



Research Brief

Enterprise Repositories: Learning and Sharing

Introduction

The NASCIO enterprise architecture program includes a deliverable under a grant from the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice, to investigate available repositories for facilitating enterprise architecture initiatives. This research brief constitutes the culmination of that investigation. The focus of this effort is an evaluation of available tools that provide for extensive file sharing capabilities and the ability to collaborate with colleagues in other states, counties, agencies, etc. Since 1998, NASCIO has been instrumental in promoting the concepts and implementation of enterprise architecture across the various levels of government. This investigative initiative is one in a series of continued efforts to facilitate state to state learning and sharing.

The Business Need

NASCIO state members have frequently expressed a desire to learn from other members and to share their own best practices within the NASCIO community. This desire became quite evident during the Enterprise Architecture Maturity Model (EAMM) Assessment visits completed in 2004 involving counties, states, and a federal agency. In fact, participants in that initiative identified **information sharing** as the **number one benefit** gained from these site visits. Many of the methods and tools presented by participants were described in the *NASCIO Enterprise Architecture Assessment Tour Report¹* and were brought into NASCIO's Strategic Materials And Resources Tool (SMART) so these "gold nuggets" of knowledge would be accessible to everyone in the NASCIO community. (*Note: These entries in SMART can be retrieved using the keyword "EAMM."*)

In the last several NASCIO Architecture Working Group (AWG) meetings, the desire to learn from peers has been a topic of discussion – *again - demonstrating the continued interest in this issue*. Members of the AWG have explored various channels for sharing information. There is a need for a resource that would enable sharing of documents and enterprise architecture artifacts. However, states typically do not have budget allocated for such a resource. The options to be considered must either be NASCIO-supported facilities such as SMART, or facilities outside of NASCIO with minimum or no user fees.

This resource has been referred to as a "library", a "repository" and a "collaboration tool." For purposes of communication the term "repository" has become the accepted term. Such a resource is not an end in itself. Rather, the *business need* is the ability to accommodate sharing of all types of documents and file types from process models to project management templates to XML schemas. The list of potential candidate items includes virtually any documents or electronic files that are created in state, territorial, county, local and tribal government. Shareable enterprise architecture artifacts include

¹ see <https://www.nascio.org/hotIssues/EA/>

a wide variety of deliverables including models, templates, plans, presentations, position papers and scorecards within the subjects and disciplines of strategic planning, knowledge management, change management, project management, risk management, process modeling, data modeling, program design, and database design.

This repository is not the only tool to be employed for communication and information sharing within government. NASCIO currently uses the *Enterprise Architecture Newsbriefs*², *Cyber Security Newsbriefs*³, periodic *Enterprise Architecture Webinars*, and various research briefs and reports for sharing newsworthy information on various initiatives that are of interest to government. The repository would be an additional resource to accommodate sharing of documents and files of all types. This repository could potentially facilitate *collaborative initiatives* involving multiple jurisdictions. This type of activity has been demonstrated by a number of cities that are collaborating on application development. For example, Newport News, Virginia, is presently leading such an effort. Collaborative initiatives such as this can bring significant savings to each of the participants. This type of initiative has been discussed within the NASCIO community, but it remains to be seen if an analogous initiative would be undertaken at the state level.

Considerations

In surveying NASCIO members and the market, several things are worth noting. Some states have purchased a repository, or knowledge management tool. Often these repositories are linked to a computer-aided-engineering tool and may involve a meta model that maps to a preferred methodology for enterprise architecture development. These types of initiatives certainly present an effective information sharing resource, but contribute nothing toward “member to member” sharing.

Related restraints or associated risks associated with a resource *outside* of NASCIO include *unplanned cost* and *loss of availability*. There is the potential of populating a shared resource that may entail no cost or user fees initially, with the eventuality of imposed fees that effectively preclude NASCIO members from continued usage of the repository including access to previously loaded materials.

There is also the potential that a repository presented by another entity outside of NASCIO may become unavailable at some future point in time because the sponsoring organization decides it is no longer interested in the continued sponsorship of such a resource. Such an action would again create the undesirable outcome of a loss of access to a repository previously populated with, potentially, a significant amount of information.

Identification of such risks is mandatory. For example, if NASCIO is going to encourage its members to populate a shared repository, there must be a reasonable assurance that such a resource will remain up and running for the medium to long term. Populating such a resource will take time and effort. Allowing such an effort to be put forth only to find that the resource, for whatever reason, is brought down after only a few years, or that user fees are imposed that preclude states from making access must be avoided. Prior to such happenstance, the NASCIO community may have made a considerable investment of effort to populate such a repository without long term benefit.

On the other side of the risk equation is the interest and motivation in populating such a resource. *Will NASCIO members actually populate such a resource?* This is yet to be determined. After additional discussions, the expectation is the use of such a resource would only be motivated by participation in a collaborative project involving multiple jurisdictions. Another potential motivation might be sharing of

² see, <http://www.infoinc.com/nascio/enterprise/> to subscribe to this newsletter

³ see, <http://www.infoinc.com/nascio/> to subscribe to this newsletter

documents within a relatively small community of peers who wish to share ideas. Examples of these types of communities include any of the NASCIO committees. Beyond these examples, it is difficult to believe anyone would be motivated to populate a shared repository without a specific target audience beyond their immediate scope of responsibility within state government.

Additional considerations regarding the viability of such a resource include *ease of use, availability, features, navigation within the resource*, the ability to *establish security* profiles for the users, and the *general security and privacy issues* pertaining to the materials in the repository. Sometimes the privacy and security requirements differ from jurisdiction to jurisdiction depending on the information content. Where there are concerns, obviously, the most prudent choice is to not populate a shared repository. Each of these issues can create enough of a barrier that a state will *decide not* to participate in the use of shared repository.

