Project Tracking No.: 10251

IOWAccess Advisory Council

Return on Investment (ROI) Program Funding Application

This template was built using the ITE ROI Submission Intranet application.
FINAL AUDIT REQUIRED: The Enterprise Quality Assurance Office of the Information Technology Enterprise is required to perform post implementation outcome audits for all Pooled Technology funded projects and may perform audits on other projects.

This is an IOWAccess Revolving Fund Request.

Amount of funding requested: Currently: $490,000

Anticipated total: $490,000

Section I: Proposal

Date:	
Agency Name:	State Library of Iowa
Project Name:	Dynamic Data on the Web
Agency Manager:	Beth Henning
Agency Manager Phone Number / E-Mail:	515-281-4350 beth.henning@lib.state.ia.us
Executive Sponsor (Agency Director or Designee):	Mary Wegner
IOWAccess Project Process Phase:	☐ Scope Analysis X Design (FY2008) X Implementation (FY2009)

A. Project Summary: Describe the nature and use of the proposed project, including what is to be accomplished, how it will be accomplished, and what the costs and benefits will be.

Response: Dynamic Data on the Web is a project to design, develop, and implement a Web-enabled software solution to:
♦   Make it easy for state and local agencies, state data center affiliates, libraries, businesses, researchers, media, and citizens to find, use, and visualize data about Iowa's population, economy, housing, and government and
♦   Enhance the availability and usefulness of data to the citizens of Iowa without additional staff, ongoing outside support, or customized programming.

The costs of the project include software as well as design, conversion, and training services. The benefits are:
♦   A dynamic user interface to answer data users' needs to view data as HTML tables; sort and rank data; create customized reports; visualize Iowa population trends using charts, graphs, and maps; access metadata; and download data in multiple formats, such as XLS,CSV, or database files.

♦   A point-and-click administrative interface to replace an aging FrontPage application. It will include an automated extract, transform, and load (ETL) process; on-line analytical processing (OLAP) cubes for presenting multi-dimensional data; and a graphical tool for designing and developing reports. These tools will allow the two State Data Center employees to provide the maximum amount of data and functionality to Iowa citizens without writing customized code, hiring new staff, or contracting for ongoing support.

♦   Vendor assistance to design the new Web site and convert the current Web site. The State Data Center staff will contribute significant time to the conversion, but needs assistance to minimize disruption of ongoing services to citizens during the transition to a new site.

♦   Training to allow the State Data Center staff to be self-sufficient in managing the Web site, a vital requirement to ensure the timely release of new data in the future.

B. Strategic Plan: How does the proposed project fit into the strategic plan of the requesting agency?

Response: The mission of the State Data Center is to (1) increase the availability of census data in Iowa and (2) help citizens use it. To that end, the State Data Center maintains a Web site of population, economic, government, and housing data about Iowa, and responds to requests for assistance with data. The State Data Center Web site attracts more than 300,000 page requests each year.

(1) This project will increase the availability of data to Iowa citizens by providing an administrative interface that allows State Data Center staff to load and present large quantities of data. For example, starting in 2010 the U.S. Census Bureau will report the results of the American Community Survey (ACS) for all geographic areas in the state. Annual data releases from the ACS will equal the volume of data that was formerly released from the decennial census every ten years. Without better administrative tools for loading data and creating reports, the State Data Center staff can make only a small subset of this valuable data available to citizens on the State Data Center Web site.

(2) This project will make it easier for citizens to use and understand data about Iowa's population, housing, economy, and government. It will provide an easy-to-use dynamic interface that allows both casual and more experienced data users to create customized reports by combining dimensions such as geography, years, and specific population, economic, housing, or government attributes. It will also permit citizens to improve their understanding of the data by sorting and ranking results; visualize data in charts and graphs; and map data to make geographic comparisons.

C. Current Technology: Provide a summary of the technology used by the current system. How does the proposed project impact the agency's technological direction? Are programming elements consistent with a Service Oriented Architecture (SOA) approach? Are programming elements consistent with existing enterprise standards?

Response: The current system is based on static content hosted on an Apache Web server running Red Hat Enterprise Linux 4. The Web server includes the FrontPage 2002 Server Extensions. Data tables are prepared in Excel and made available in XLS and PDF format. These files are managed on the Web site using FrontPage 2002.

