



# **U.S. Department of Justice Data Center Consolidation Plan and Progress Report**

Version 2.1

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## Version History

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## Table of Contents

1. Introduction .....	1
2. Agency Goals for Data Center Consolidation .....	2
3. Implementing Shared Services / Multi-Tenancy.....	3
4. Agency Approach, Rationale, and Timeline.....	3
4.1 Approach and Rationale.....	3
4.2 Master Plan Schedule .....	5
4.3 Consolidation Scope .....	6
5. Agency Governance Framework.....	7
5.1 Cost Benefit Analysis .....	9
5.2 Risk Management and Mitigation .....	10
5.3 Acquisition Management .....	11
5.4 Communications Strategy .....	12
6. Progress.....	13
6.1 FDCCI Consolidation Progress .....	13
6.2 Cost Savings .....	14

## 1. Introduction

The mission of the Department of Justice (DOJ) is to enforce the law and defend the interests of the United States according to the law; to ensure public safety against threats foreign and domestic; to provide federal leadership in preventing and controlling crime; to seek just punishment for those guilty of unlawful behavior; and to ensure fair and impartial administration of justice for all Americans.

Headquartered in Washington, DC, the DOJ is a federated organization consisting of more than 40 senior management offices (SMOs), offices, bureaus, and divisions (collectively called Components). More than 100,000 employees in more than 2,000 facilities work to achieve DOJ's mission.

DOJ's IT infrastructure mirrors the complexity of the organization. The Components have built and evolved their IT infrastructures over time to meet specific mission needs while the Department has provided shared infrastructure and facilities for use in supporting a wide variety of Component mission requirements. Our past approach has not emphasized centralization or consolidation, but served to maintain federated Component autonomy with respect to their IT missions and decision making.

DOJ supports the Federal Data Center Consolidation Initiative (FDCCI) strategy to achieve greater efficiencies via data center consolidation and shared services and has set in place practices to accomplish both. In alignment with the FDCCI, DOJ initiated program activities in 2010 and began working collaboratively with Components to better understand the IT infrastructure inventory, performance objectives, future plans, and challenges. In 2011, the Department launched an executive forum of Component CIOs for discussing FDCCI agency-wide. Also in 2011, DOJ initiated cost reporting to establish a current baseline for IT infrastructure costs at DOJ data centers. An internal cost model was developed to help determine DCCI costs and benefit potentials at DOJ and the Department has also been a key collaborator on the government-wide Total Cost of Operations (TCO) model that OMB/GSA is developing for the FDCCI.

Also in 2011, the Department's DCCI team met with and reviewed plans and lessons learned from several federal, state, and commercial consolidation efforts, and has worked with internal departmental groups to understand best practices applied in recent consolidation and virtualization efforts undertaken in the classified IT area. We have also communicated with commercial providers of data center and consolidation services to inform our efforts, and the Department is participating in an inter-agency peer review process.

Understanding the importance of complete and accurate information, DOJ implemented several steps to verify and improve the FDCCI IT asset inventory reporting for 2011, including:

- Reviewing inventory submissions provided by Components to identify missing or suspect entries
- Conducting data center site visits and holding discussions with Component leadership and staff
- Conducting interviews with Component designated Points of Contact (POCs) for the consolidation initiative to ensure asset inventory reports were complete, accurate, and consistent, and to identify limitations
- Requiring asset inventory reports submitted by Components be approved by Component CIOs or equivalent role

As identified during the asset inventory update, limitations continue to exist in measuring and reporting detailed information on energy, server utilization, and operational costs.

To date, DOJ has identified 36 data center sites for consolidation. Since submission of last year's consolidation plan, DOJ reduced its number of data processing facilities from 105 to 75, with plans to consolidate 2 additional facilities by the end of 2011, and 4 facilities in 2012. The most recent asset inventory update also reflects improvements in virtualization, a key focus area in DOJ's overall

consolidation efforts. While early consolidation efforts have resulted in reducing the number of data centers far sooner than originally planned, much of the “low hanging fruit” has now been harvested and the more challenging and difficult work remains.