NASCIO has reviewed the capabilities, availability, and costs associated with several commercially available repositories as well as The Solutions Exchange (TSE)⁴, SMART⁵, Component Organization & Registration Environment (CORE.gov)⁶, and the Federal Enterprise Architecture Management System (FEAMS).⁷ The capabilities and potential applications have also been considered relative to setting up a Wiki⁸.

In light of the aforementioned needs, risks and restraints, NASCIO examined options for information sharing and narrowed the list to two candidates.

Options

There are two very good options for sharing documents and files that entail search and security capabilities and are currently available at no charge to NASCIO members. One is NASCIO's SMART library and the other is CORE.gov which is sponsored by the U.S. General Services Administration (GSA). These resources have some similarities in purpose, but are very different in terms of their full suite of capabilities. SMART is an on-line searchable library using a relational database with access restrictions. CORE.gov certainly bears similar characteristics, but is significantly more sophisticated in terms of capabilities. CORE.gov also provides collaboration functionality and it allows the creation of project libraries.

Some local, county, and federal government agencies are already collaborating on software development using CORE.gov. Noteworthy is the fact that the federal government is converging on CORE.gov as the *ultimate repository* with links to other federal repositories.

SMART can be accessed on NASCIO's website at www.nascio.org. It is simply a database where documents and links can be stored and retrieved. SMART is intended to provide a library of useful references to the NASCIO community. It currently contains actual documents and also links to documents that are available on-line at other websites. Items to be added must be sent to NASCIO staff who evaluate items to determine both appropriateness and classification. Items are entered with various key words to facilitate later retrieval. There is no charge to NASCIO members for using SMART. While it is currently undergoing some technical upgrades, SMART is expected to be available into the

⁴ see <http://www.cio.gov/tse/>

⁵ see <http://www.nascio.org/SMART/>

⁶ see <https://www.core.gov/>

⁷ see <https://www.feams.gov/>

⁸ see <http://wiki.org/wiki.cgi?WelcomeVisitors>

foreseeable future. SMART usage goes beyond the Architecture Working Group to include document sharing by other NASCIO committees.

CORE.gov can be accessed at www.core.gov. CORE.gov is defined as a collaboration environment for component development, registration, and reuse. CORE.gov is organized using project folders. User profiles are created based on their role(s) within a particular project. Project folders are established by the CORE.gov support team. Once a folder is created, the owner(s) has the freedom to create an underlying organization of subfolders. Virtually any type of file can be stored in a folder and made available to anyone with access to that folder. CORE.gov also provides a suite of collaboration tools. CORE.gov is currently used for managing a broad spectrum of document types including meeting minutes, presentations, position papers, enterprise architecture artifacts, and application components.

Usage of CORE.gov is fairly extensive within the federal community. Local governments are also active in using CORE.gov for collaborative application development and sharing of documents from agendas and minutes to presentations. Currently there is no charge for CORE.gov. GSA is interested in making this tool widely available within federal, state, and local government. If usage charges are applied in the future, the intention is that such charges would be so minimal that no government jurisdiction would be prohibited from using CORE.gov. CORE.gov is also expected to be available into the foreseeable future. CORE.gov is currently being enhanced to make it very user-friendly for establishing project folders, and conducting searches. There appears to be significant commitment on the part of GSA to continue to develop this resource, and the interest in its use at the federal and local levels of government appear to be significant.

Recommendations

At this time, NASCIO makes the following recommendations

- (1) Employ CORE.gov for information sharing and collaborative application development. Thus far collaborative development at the state level has been limited. However, the consensus of the AWG is that collaborative software development will gain more interest going forward. Initiating the use of CORE.gov on a limited basis now will help begin the development of necessary skill levels that could prove valuable later when collaborative development eventually becomes more prevalent.
- (2) NASCIO should sponsor a webinar to be presented by the community of local government that is currently involved in collaborative computing in order to gain from their experience.
- (3) NASCIO members should begin to populate CORE.gov with materials considered to be of interest to the general NASCIO community. Further, any NASCIO committees should consider using CORE.gov for sharing documents related to committee activities and deliverables. The AWG has created a project folder titled “nascio-ea” in order to test the actual interest in this use of a repository within the AWG committee. Additional structure and organization can evolve in this folder over time. Also, additional folders can be created for other NASCIO projects going forward. Over time, the AWG will make an assessment as to the actual use of CORE.gov.
- (4) After gaining some experience with CORE.gov, it would be helpful to do a reevaluation. This activity will identify advantages of CORE.gov, identify opportunities for improvement, present lessons learned, re-validate the need for a shared repository, and provide the opportunity to collaborate with the CORE.gov steering committee on future direction for this resource.

To access CORE.gov, e-mail the CORE.gov customer support contact, Joanne Brown, at

Joanne.Brown@saic.com, or call (703) 375-2373. NASCIO has created a project folder titled “nascio-ea.” Access to this folder starts with a request to NASCIO staff. A preliminary structure has been created based on jurisdiction. However, this is not the only way to organize information. Collaborative efforts at the state level and involving multiple levels of government will need to create a dedicated project folder and establish rules for organization and access.

References

“Why is Newport News, Virginia interested in developing components in collaboration with other cities?” See <http://www.core.gov/AndySteinInterviewWithPicture.pdf>. This article describes the collaborative development experience currently ongoing with the community of city governments.

NASCIO’s Strategic Materials And Resources Tool (SMART) is available for access at <http://www.nascio.org/smart>.

NASCIO has conducted a webinar describing the purpose and functionality of CORE.gov. The presentation is available at <https://www.nascio.org/hotIssues/presentations.cfm>.

Funded with assistance from the Bureau of Justice Assistance,
Office of Justice Programs,
U.S. Department of Justice

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