate or “benchmark” existing solutions. A series of surveys will be distributed, collected, and analyzed for this purpose. In addition to ensure confidentiality, integrity, and accessibility to data, the security requirements must be identified and coordinated with the e-Authentication Program.

The evaluation of existing systems and security requirements will allow organizations to begin to reengineer the business processes and baseline their current performance measures.

#### **Design**

The key to interoperability and integration is agreeing to a common architecture and data sets. The design will conform to the Federal Enterprise Architecture and the IAEGC 194 data set.

Configuration management will be established and maintained. This will result in streamlining the many duplicative processes.

## **Build**

The Find module and an Apply module will be developed to allow users to apply to specific grants that they find. On-line help and Computer Based Training modules will be developed to reduce user-training needs.

## **Test**

All modules will be unit, system, integration, regression, and usability tested. Testing is projected to cost 25% of the design and build phases.

## **Pilot**

Through FedBizOps the first Find Pilot will commence by 7/1/2002. Two Apply Pilots will be conducted by 10/1/2002 and 4/1/2003.

## **Implementation**

Deployment of the Find module will commence by 12/31/02. The Deployment of the Apply modules will commence by 9/30/2003.

## **Operations and Maintenance**

Operations and Maintenance will begin after the deployment of the pilots and continue indefinitely.

## **Hardware**

To provide secured access with high availability, a duplexed enterprise server environment will be required. The enterprise server will store the data and interface with the Web application server. In turn the Web application server will interface with the Policy, Directory, and Messaging servers. Storage area networks (SANs) and will be used to store and backup the data. Load balancing will be used to manage processing.

See Figure V.1. It is estimated that the system must be able to store a minimum of three versions of 500,000 applications with contain about 100 data elements of about 100 bytes per element (text and image attachments will require more disk). Hence, a minimum of 15 Terabytes will be required.

Figure V.1: General E-Grants Storefront configuration.

## **Software**

The E-Grants Storefront plans to leverage the existing FedBizOpps search engine for the "Find an Opportunity" function. Application development tools will be needed to be purchased to develop and test the Web interface, database, security, message exchange, workflow, document management, configuration management, back up and recovery.

## **Hardware and Software Environments**

The E-Grants Storefront will require primary production environment and a backed-up production environment to allow users to access and submit official data. A development environment will be needed to design and build the next version of the E-Grants Storefront. Likewise a Test environment will be required to integrate the modules of the new version, system test the functionality, and regression test the version to determine if there are any impacts to the current version. Finally, a Training environment will be needed to conduct training, outreach, and communication and demonstrations.