The proposed project will include an ETL process; OLAP cubes for presenting multi-dimensional data; a graphical tool for designing and developing reports; and a public portal with a flexible and intuitive easy-to-use Web interface. The application will include support for a Web services interface that provides access to the underlying census data. It is expected that the application will require a two CPU Dell PowerEdge Server running Windows Server.

D. Statutory or Other Requirements

Is this project or expenditure necessary for compliance with a Federal law, rule, or order?   **Response:** No.

☐   YES (If "Yes", cite the specific Federal law, rule or order, with a short explanation of how this project is impacted by it.)
Explanation:

Is this project or expenditure required by state law, rule or order? **Response:** No.

☐   YES (If "YES", cite the specific state law, rule or order, with a short explanation of how this project is impacted by it.)
Explanation:

Does this project or expenditure meet a health, safety or security requirement?
Response: No.

☐   YES (If "YES", explain.)
Explanation:

Is this project or expenditure necessary for compliance with an enterprise technology standard? **Response:** No.

☐   YES (If "YES", cite the specific standard.)
Explanation:

[This section to be scored by application evaluator.]

Evaluation (15 Points Maximum)
If the answer to these criteria is "no," the point value is zero (0). Depending upon how directly a qualifying project or expenditure may relate to a particular requirement (federal mandate, state mandate, health-safety-security issue, or compliance with an enterprise technology standard), or satisfies more than one requirement (e.g. it is mandated by state and federal law and fulfills a health and safety mandate), 1-15 points awarded.

E. Impact on Iowa's Citizens

1. Project Participants **- List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, other levels of government, etc.) and provide commentary concerning the nature of participant involvement. Be sure to specify who and how many** direct **users the system will impact. Also specify whether the system will be of use to other interested parties: who they may be, how many people are estimated, and how they will use the system.**

Response: The State Data Center program consists of thirty affiliate organizations around the state who provide data assistance to their constituent groups and who use the State Data Center

Web site frequently. The affiliates include all of the Councils of Government (COGs), Iowa Workforce Development, Department of Public Health, Department of Human Services, the three regents' universities, and selected public libraries, college libraries, and ISU extension offices.

Other direct users of the State Data Center Web site include state and local government officials who need data for policy decisions, performance benchmarks, and revenue and cost estimating; businesses and entrepreneurs who use data to make marketing and site location decisions; non-profits who need data to support grant applications; scientists, educators and students who analyze data for research purposes; media who report on population and economic trends in the state; and citizens who use data to promote and improve their communities. In 2006 the State Data Center Web site received more than 300,000 page requests and the State Data Center and its affiliates answered more than 3,300 e-mail and telephone requests for data.

The State Data Center also works closely with the League of Iowa Cities and the Iowa State Association of Counties to provide data and information to local governments. Other interested parties include state agencies whose data are already available on the State Data Center Web site. Currently, the State Data Center Web site includes data from the Department of Human Services (county recipients of food assistance, Title XIX assistance, Family Investment Program (FIP) assistance, children in foster care); Department of Education (languages spoken by K-12 English Language Learners in Iowa counties); and Department of Corrections (characteristics of inmates in Iowa's correctional facilities). The Web site also includes data from the Iowa Department of Public Health (county births and deaths) so that citizens can compare the official IDPH vital statistics to U.S. Census Bureau estimates.

In addition, the State Data Center collaborates with state agencies to develop statistical profiles of special population groups which are published on the State Data Center Web site. Partner agencies include Department of Elder Affairs, Commission on the Status of African-Americans, Commission on the Status of Iowans of Asian and Pacific Islander Heritage, Commission on the Status of Women, Division of Latino Affairs, Iowa Workforce Development, Iowa Vocational Rehabilitation Services, and New Iowan Centers.

2. Service Improvements - Summarize the extent to which the project or expenditure improves service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

Response: Today the line between information consumers and information producers has blurred--citizens expect to be able to find everything on the Web, they expect to find it in a format that fits their unique needs, and they expect to interact with the information they find. In a focus group conducted by the State Library in the fall of 2006, data users were enthusiastic about the data and services provided by the State Data Center, but they also expressed a desire for more features on the State Data Center Web site, including (1) "a true online database to be able to manipulate the data"; (2) the ability to "select a combination of counties and have the data total up for just those counties"; and (3) "GIS mapping capability". This project will improve services within state government and to citizens of Iowa by providing the functionality that our users have told us they need.

3. Citizen Impact – Summarize how the project leads to a more informed citizenry, facilitates accountability, and encourages participatory democracy. If this is an extension of another project, what has been the adoption rate of Iowa's citizens or government employees with the preceding project?

