

**State of Michigan
Request for Information**

Great Lakes Information & Technology Center
*Michigan's Next Generation
Green Computing Environment*

January 7, 2010

**Requesting Organization:
Michigan Department of Information Technology**



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1 Introduction

1.1 Objectives & purpose

The State of Michigan, through the Michigan Department of Information Technology (MDIT) is developing strategic alternatives for the way it operates and provides data center services. Currently, MDIT operates three main data center sites after conducting a large-scale consolidation of data center equipment and service locations. MDIT expects to develop a new shared data center site—the Great Lakes Information and Technology Center (“GL-ITC”)—in Michigan while potentially maintaining one of the current sites.

MDIT is interested in exploring ways to provide long-term sustainability and improve Michigan’s overall efficiency of data center operations. MDIT is proposing an extended contract, including an appropriate sharing of risks and responsibilities, for the new data center design, construction and maintenance with additional IT / operational services to be determined. A public private partnership is one potential delivery model for this solution.

The raised-floor data center space needs of the State are estimated at 35,000 to 40,000 square feet. An additional 40,000 square feet of office space may also be needed for disaster recovery computing space, critical production computing space, call center services, as well as shared hardware for aggregating storage and / or computing needs. Additional square footage may be needed for local governments, universities and private sector companies. Renewable sources of energy for the facility are of great interest to the State.

The State intends to leverage the resources of the private sector to achieve goals for the development of the GL-ITC. MDIT is pleased to invite potential respondents to register their interest in assuming the role and responsibilities of a private sector partner in the project.

This document is a Request for Information (“RFI”) from organizations, individual companies or strategic teams that may be interested in:

- Developing, building, financing, operating and / or maintaining a data center building; and
- Providing various shared information technology services to State departments and agencies, and other tenants in this facility.

The purpose of this RFI is to inform potential respondents of this opportunity. Specifically, the RFI seeks to:

- Provide general background information related to the GL-ITC project.
- Communicate to potential private sector partners the vision and goals of MDIT for the development of the GL-ITC and related services.

- Provide an opportunity for potential respondents to articulate their interest in participating.
- Solicit input from potential respondents on a variety of issues, including the scope of the proposed services and the nature of the contracting arrangements.
- Generate input and comments from industry experts regarding the “bundling” of services and green energy opportunities.
- Provide a means for organizations and companies to address the issue of potential “teaming” strategies that may be required to successfully meet MDIT’s needs.

The information gathered from the RFI will be used to assist MDIT with the preparation of any resulting Request for Proposals (RFP) for the proposed project, as described in Section 4.

Please note that while a response to this RFI is not a pre-requisite to participating in any resulting procurement process, potential respondents are encouraged to respond to the RFI. Submissions will be reviewed to assist in refining the approach, scope and structure of any partnership(s).

The GL-ITC project team anticipates seeking further input from a subset of the respondents to the RFI.

1.2 Michigan Department of Information Technology & data center background

The Michigan Department of Information Technology (MDIT) was formed in October 2001 by Executive Order No. 2001-3 to achieve a unified and more cost-effective approach for managing information technology among all Executive Branch agencies. From 2002 to 2007, MDIT primarily focused on consolidation: consolidating data centers, standardizing e-mail systems, sharing data across government agencies, developing the appropriate staffing and billing models, and leveraging the State’s IT buying power.

Today, MDIT is shifting its focus away from consolidation and is centering on shared services and collaboration and maturing the IT organization around standard processes and methods, improved service and satisfaction. To that end, MDIT’s mission, as laid out in Michigan’s 2008-2012 IT Strategic Plan (www.michigan.gov/itstrategicplan), is as follows: “Transforming the way government operates—delivering innovative information technology solutions with excellence and integrity.” MDIT is fostering and developing greater partnerships with local government and private partners, combining resources and transforming government service, as well as streamlining citizen and business interactions with government.