The Department recognizes that achieving significant additional IT infrastructure consolidation will require a concerted multi-year enterprise initiative that has the clear support of Component leadership and empowers the Department CIO with the authorities and responsibilities for commodity IT expenditures as required by OMB Memorandum 11-29. Towards this end, over the next 90 days, the Deputy Attorney General will engage Component leadership with the objectives of defining aggressive targets for cost savings through IT infrastructure consolidation, developing the plans to achieve these targets and identifying the required funding mechanisms. When these enterprise planning efforts are complete, the Department will submit an updated plan to OMB that will provide additional specificity on schedule, cost savings estimates, shared services to be deployed and impacts to existing data center locations.

## 2. Agency Goals for Data Center Consolidation

DOJ will emphasize the following goals for the data center consolidation initiative:

- Support the Department’s mission priorities
- Optimize the cost, performance, and delivery of IT technologies and services by leveraging a range of hosting environments including cloud computing, commercial hosting, government hosting, commercial collocation, and government collocation
- Reduce the total cost of ownership for IT infrastructure through more effective planning, budgeting, acquisition, operations, and governance practices
- Shift investments to more efficient and standardized computing platforms and technologies, focusing on server virtualization
- Improve the quality, availability, and adoption of shared infrastructure services, focusing on enterprise email and enhanced hosting and storage services
- Maintain and enhance the security, reliability, and recoverability of the enterprise IT infrastructure through modernization/relocation of the JDC-W data center services, a more unified architecture and standards, and enhanced cross-organization communications and collaboration
- Enable improved management decision making by streamlining and enhancing the accessibility, timeliness, value, and use of IT asset inventory and consolidation data

DOJ’s consolidation planning to date has been based on the overarching objective of aligning with guidance from OMB, GSA, and the Data Center Consolidation Task Force (DCCTF) as well as best commercial practices. Accordingly, the Department has established preliminary quantitative goals for: the number of datacenters to be consolidated, average virtualization percentage across the enterprise, average number of virtual machines per host for the enterprise, and IT infrastructure cost savings/avoidance to be realized. DOJ will finalize these quantitative goals as part of the enterprise planning process.

### **3. Implementing Shared Services / Multi-Tenancy**

The Department plans, develops, deploys, operates, and manages a wide range of enterprise infrastructure services in the context of a broader framework bounded by Departmental and Component requirements, preexisting legacy systems and programs, contracts, government-wide initiatives and mandates, new technologies, and mission priorities. Data center consolidation presents new opportunities to further the use and expansion of shared services in alignment with DOJ's IT Strategic Plan and the FDCCI.

#### **Shared Services**

DOJ currently provides a number of enterprise shared services for use by Components, including JUTNet for managed wide-area network services, TIC for trusted internet connectivity, and the Justice Security Operations Center (JSOC) for cyber defense and security operations. Additionally, DOJ provides services for a small number of other organizations (including the Department of Homeland Security).

Having widely and successfully deployed shared services at an enterprise level, the Department understands the value they generate as well as the complexity and challenges associated with their delivery. Deployments of additional enterprise shared services are integral to our consolidation plans, and DOJ will apply lessons learned and guiding principles from these past efforts to new offerings as they evolve. Future services under consideration in conjunction with data center consolidation include hosting, storage, email and collaboration tools, VOIP, IT inventory/asset management, and enterprise network/LAN management.

Selected services and delivery models will be further evaluated in collaboration with DOJ Components during detailed planning and analysis efforts to determine the optimal methods for future acquisition, provisioning, and delivery.

#### **Multi-Tenancy**

DOJ currently provides multi-tenant data center and IT infrastructure support for its Component organizations as well as the Department of Homeland Security through the enterprise Justice Data Centers under OCIO management. While the Department's plans do not presently focus on providing multi-tenant support for other Agencies, DOJ intends to enhance enterprise data center services to further drive consolidation and improve multi-tenancy throughout the enterprise data center infrastructure used by DOJ Components.

### **4. Agency Approach, Rationale, and Timeline**

#### **4.1 Approach and Rationale**

DOJ's existing data center configuration is the result of a historically decentralized IT organization where Components have developed their own IT infrastructure in addition to mission-specific IT applications. DOJ entered the data center consolidation process with 105 data processing facilities. Two of these facilities are enterprise data centers; the remainder are owned and operated by Components.