Response: Statistics about Iowa's population, businesses, housing, and government are used every day to make decisions that affect Iowa citizens. Data from the State Data Center Web site are used to develop policies to keep and attract young workers in the state, to make cost estimates for residential lead abatement programs, to hire interpreters for police departments, and to analyze federal funds flowing to Iowa counties. The State Data Center serves citizens, businesses, governments, and researchers who debate school closings and school construction,

developers' responsibilities for green spaces and park enhancements, evacuation plans for factories, and the location of summer lunch programs for children in poverty. The State Data Center has provided data for business plans, including plans for retirement communities, wineries, car washes, coffee houses, medical clinics, and child care centers.

Public access to public data is essential for an informed citizenry and participatory democracy. This project will not only make more data available to Iowa citizens and policy makers, it also provides the tools to help Iowans understand the data and make good decisions. Good decisions require that data be transformed into knowledge. Data is a static spreadsheet of numbers. Knowledge is the understanding that comes from seeing a trend line, a chart, or a map of county comparisons.

4. Public Health and/or Safety – Explain requirements or impact on the health and safety of the public.

Response: This project has no direct impact on public health or safety, however there is an indirect impact when health and safety data are available to citizens and used more wisely in decisions that affect citizens.

[This section to be scored by application evaluator.]
Evaluation (15 Points Maximum)

- Minimally directly impacts Iowa citizens (0-5 points).

- Moderately directly impacts Iowa citizens (6-10 points).

- Significantly directly impacts Iowa citizens (11-15 points).

[This section to be scored by application evaluator.]
Evaluation (10 Points Maximum)

- Minimally improves customer service (0-3 points).

- Moderately improves customer service (4-6 points).

- Significantly improves customer service (7-10 points).

F. Process Reengineering

Provide a pre-project or pre-expenditure (before implementation) description of the impacted system or process.   Be sure to include the procedures used to administer the impacted system or process and how citizens interact with the current system.

Response: Currently, the State Data Center Web site hosts more than 4,000 unique Excel files. With full implementation of the annual American Community Survey (ACS) in 2010, the State Data Center could double the amount of data it receives each year, receiving the equivalent of a decennial census release every year.

Although the amount of information on the current State Data Center Web site is expanding, production processes and presentation technology for the site remain as they were in 2001. The State Data Center staff review source data files (CSV or XLS) every week, then manually combine characteristics to create static XLS or PDF data tables, manually link each file to a

limited number of pre-defined subject headings, and publish the information on the Web using FrontPage (no longer supported by Microsoft).

Citizens may browse subject headings on the Web site in order to find static data tables that most closely match their needs. XLS and PDF files may be opened and downloaded. Citizens cannot quickly view the information as HTML pages nor can they search by keyword or manipulate the data once they find it, for example, by selecting a subset of counties instead of viewing all 99, creating rankings and totals, or combining the years or characteristics of their choice into customized tables. While the site offers a limited number of static maps, it does not allow citizens to create their own maps. The only metadata on the site are brief source and year footnotes included in each data table.

Provide a post-project or post-expenditure (after implementation) description of the impacted system or process. Be sure to include the procedures used to administer the impacted system or process and how citizens will interact with the proposed system. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

Response: With the new application, the State Data Center staff will use an ETL tool to load and transform source data files into OLAP cubes, re-using the ETL routines whenever updated source files are received. A guided OLAP cube creation process will allow staff to create reports, and perhaps dashboards, from multi-dimensional data and make them available through a public Web portal. With more efficient processes to load and present data, the State Data Center estimates that it could host between 10-20 gigabytes of data at the time of implementation and process an additional 2-5 gigabytes each year.

With the new application, citizens will be able to select, combine, and pivot dimensions, such as geography, years, and specific population, economic, government or housing attributes; sort and rank results; visualize data in maps, charts, and graphs; specify output file formats; and access metadata and data notes online.

 [This section to be scored by application evaluator.]
Evaluation (10 Points Maximum)

- <u>Minimal</u> use of information technology to reengineer government processes (0-3 points).

- <u>Moderate</u> use of information technology to reengineer government processes (4-6 points).

- <u>Significant </u>use of information technology to reengineer government processes (7-10).

G. Timeline

Provide a projected timeline for this project. Include such items as **start date**, planning, database design, coding, implementation, testing, conversion, parallel installation, and date of final release. Also include the parties responsible for each item.