MDIT's data center efforts mirror this approach. Since 2004, the department has consolidated and migrated services and equipment from 36 to 3 primary data centers. Capacity and energy constraints—emanating from the migration as well as mounting service requirements of state agencies and citizens—are major drivers behind the GL-ITC project. Specific goals for the project are provided below, in order of importance to MDIT:

- **Improved Operational Efficiency and Effectiveness:** Securely hosting the State's critical information and technology solutions through a scalable approach that will enable future power and cooling capabilities to be ramped as needed. Improving/maintaining the quality of service in a long-term, cost-effective, and efficient manner.
- **Energy Efficiency:** Improving power usage efficiency, reducing the carbon footprint and cost of operations through renewable power sources and green practices.
- **Economic Development:** Advancing Michigan's IT infrastructure and acting as a magnet for related economic activity, resulting in Michigan jobs and investment both during and beyond construction.
- **Better Government:** Enabling cooperation, shared service potential, and improved business continuity capabilities among state and local government entities.

1.3 *Additional information sources & current data center overview*

- Great Lakes Information & Technology Center Fact Sheet (http://michigan.gov/documents/nep/DataCenterFactSheet_Jan0610_306306_7.pdf)
- **Current Scope of Data Center Services:** MDIT's three primary data centers are located in the greater Lansing area, as follows:
 - **Lake Superior data center:** This center houses over 1,410 servers, four critical mainframes, 1.8 Petabytes of storage and the associated infrastructure that serves all of State Government's data center computing needs. This facility is staffed and operates 7 x 24 x 365 and is considered a Tier III data center by the Uptime Institute.
 - **Traverse Bay data center:** This location contains three mainframes and over 791 servers. It too operates 7 x 24 x 365 and is considered a Tier III facility by the Uptime Institute. This facility contains critical production equipment, as well as some Disaster Recovery services. It is staffed Monday through Friday during normal business hours. The center is remotely monitored and maintained during non-business hours.
 - **Lake Ontario data center:** This facility contains over 651 servers and is considered a Tier II facility by the Uptime institute. It primarily houses business services as well as some test and development equipment. It also contains the standard desktop testing

environment. It is staffed Monday through Friday during normal business hours. The center is remotely monitored and maintained during non-business hours.

- Data center services include, but are not limited to, the following:
 - Information Technology Infrastructure Library (ITIL) based change, incident, configuration and release management processes.
 - Two sources of commercial power from one grid (diesel generators backup to commercial power).
 - Lake Superior and Traverse Bay: Tier III—multiple power and cooling distribution paths with only one path active, has redundant components, and is concurrently maintainable, providing 99.982% availability.
 - Lake Ontario: Tier II—one power and cooling distribution path. The facility has some redundant components, providing 99.75% availability.
 - 10 Gigabyte redundant network paths, redundant switching infrastructure, management VLANs, and dual dense wave division multiplexer ring in place to synchronously mirror data using dark fiber.
 - Water based, wet pipe sprinkler fire protection, incipient smoke, and water detection systems.
 - ANSI/EAI/TIA wiring standards as well as hot aisle/cold aisle cooling strategies.
 - 7 x 24 x 365 security guards with centralized security monitoring with camera systems, both inside and outside the facility, as well as access control systems with pin pads and door alarms.
 - Firewalls with multiple security zones, network intrusion, anomaly detection and two factor authentication.
 - Network intrusion prevention, detection solutions, as well as vulnerability management solutions are in place to scan servers and network equipment to identify, and remediate vulnerabilities.
 - A “rated” service offering for clients.
- Michigan’s data center consolidation award-winning submission for the 2007 National Association of State CIO’s 2007 Best Practice Awards:
<http://www.nascio.org/awards/2007Awards/enterpriseManagement.cfm>

2 Description of the GL-ITC project

The GL-ITC project includes the development of a Tier III data center facility within the state of Michigan to support the current and future information system needs and requirements of the State. It is expected to improve operational efficiencies and reduce energy utilization, provide economic development opportunities for Michigan and foster better government, including shared services.