DOJ's approach for data center consolidation includes reducing its data center footprint through expanded use of standard architectures, shared services, shared infrastructure, and shared facilities. Consolidation of data center services at DOJ will be based on two primary groups of activities:

1. Data Center Optimization
2. Enterprise Shared Services

These activities are described below and a Master Plan Schedule is provided in Section 4.2.

## **Data Center Optimization**

This group includes tasks and activities associated with consolidating data processing facilities primarily through collocation of equipment into fewer sites and reduction of physical servers via increased virtualization. To date, initiatives in this activity area have resulted in consolidation of 30 data processing facilities larger than 100 square feet. Going forward, DOJ will focus on three key areas:

1. Consolidation of additional sites identified by Components as candidates for closure
2. Evaluation and execution of additional near-term infrastructure optimization and consolidation opportunities
3. Implementing a performance management framework with Department-wide targets for virtualization and standards for energy monitoring/management

## **Enterprise Shared Services**

DOJ's data center footprint and legacy IT infrastructure evolved over time to serve the needs of a highly federated organization. Moving from the current environment to a more unified, standardized and cost-efficient approach for providing data center services requires expanded use of commodity IT services across the enterprise. DOJ has begun to explore alternatives for procuring and implementing the necessary infrastructure-level and application-level commodity IT services required to support component missions in the most cost-effective manner. These services must be reliable and rapidly scalable. Additionally, they must be priced based on cost-to-deliver and available to Components through usage-based charging models. The target set of commodity services to be deployed will be defined during the enterprise planning process currently being undertaken by the Department. Subsequent phases of work will include: defining enterprise standards, procurement and implementation of the required services, and migration. DOJ will update the consolidation scope, approach, and timeline in collaboration with Components as the enterprise planning efforts are completed.

## 4.2 Master Plan Schedule

Figure 1 illustrates the projected master plan schedule and timeline for DOJ’s consolidation plans in support of the FDCCI. The schedule will be updated and finalized as enterprise planning efforts are completed.