Milestone	Date (Calendar Year)
Issue RFP	CY2008 1st quarter
Select vendor for software, professional services and training	CY2008 2nd quarter
Purchase software, training, and hardware	CY2008 2nd quarter
Start professional services contract	CY2008 3rd quarter
Customer acceptance testing	CY2009 1st quarter
Customer sign-off	CY2009 2nd quarter
Web site cut-over	CY2009 3rd quarter

[This section to be scored by application evaluator.]
Evaluation (10 Points Maximum)

- The timeline contains several problem areas (0-3 points).

- The timeline seems reasonable with few problem areas (4-6 points).

- The timeline seems reasonable with no problem areas (7-10).

H. Funding Requirements

On a fiscal year basis, enter the estimated cost by funding source: Be sure to include developmental costs and ongoing costs, such as those for hosting the site, maintenance, upgrades.

	FY08		FY09		FY10	
	Cost($)	% Total Cost	Cost($)	% Total Cost	Cost($)	% Total Cost
State General Fund (State Library)	$10,000	4%	$75,000	24%	$75,000	100%
Pooled Tech. Fund /IOWAccess Fund	$250,000	96%	$240,000	76%	$0	0%
Federal Funds	$0	0%	$0	0%	$0	0%
Local Gov. Funds	$0	0%	$0	0%	$0	0%
Grant or Private Funds	$0	0%	$0	0%	$0	0%
Other Funds (Specify)	$0	0%	$0	0%	$0	0%
Total Project Cost	$260,000	100%	$315,000	100%	$0	0%
Non-Pooled Tech. Total	$10,000	4%	$75,000	24%	$75,000	100%

[This section to be scored by application evaluator.]
Evaluation (10 Points Maximum)

- The funding request contains questionable items (0-3 points).

- The funding request seems reasonable with few questionable items (4-6 points).

> • The funding request seems reasonable with no problem areas (7-10).

I. Scope

Is this project the first part of a future, larger project? No.

☐   YES (If "YES", explain.)   ☐
Explanation:

Is this project a continuation of a previously begun project? No.

☐   YES (If "YES", explain.)
Explanation:

[This section to be scored by application evaluator.]
Evaluation (10 Points Maximum)

- This is the first year of a multi-year project / expenditure or project / expenditure duration is one year (0-5 points)

- The project / expenditure is of a multi-year nature and each annual component produces a definable and stand-alone outcome, result or product (2-8 points).

- This is beyond the first year of a multi-year project / expenditure (6-10 points)

The last part of this criteria involves rating the extent to which a project or expenditure is at an advanced stage of implementation and termination of the project / expenditure would waste previously invested resources.

J. Source of Funds

On a fiscal year basis, how much of the total project cost ($ amount and %) would be underlined absorbed by your agency from non-Pooled Technology and/or IOWAccess funds? If desired, provide additional comment / response below.

Response: The State Library of Iowa will contribute $10,000 for training in FY2008 and will contribute all ongoing operations and maintenance costs (estimated at $75,000 annually) starting in FY2009. In addition, two State Data Center employees will work part-time with the vendor on the conversion, thus reducing the total cost of professional services.

[This section to be scored by application evaluator.]
Evaluation (5 Points Maximum)

- 0% (0 points)

- 1%-12% (1 point)

- 13%-25% (2 points)

- 25%-38% (3 points)

- 39%-50% (4 points)

- Over 50% (5 points)

Section II: Financial Analysis

A. Project Budget Table

It is necessary to estimate and assign a useful life figure to each cost identified in the project budget. Useful life is the amount of time that project related equipment, products, or services are utilized before they are updated or replaced. In general, the useful life of hardware is three (3) years and the useful life of software is four (4) years. Depending upon the nature of the expense, the useful life for other project costs will vary between one (1) and four (4) years. On an exception basis, the useful life of individual project elements or the project as a whole may exceed four (4) years. Additionally, the ROI calculation must include all new annual ongoing costs that are project related.