MDIT is proposing an extended contract, including an appropriate sharing of risks and responsibilities, for the data center design, construction and maintenance with additional IT and ongoing building facilities services to be determined. A public private partnership is one potential delivery model for this solution.

The space may support disaster recovery computing, critical production computing, call center services, as well as shared hardware for aggregating storage and/or computing needs. MDIT is very interested in pursuing renewable sources of energy.

Current data center locations are within the greater Lansing area. A requirement of the GL-ITC project is linkage via fiber network to one of these sites or to an alternate data recovery site. MDIT mirrors and backs up data from one facility to another using synchronous replication methods with zero loss of data to date. The existing service has some distance limitations based on MDIT's current service objectives.

The chosen developer will be responsible for the design, construction, financing and maintenance of the center to meet appropriate LEED certification in design, construction and ongoing building operational requirements.

2.1 Proposed services to be provided

MDIT currently utilizes outside services for some of the IT-related functions within the existing hosting centers. Through this development opportunity, MDIT is interested in potentially moving to a single partner solution for these services; combining both physical asset and some IT services within the contract for the delivery of the new center.

Service elements that may be considered at this time include:

- A fully serviced Tier III data center facility under a long-term lease agreement, including:
 - Building or facility support services (HVAC and Power Support), including acquiring, implementing and supporting power, cooling, ventilation and infrastructure environmental monitoring technologies (PCM). This includes uninterruptible power supplies (UPS) systems, power management and distribution systems, static transfer switching systems, data center facility air conditioning systems (HVAC), static transfer switches, surge protection/transient voltage surge suppression systems, and environmental monitoring solutions.
- Server hardware/software procurement, including:
 - Servers, associated peripherals, and server racking infrastructure
 - Software, including operating system software
 - Limited integration, installation, and implementation services

- Citrix, FileNet, Remedy, and data recovery
- Enterprise storage support services, including the acquisition of storage related hardware, software, training and services related to the storage infrastructure.
- Data backup and restore services; providing fully managed, 7 x 24 server backup services using State-owned licenses, including:
 - New client implementations for backup/restore services, upgrades, day-to-day backups/restores, and de-implementations
 - Services on flat files, applications and databases, as well as a variety of server operating systems, utilities, and system states
 - Local and remote monitoring of backup service performance, monitoring performance for backup infrastructure, and assisting with proactive problem/issue identification

2.2 *Site selection*

At this point, the location for the facility has not yet been determined. Site requirements will be influenced by the need for the center to be part of the Department's Disaster Recovery solution, to meet Tier III standards, and the other stated goals of the project as outlined in Section 1.2: cost reduction, reduced energy utilization, economic development opportunities and improved government service.

Today, MDIT mirrors data between its data center facilities with zero loss of data during the process. The technology that MDIT currently uses for synchronous data recovery has some distance limitations. Current research indicates that the further the geographic distance between centers, the more latency between synchronous writes.

While MDIT currently has a disaster recovery location in the greater Lansing area—and current distance limitations are 18-31 miles for synchronous mirroring—should a new disaster recovery option become available as part of this project, the GL-ITC could be located anywhere within the geographic boundaries of the state.

2.3 *Revenues & delivery model*

MDIT is considering a number of payment mechanisms for the facility and is interested in exploring innovative solutions which offer value.

At this time MDIT anticipates a payment structure spread evenly over the contract life, structured as a periodic charge for all services delivered with developer costs to be recovered. It is expected that this payment will, from time to time, be adjusted for inflation, availability and performance as related to the asset and level of service.