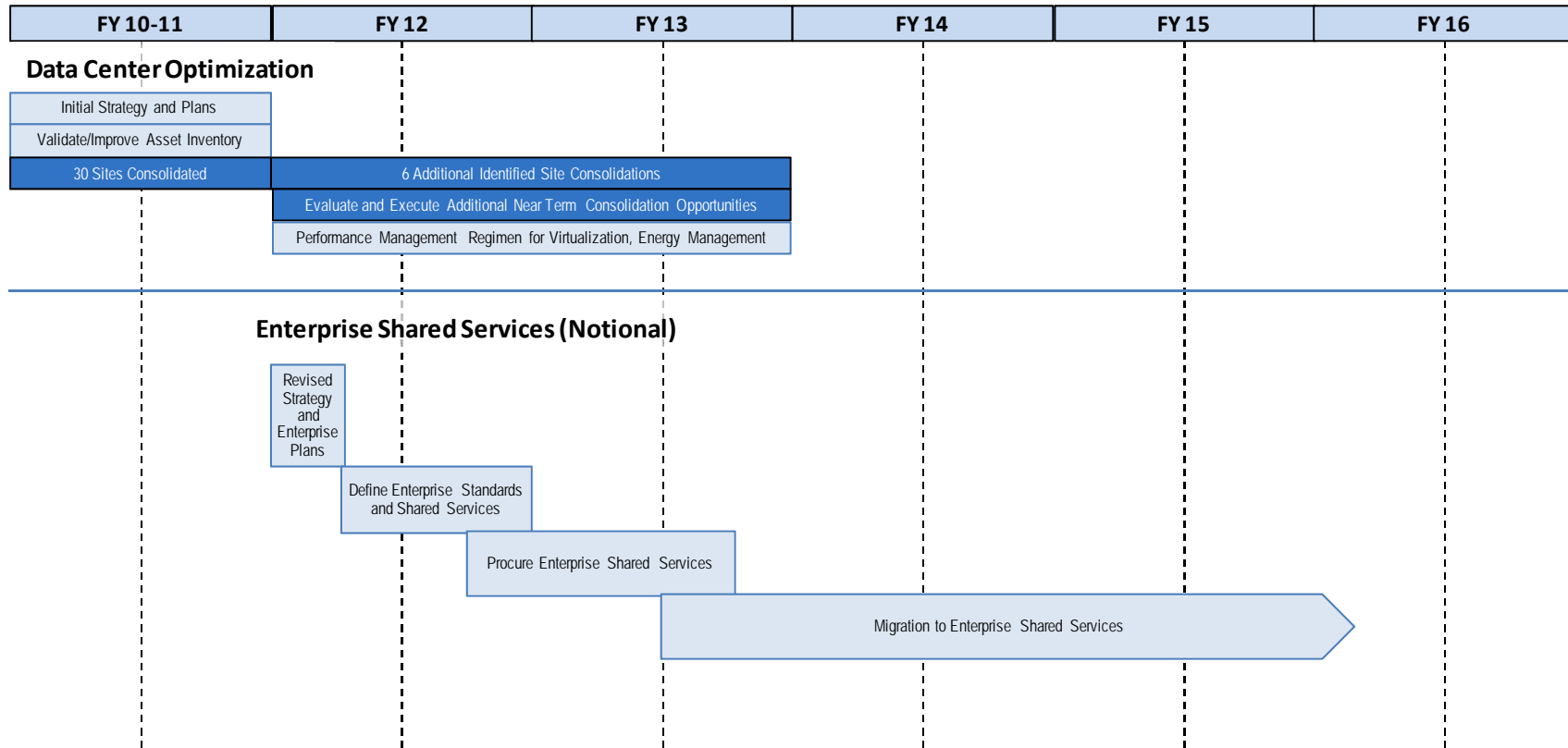


Figure 1 - DOJ Data Center Consolidation Master Plan Schedule and Timeline



### 4.3 Consolidation Scope

The Department's consolidation and optimization efforts focus on unclassified data processing facilities, with 5 or more servers, located within the Continental United States. For reporting purposes, DOJ considers facilities meeting these criteria as "data centers" regardless of their size. In alignment with OMB guidance, the Department reports consolidation activity for sites 100 sq ft or larger.

Table 1 defines the current consolidation scope and schedule for DOJ data centers ( $\geq 100$  square feet) to be consolidated. DOJ recognizes that execution of a broader IT transformation initiative may impact the future consolidations and will update the consolidation scope and plans as the longer-term strategy evolves.

#	Agency Component	Data Center	Location	Action	Status
1	████	████████████████	Washington, DC	Consolidate/Decommission	Completed
2	████	████████████████	Ft. Worth, TX	Consolidate/Decommission	Completed
3	████	████████████████	Atlanta, GA	Consolidate/Decommission	Completed
4	████	████████████████	Boston, MA	Consolidate/Decommission	Completed
5	████	████████████████	Chicago, IL	Consolidate/Decommission	Completed
6	████	████████████████	Dallas, TX	Consolidate/Decommission	Completed
7	████	████████████████	Centennial, CO	Consolidate/Decommission	Completed
8	████	████████████████	Detroit, MI	Consolidate/Decommission	Completed
9	████	████████████████	El Paso, TX	Consolidate/Decommission	Completed
10	████	████████████████	Houston, TX	Consolidate/Decommission	Completed
11	████	████████████████	Los Angeles, CA	Consolidate/Decommission	Completed
12	████	████████████████	Fairfax, VA	Consolidate/Decommission	Completed
13	████	████████████████	Miami, FL	Consolidate/Decommission	Completed
14	████	████████████████	Metairie, LA	Consolidate/Decommission	Completed
15	████	████████████████	New York, NY	Consolidate/Decommission	Completed
16	████	████████████████	Newark, NJ	Consolidate/Decommission	Completed
17	████	████████████████	Philadelphia, PA	Consolidate/Decommission	Completed
18	████	████████████████	Phoenix, AZ	Consolidate/Decommission	Completed
19	████	████████████████	Quantico, VA	Consolidate/Decommission	Completed
20	████	████████████████	San Diego, CA	Consolidate/Decommission	Completed
21	████	████████████████	San Francisco, CA	Consolidate/Decommission	Completed
22	████	████████████████	Guaynabo, PR	Consolidate/Decommission	Completed
23	████	████████████████	Seattle, WA	Consolidate/Decommission	Completed
24	████	████████████████	Chantilly, VA	Consolidate/Decommission	Completed
25	████	████████████████	St. Louis, MO	Consolidate/Decommission	Completed
26	████	████████████████	Washington, DC	Consolidate/Decommission	Completed