The Total Annual Prorated Cost (State Share) will be calculated based on the following equation:

$$\left[\left(\frac{Budget\ Amount}{Useful\ Life}\right) \times \%\ State\ Share\right] + \left(Annual\ Ongoing\ Cost \times \%\ State\ Share\right) = Annual\ Prorated\ Cost$$

Budget Line Items	Budget Amount (1st Year Cost)	Useful Life (Years)	% State Share	Annual Ongoing Cost (After 1st Year)	% State Share	Annual Prorated Cost
Agency Staff						
Software (FY08)	$240,000	4	100%	$75,000	0%	$60,000
Hardware (FY08)	$10,000	3	100%			$3,333
Training						
Facilities						
Professional Services (FY09)	$240,000	4	100%			$60,000
ITE Services						
Supplies, Maint, etc.						
Other						
Totals	$490,000		100%	$75,000	0%	$123,333

B. Spending plan

Explain how the funds will be allocated.

Response: The State Library will select one vendor for software, professional services and training and another vendor for hardware. Software, training, and hardware will be purchased in FY08; professional services will be purchased in FY09.

C. Tangible and/or Intangible Benefits

Respond to the following and transfer data to the ROI Financial Worksheet as necessary:

1. **Annual Pre-Project Cost** - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation.

Response: This project will not reduce operations costs. However, it will enhance citizen access to data about Iowa's population, economy, housing and government without adding new staff or contracting for ongoing support.

Describe Annual Pre-Project Cost:

Quantify Annual Pre-Project Cost:

	State Total
FTE Cost(salary plus benefits):	$0.00
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$0.00
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$0.00
Total Annual Pre-Project Cost:	$0.00

2. **Annual Post-Project Cost** - This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation. **Quantify actual state government direct and indirect costs** (personnel, support, equipment, etc.) associated with the activity, system or process after project implementation.

Response: This project will not reduce operations costs. However, it will enhance citizen access to data about Iowa's population, economy, housing, and government without adding new staff or contracting for ongoing support.

Describe Annual Post-Project Cost:

Quantify Annual Post-Project Cost:

	State Total
FTE Cost(salary plus benefits):	$0.00
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$0.00
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$0.00
Total Annual Post-Project Cost:	$0.00

3. **Citizen** **Benefit** - Quantify the estimated annual value of the project to Iowa citizens. This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to

transportation, the time expended on the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of $10 per hour for citizen time.

Describe savings justification:

Response: See #5, "Benefits Not Readily Quantifiable".

ROI Financial Worksheet	
A. Total Annual Pre-Project cost (State Share from Section II C1):	
B. Total Annual Post-Project cost (State Share from Section II C2):	
State Government Benefit (= A-B):	
Annual Benefit Summary:	
State Government Benefit:	
Citizen Benefit:	
Opportunity Value or Risk/Loss Avoidance Benefit:	
C. Total Annual Project Benefit:	
D. Annual Prorated Cost (From Budget Table):	
Benefit / Cost Ratio: (C/D) =	
Return On Investment (ROI): ((C-D) / Requested Project Funds) * 100 =	

4. **Opportunity Value/Risk or Loss Avoidance** - Quantify the estimated annual non-operations benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or Federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

Response: See #5, "Benefits Not Readily Quantifiable".

Transaction Savings	
Number of annual online transactions:	
Hours saved/transaction:	
Number of Citizens affected:	
Value of Citizen Hour	
Total Transaction Savings:	
Other Savings (Describe)	
Total Savings:	

5.**Benefits Not Readily Quantifiable** - List and summarize the overall non-quantifiable benefits (i.e., IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.).

Response: This project increases the availability of public data to Iowa citizens and provides the tools to help policy-makers, businesses, and citizens understand the data and use it to make good decisions. It empowers data users to find data directly without going through an intermediary agency, and it saves data users time by making it easy to customize data for their unique needs with a few clicks.

[This section to be scored by application evaluator.]
Evaluation (15 Points Maximum)

- The financial analysis contains several questionable entries and provides minimal financial benefit to citizens (0-5 points).

- The financial analysis seems reasonable with few questionable entries and provides a moderate financial benefit to citizens (6-10 points).

- The financial analysis seems reasonable with no problem areas and provides maximum financial benefit to citizens (11-15).

Appendix A. Auditable Outcome Measures

For each of the following categories, list the auditable metrics for success after implementation and identify how they will be measured.

1. Improved customer service –

The State Library will conduct a focus group of State Data Center Web site users after implementing the new Web site. The focus group will assess users' perceptions of the Web site, satisfaction with Web site content, and opinions regarding the user friendliness of the Web site.

2. Citizen impact

The State Library will collect monthly statistics of Web site use.

3. Cost Savings

4. Project reengineering

5. Source of funds (Budget %)

6. Tangible/Intangible benefits