MDIT expects there to be significant potential for opportunities for third-party revenue generation for a respondent delivering the project. MDIT is considering several delivery models:

- Design-Build: Developer designs and builds the center, while the State operates, maintains, and finances.
- Design-Build-Finance: Developer designs, builds and finances the center while the State operates and maintains. Developer payment for delivery is typically deferred.
- Design-Build-Finance-Maintain: Developer designs, builds, finances, and maintains the center. Responsibilities for cost overruns and performance would lie with the developer and the payment would be structured to take into account any deficiencies in delivery timing and facility maintenance.
- Design-Build-Finance-Operate-Maintain: Developer designs, builds, finances, operates and maintains the center. Responsibilities for cost overruns and performance would lie with the developer and the payment would be structured to take into account any deficiencies in service or delivery timing.

At this time, a Design-Build-Finance-Operate-Maintain (DBFOM) model is the expected delivery option with a limited scope of IT related services. In this arrangement, the State will receive:

- A fully serviced data center facility for a long-term lease period, as outlined in Section 2.1.
- Ownership of the facility following handback at the end of the contract (the handback terms will be defined such that the asset returned will have a minimum useful economic life).

It is important to note that the State of Michigan is prohibited from entering into debt arrangements. The State may, however, enter into long-term lease and service agreements. All payment obligations are subject to appropriation. For the GL-ITC, the State anticipates that payments made to the private operator will be long-term lease and/or service payments.

3 *Responding to this RFI*

3.1 *Introduction*

Interested organizations may respond as a prime contractor or they may confine their comments and response to specific areas of expertise. The potential size and scope of this project may require strategic teams be formed to respond to the diversity of the services proposed.

3.2 *Submission of responses*

3.2.1 *Freedom of Information Act*

All documentation provided in the response to this RFI is subject to the provisions of the Freedom of Information Act, 1976 PA 442, MCL 15.231, et seq.

3.2.2 *Electronic copy of the RFI*

An electronic copy of the RFI is available on the Internet at www.bid4michigan.com. It is recommended that all potential contractors also register for future procurement opportunities and announcements on this site.

3.2.3 *Questions regarding the RFI*

Organizations requiring clarification of the intent or content of this RFI, the RFI process or the project in general, may request clarification by submitting questions, clearly labeled as “*GL-ITC PROJECT RFI-QUESTION*,” to the delivery contact listed in Section 3.2.4. No verbal or other form of inquiry will be received. Frequently asked questions and responses will be posted online at: www.bid4michigan.com.

3.2.4 *Delivery of responses*

Respondents are invited to provide responses to the *Questionnaire* provided as *Appendix A* to this RFI. Respondents are requested to email (faremouthg@michigan.gov) and deliver six (6) printed copies of submissions addressed to:

Mason Building
Attn: Greg Faremouth
530 West Allegan, 2nd Floor
Lansing, MI 48913

The responses are to be received on or before the time and date specified in Section 3.2.5.

3.2.5 *Submission due date*

Respondents are requested to make their submissions before 3:00 p.m., January 21, 2010.

3.2.6 Limitations of the RFI

The submission of a response does not constitute any commitment on behalf of the respondent. Also, the respondent's right to compete during any subsequent RFP process is not contingent on the submittal of a response to this RFI.

3.3 Development of responses

The responses should be completed in conformance with the following.

3.3.1 Completion of response

Interested organizations may respond reflecting interest as a prime contractor, or they may confine their responses to areas of specific capability. Responses should be detailed, but straightforward and concise, providing input and information to meet the objectives in Section 1.

3.3.2 Respondent's costs

Neither the State of Michigan, MDIT, nor any other state agency is liable for any expenses incurred by any respondent related to preparing a response to this RFI and shall be held harmless and free from any and all liability, claims, or expenses whatsoever incurred by, on behalf of any person or organization responding to this RFI.

3.3.3 Disposition of responses

All material submitted in response to this RFI will become the property of the State of Michigan.