#	Agency Component	Data Center	Location	Action	Status
27	████	████████████████	Ft. Dix, NJ	Consolidate/Decommission	Completed
28	████	████████████████	Tallahassee, FL	Consolidate/Decommission	Completed
29	████	████████████████	Washington, DC	Consolidate/Decommission	Completed
30	████	████████████████	Arlington, VA	Consolidate/Decommission	On track: 4Q/2011
31	████	████████████████	Arlington, VA	Consolidate/Decommission	On track: 4Q/2011
32	████	████████████████	Chevy Chase, MD	Consolidate/Decommission	Completed
33	████	████████████████		Consolidate/Decommission	On track: 2012
34	████	████████████████		Consolidate/Decommission	On track: 2012
35	████	████████████████		Consolidate/Decommission	On track: 2012
36	████	████████████████	Washington, DC	Consolidate/Decommission	On track: 2012

Table 1 - Consolidation Scope

## 5. Agency Governance Framework

DOJ has developed and implemented an integrated IT governance process as part of the Department's IT governance program that seeks to maximize the value and manage the risks associated with acquisition and management of IT investments. The governance efforts focus on improving the processes for investment selection and ensuring appropriate oversight is performed throughout an investment's life cycle. The governance processes have evolved over several years and continue to mature as the Department works to improve and integrate IT management efforts into a more cohesive set of actions. For the data center consolidation initiative, DOJ will leverage and build upon the existing IT governance framework to achieve the Department's goals and objectives.

### Stakeholder Groups

As illustrated in Figure 2, five primary stakeholder groups play key roles in the DOJ IT governance processes. These stakeholder groups and organizations include:

- Federal Oversight Groups:** includes external organizations who oversee the Department's governance activities, such as the Office of Management and Budget (OMB), the Government Accountability Office (GAO), the DOJ Office of the Inspector General (OIG), and Congress.
- DOJ Oversight Groups:** includes the review boards, advisory councils and committees who govern the Department's IT investment activities.
- DOJ Partners:** includes the Department-level persons and organizations outside the DOJ OCIO who participate in or influence IT investment planning and management. This includes Partners involved in integrating

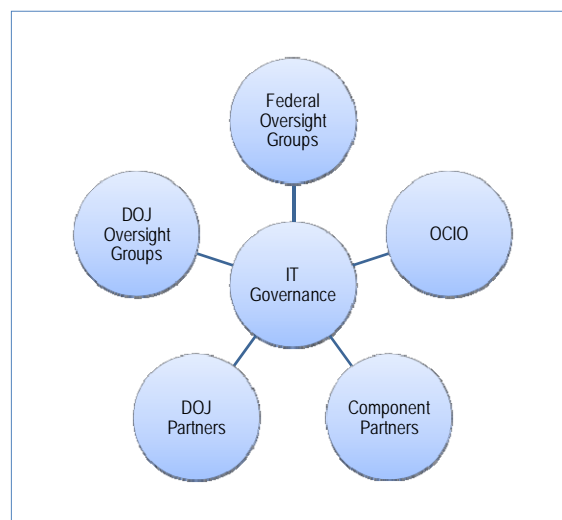


Figure 2 - Governance Stakeholders and Organizations

sustainability principles from the Department's Strategic Sustainability Performance Plan.

- **Component Partners:** includes the people and organizations within the DOJ Components responsible for performing or participating in IT investment management processes.
- **Office of the CIO (OCIO):** includes staff organizations under the Department CIO who are responsible for managing the Department's IT investment management programs, including the Consolidation Management Team that provides guidance and oversight for data center consolidation efforts. The Consolidation Management Team also holds responsibility for developing the master program schedule and plans, business case and alternatives analysis, status tracking and reporting, financial management, communications management, acquisition management, and risk management.

### Planned Activity Highlights

Governance activities in support of DOJ's data center consolidation initiative will include, but not be limited to:

- DOJ Partners and Oversight Groups:
  - Establish sustained IT governance at the Department and its Components to reduce costs, reduce environmental impact, improve efficiency and service levels, enhance agility and business continuity, and strengthen IT security.
  - Establish formal Departmental policy requiring conformance with the Department's plans and activities for data center consolidation and optimization.
  - Participate in the OCIO review and approval of Component IT Infrastructure Business Plans and Budgets [Budget Staff].
  - Ensure all data center expenditures and contracts are accounted for in approved IT Infrastructure Business Plans [Acquisition Staff].
- DOJ OCIO:
  - Establish a performance management framework that directs lifecycle activities supporting the goals of this initiative, including development of a common set of metrics and targets as a basis for decisions on IT infrastructure and data centers.
  - Establish a customer representation mechanism to establish service level agreements for enterprise data centers and shared services and oversee enterprise data center performance.
  - Sponsor independent assessments on compliance, performance, and governance.
- Component Partners:
  - Participate in steering/governance bodies and standards working groups.
  - Develop and maintain IT Infrastructure Business Plans. Plans must be submitted to and approved by the DOJ CIO.
  - Consolidate/optimize data center IT infrastructure to achieve goals and objectives in compliance with approved plans.
  - Periodically measure and report on IT inventory, consolidation/optimization progress and performance against key metrics.

## Performance Management and Metrics

Achieving the goals of the data center consolidation initiative requires an approach that addresses business, technical, and organizational considerations. Based on a foundation of performance management and monitoring, DOJ will define and periodically update selected metrics and targets to measure success and enable improved management of the data center infrastructure. Performance management provides a framework for Department and Component planning efforts and offers improved insight and intelligence into cost savings, operational efficiencies, service quality, energy use, and environmental impact.

Performance metrics selected for initial DOJ emphasis include:

- Number of data centers
- Average server virtualization %
- Average number of virtual OS per host
- Savings/cost avoidance

DOJ anticipates emphasizing a broader range of metrics in the future to include, but not be limited to:

- Data center IT asset inventory and management (e.g., quantities of data centers, racks, and server platforms; aggregate floor space; building operational costs)
- Server virtualization and consolidation (e.g., average virtualization %, average # of virtual OS per host, average OS virtualization %, average server utilization)
- Rack space consolidation (e.g., rack space utilization %)
- Energy efficiency (e.g., average power usage efficiency or PUE, average power density capacity equivalent)
- Enterprise service management (e.g., SLAs, availability, reliability, maintainability, service desk, change management, incident/problem management)

### 5.1 Cost Benefit Analysis

DOJ's data center infrastructure reflects the complexity of a highly federated organization with disparate legacy architectures and technologies that has evolved over many years. Like other agencies within the Federal Government, there are opportunities to obtain cost savings through best practice standardization, consolidation, and leveraged acquisitions. Areas impacted would include: hardware, software, networking, facilities, energy, and labor.

The government's data center consolidation initiative mandates that the Department close data centers and perform consolidation to meet budget, performance, security, and environmental goals established for the federal enterprise. The initiative highlights the potential for benefits through leveraging more efficient platforms and technologies; improving standardization and automation; introducing more effective practices; and reducing the energy and real estate footprint of government data centers. DOJ leadership supports this initiative.

DOJ identified potential four-year savings of \$7M associated with the current consolidation scope (36 sites) from FY10 through FY13. DOJ is applying several tools to make decisions and quantify the business case for broader consolidation. Estimates derived through internally developed models indicate sizeable potential cost savings/avoidance, net of investment, over a five year period. DOJ is working with the beta FDCCI model for estimating data center Total Cost of Operations (TCO). Early versions of the FDCCI TCO model indicate a potential for additional costs and benefits which we are currently studying.

DOJ intends to perform additional cost benefit analysis as part of the enterprise planning efforts underway and will continue to work with DOJ Components and the FDCCI PMO to leverage the TCO model as it evolves to a final version accepted for government-wide use.

## 5.2 Risk Management and Mitigation

While data center consolidation offers the promise of improvements in cost savings, efficiency, service quality, energy use, and environmental impact, it also presents risks for adversely impacting mission performance if managed or executed improperly. Effective management and mitigation of risk requires accurate and timely visibility of program and technical performance across all phases of consolidation.