3.4 Format of response

3.4.1 Overview of response format

The response shall be concise and contain only relevant information, and shall be structured in the following sections:

Section 1 – Cover letter

Section 2 – Response to Category A questions in Appendix A

Section 3 – Additional materials, information or comments

3.4.2 Cover letter

The response should have a cover letter signed by an authorized member of the respondent's firm whom the State may contact for any resulting oral discussions

or questions. The cover letter should also summarize the respondent's business and provide a brief outline of the core services offered.

3.4.3 Response format

Please list the Appendix A, Category A questions in your response.

3.4.4 Additional information

If a respondent wishes to clarify or augment an answer with the provision of additional information this shall be included as an attachment to Section 2. Additional information not related directly to a specific question shall be included as a separate Section 3.

3.4.5 Copies

Michigan requests six (6) copies of responses and one electronic version, as indicated in Section 3.2.4. Submissions should, where possible, use recycled paper.

4 RFI process & schedule

The table below represents the GL-ITC project RFI process and schedule.

Milestone	Date
Issue RFI	January 7, 2010
Written Responses to RFI Due	January 21, 2010
Oral Presentations with Selected Respondents Begin	February 4, 2010

Assuming market interest and available resources, it is the State's intention that a formal procurement process will follow. At this point, no further information is available regarding the schedule for subsequent phases of this project. Interested parties are encouraged to register and check www.bid4michigan.com for future information.

Appendix A – Questionnaire

The Michigan Department of Information Technology is utilizing a two-stage response process for this RFI.

Respondents to this RFI are requested to provide written responses to the Category A questions, using the structure outlined in Section 3.4 of the RFI. Following receipt and review of these submissions, respondents may then be invited to provide oral responses to Category B questions.

Category A questions

MDIT requests written responses:

- 1) Broadly, what role would your organization play in the development of a managed data center facility and the ongoing operations of such facility?
- 2) Please identify any relevant public-private experience your organization has in:
 - a. Facility development
 - b. Providing IT services
 - c. Providing managed facility (including managed IT facility) services
- 3) Please explain, with reference to market examples, broadly what you believe to be a successful delivery model in terms of data center delivery?

Category B questions

These sample questions are strictly provided for background purposes and should not be answered at this time.

Following the receipt and review of Category A responses, MDIT may request oral discussions on the following topics:

A	General
1	Given the current services required by the State, how could a future RFP scope of services be structured so as to encourage: <ol style="list-style-type: none"> a) greater potential for economic development locally and statewide; and b) delivery of the best long-term value solution?
B	Project scope
1	What aspects of the proposed project scope do you envision being of the greatest risk to achieving the State's goals for project delivery?
2	Are there any specific aspects of the GL-ITC Project that are of concern to you and why? How would you like to see these issues addressed?
3	Please identify any services not mentioned in this RFI that you believe should be included in the scope and why they should be included.

Category B questions (continued)

4	What are the primary elements you would recommend in the development of a “green” data center facility? Please highlight any elements in the project scope that would best support the achievement of this goal.
5	As MDIT considers partnering with the private sector on this data center project, what specific business and technical considerations should be addressed prior to next steps in the procurement process?
C Procurement process	
1	What factors does your firm consider when making a decision to respond to procurement for a project? What factor or factors, if any will trigger a “no response” decision?
2	Based on your experience with providing services to the public sector, please identify: a) The key potential pitfalls in such a public-private procurement process; and b) The key success factors in any procurement process.
3	What information is necessary for you to receive from the State in order to prepare a bid response?
D Public private partnership	
1	How do you see the State and your firm working together to achieve the goals of the project?
2	What do you see as the most important elements in a partnering solution for a project such as the GL-ITC?
3	The State is currently considering the optimal length of the public private partnership agreement. What factors do you see as the most critical in assessing the contract length? Does your view on contract length change depending on the project scope?
4	What risks do you think are (appropriate / not appropriate) to be transferred to a design-build-finance-operate-maintain firm or general contractor and what risks associated with the project do you think a private firm is most suitable to manage / mitigate?
5	What elements of this project will be most critical in attracting private financing?