The Consolidation Management Team will oversee enterprise risk management and mitigation efforts throughout the duration of the data center consolidation initiative, ensuring the appropriate level of visibility, insight and action during pre-consolidation, consolidation, and post-consolidation activities. The Consolidation Management Team will also be responsible for developing the overall Risk Management Plan for the initiative, which will describe in detail the approach to risk identification, analysis, planning, tracking, control, and communications.

DOJ has identified the following program-level risks associated with the data center consolidation initiative categorized by primary risk types (i.e., funding, management, technical, and security). The teams responsible for overseeing specific data center consolidation efforts will manage risks at the component/system and data center levels.

Type	Risk	Mitigation
Funding	Lack of up-front investment will delay and/or prevent consolidation and achievement of targets.	Actively involve Department leadership and Budget Staff in early strategy, planning, and investment management activities. Plan work with phased deliverables that align with funding.
Management	Potential downsizing of civilian and contractor personnel due to consolidation will leave the government unable to adequately perform required services and may cause the government to incur unplanned expenses due to contract restrictions.	Engage human resources and procurement organizations to support personnel planning, communications, defining skill sets required for the to-be data centers and establishing personnel policies/procedures. Ensure that all new contracts contain termination clauses to provide service transition and outsourcing flexibility.
Management, Technical	Ability to secure Component cooperation in successfully achieving the vision will prevent, delay, and/or disrupt consolidation efforts.	Establish appropriate sponsorship, policy, communications, organization, and governance frameworks. Initiate transformation activities required to evolve to a more leveraged architecture, footprint, and organization.
Management, Technical, Security	Lack of standardized approaches for Department IT development and operations will limit realization of efficiency and savings improvements.	With Component participation, establish a Department-wide architecture and standards for data center technology, service delivery, security, procurement, and associated key performance areas.

Management	The current business case for consolidation as depicted in both OMB's TCO model and DOJ projections relies on cost avoidance to a greater extent than true cost savings/reduction, impairing the ability to track benefit realization over time.	Ensure that all stakeholders clearly understand the cost reduction vs. the cost avoidance benefits projected for the program. Evolve models/projections to incorporate improvements in IT asset and data center cost reporting along with planning details for future service delivery.
Management, Technical, Security	Availability of proven commodity services capable of addressing DOJ's needs for flexibility, scalability and security may be limited, potentially delaying and/or preventing broad adoption.	Engage with other large government and commercial organizations to leverage lessons learned by early adopters in addressing similar challenges. Actively engage Components in requirements definition, acquisition, and selection activities.

### 5.3 Acquisition Management

The Consolidation Management Team will develop and oversee DOJ's acquisition management strategy throughout the duration of the data center consolidation initiative. The acquisition management strategy will address:

- Leveraging appropriate DOJ-wide and government-wide acquisition vehicles to optimize lifecycle costs and expenditures associated with data centers and IT infrastructure
- Providing management with adequate information for making decisions concerning procurement of government and contractor resources and services for data center infrastructure, including ensuring the availability of funding
- Providing technical evaluation personnel with adequate information for analyzing and evaluating vendor proposals in alignment with defined data center and IT infrastructure requirements, architectures, and standards for data
- Ensuring that vendors will have adequate information for preparing bids, including established data center standards and architectures
- Providing the source selection official with adequate information on which to base a selection

Additionally, DOJ will establish and enforce formal Departmental policy regarding the acquisition of data center IT infrastructure in conformance with Component IT business plans, as determined by the governance framework for the data center consolidation initiative.

A key contract up for renewal includes the lease for the JDC-W enterprise data center building, which is leased by GSA/DOJ. The current lease term is set to expire in July 2012, with the option for three one-year extensions. Data center consolidation and implementation of the strategy for enterprise data center services will impact the requirements and lease contract for the JDC-W facility.

Options under consideration for future acquisition in the delivery of data center services include cloud computing, commercial hosting, government hosting, commercial collocation, and government collocation services. Initial cloud computing efforts are underway, and analysis of those efforts will be considered in determining the impact of broader deployment across the Department.

To date, no contracts have been canceled as part of the Department's consolidation efforts and acquisition issues have not delayed consolidation.

#### 5.4 Communications Strategy

Data center consolidation will require significant change and transformation in how the Department delivers IT infrastructure services. The Department's communications strategy for this initiative will focus on providing effective communications throughout the transformation efforts to improve stakeholder awareness, understanding, compliance, and decision-making. Specific objectives include providing direct and open communications, guidance, and status; exchanging information, opinions, and ideas; addressing questions and concerns; managing expectations; and promoting acceptance, ownership, and enthusiasm.

The Consolidation Management Team will develop a formal Communications Plan to ensure that communications about the consolidation efforts convey the right message, from the right communicator, to the right audience, through the right channel, at the right time. At a minimum, the Communications Plan will address: purpose, scope, terminology, guiding principles and best practices, references, stakeholders, stakeholder needs, communications channels and methods, and communications events. Figure 3 illustrates a preliminary list of stakeholders for communications on consolidation related topics.



Figure 3 - Key Stakeholders for Communications

Key assumptions include:

- The Consolidation Management Team will coordinate formal and semi-formal communications, under the direction of the CIO, with internal and external stakeholders
- The OCIO will be the primary interface for communications to DOJ and Federal Oversight Groups
- Component CIOs will serve as the primary conduits for communications with Component Partners and User Communities

## 6. Progress

### 6.1 FDCCI Consolidation Progress

As of September 30, 2011, the Department exceeded consolidation targets defined in the 2010 Data Center Consolidation Plan and remains on track for meeting the targets for 2011 and 2012 as defined in the April 2011 submission to OMB and the June 2011 Inventory Update. Highlights in key DOJ metrics for consolidation include:

- Reduced the total number of data processing facilities by approximately 30% (from 105 to 75) with plans to consolidate 2 additional facilities by the end of 2011
- Improved the average server virtualization % from 8.3% to 9.4%
- Improved the average number of virtual machines per host from 3.8 to 6.6

The table below summarizes DOJ's consolidation progress and projections for consolidating data center facilities.

	Closed	Target Closing Numbers					TOTAL Closings Planned
	4Q10 2Q11	4Q11	4Q12	4Q13	4Q14	4Q15	
<b>Consolidation Targets- Facilities ≥ 100 sq. ft. - Reported in June 2011 Asset Inventory</b>	30	2	4	0	0	0	36

Figure 4 - Consolidation Progress Table

In 2011, the Department made significant progress in:

- Component-driven efforts to drive near-term improvements in consolidation and virtualization
- Improving the collection methods, accuracy and understanding of consolidation data to inform management decision-making and drive process improvements
- Interacting with other government and commercial organizations to build knowledge and leverage lessons learned
- Understanding the challenges, complexities, and requirements associated with consolidation in a highly federated organization

The Department remains committed to the goals and objectives of the FDCCI and recognizes that moving from the current environment to a more unified, standardized, and cost-efficient approach for providing data center services requires change. Efforts are underway to drive more significant consolidation and DOJ expects to provide future updates to the closure projections based on revisions to the enterprise plans.



## 6.2 Cost Savings

DOJ initiated several activities in 2011, as part of the investment management process, to gain a deeper understanding of the costs associated with running data centers across the Department as well as the benefits generated through IT cost saving initiatives. Components were surveyed to outline any programs they started or plan to start where information technology has/will directly lead to reduced costs. Components participating in the survey response estimated the high level savings associated with those programs on an annual basis for FY10 through FY13. Responses were reviewed by OCIO to determine the reported savings directly associated with data center infrastructure optimization and consolidation.

Table 2 provides a summary of the estimated cost savings as reported by DOJ Components in June 2011.

	FY10	FY11	FY12	FY13	Cumulative Savings
<b>Estimated Savings</b>	\$1.04 M	\$1.92 M	\$2.14 M	\$1.95 M	\$7.09 M

Table 2 – Estimated Savings Due to Infrastructure Optimization and Consolidation

### Notes:

- Savings reported by DOJ Components in 2011 did not include estimates on cost avoidance. In the future, DOJ will work to leverage the FDCCI TCO model in providing Components with tools to derive more uniform and consistent estimates for cost savings and avoidance.
- Savings estimates in Table 2 address the current consolidation scope only (36 sites). DOJ will revise savings estimates incorporating future updates to the consolidation scope and associated enterprise plans.

Financial constraints have slowed the Department's consolidation efforts and challenges remain in providing upfront funding before any cost savings accrue.