New Models of Collaboration
A Guide for Managers

**Delivering E-Government Services through the
Access Indiana Information Network**

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Overview

The State of Indiana is able to quickly redefine the delivery of web-based government services through its highly effective public-private collaboration with Indiana Interactive, a private sector company that builds and operates Internet portals for state and local government. The hallmark of the state of Indiana E-government site, known as "Access Indiana", is its innovative self-funding approach as the site is funded through revenues generated by charging user fees for online transactions and other enhanced services. No money is appropriated from the State of Indiana budget to support Access Indiana. Because of this incentive to attract users to Access Indiana, Indiana Interactive has completed a site redesign. As you can see from Figure 1, the State of Indiana web portal is one of the most improved gateways among state governments in the United States.

The turnaround offers interesting lessons about how to improve the communication and coordination among stakeholders and employees partnering together to provide E-government services. Among the many critical factors driving the successful collaboration between the State of Indiana and Indiana Interactive, this case focuses on how the greater effort to articulate and formalize the roles and responsibilities of each partner improves the effectiveness with which the web portal is developed, improved, operated and maintained. The case will first describe the challenges of creating e-government applications and why collaborations with the private-sector are so important for helping governments at all levels launch them. Following this, I describe Access Indiana and the innovative public-private collaboration, which centers around a self-funding strategy to pay for the private sector partner's participation in the collaboration. I conclude with two examples illustrating the efforts both partners have implemented to improve the communication and coordination among cross-partner project development teams.

E-Government and the Rise of Collaborations

State governments are increasingly deploying E-government strategies to provide citizens and businesses with greater access to services and information through highly innovative integrated service delivery (ISD) applications. It is, for example, now commonplace for citizens to file taxes, renew professional licenses, and track legislation through web applications available on Internet gateways or portals for each state. These applications offer numerous possibilities to use the Internet and web-based technologies to extend government services online, allow citizens to interact more directly with government, employ customer-centric services, and transform operational and bureaucratic procedures.

A central component of web-based integrated service delivery applications is the web portal. A web portal serves as the integrated gateway into a state government website and provides both external constituents and internal government personnel with a single point of contact for online access to state information and resources. State governments are very complex organizations with hundreds of agencies, departments, commissions,

and regulatory bodies. Portals are web-based front-end applications that allow state governments to access and manage all of their data and information, and to deliver it to its users. Through this gateway or main user interface millions of web users can access the vast landscape of information, services, and applications available on the state web sites. In fact, government-wide web portals are emerging as a key priority for government agencies as they develop their electronic government initiatives and create electronic relationships between government and citizens (G2C), government and business (G2B), government and its employees (G2E), and government and government (G2G).

The promise of the web portal as an integrated access point to all relevant information is undeniable. Because databases and existing departmental systems are often housed on different platforms, the World Wide Web is a convenient infrastructure to use as the foundation for the transfer of data, statistics, and records across organizational boundaries. As a coordinated entryway into systems and shared databases, a web portal can provide significant cost and time-savings. For example, a child welfare employee can, in less than one hour, check a juvenile's statewide history of school attendance, medical history, and interaction with the justice system prior to foster home placement. Without this integrated system, the employee may have spent days or even weeks trying to contact to appropriate parties and access the information[1]. This underlying system integration is one feature that distinguishes web portals from large-scale websites. The extent of the integration, in addition to a host of other factors, determines the level of functionality of the web portal.

Developing these web-based integrated service delivery applications is challenging and often requires capabilities that surpass the core competencies of many state government agencies. Central to developing integrated service delivery solutions for e-government includes redesigning or developing new government services and software applications, enterprise portal management and development, and backend infrastructure integration. Each E-government project requires customized solutions to make various services accessible through one interface while tying together legacy systems, new and old business processes, and layers of complex institutional and organizational policies, practices, and norms. State government agencies find that they are many times unable to use standard off the shelf solutions and must instead customize solutions to fit their particular structure, work methods and requirements[2]. Consequently, as an effective strategy to overcome these challenges, such states as Indiana provide E-government services through a public-private collaboration

Access Indiana Background

The State of Indiana is able to quickly redefine the delivery of web-based government services and deal with these challenges through its public-private collaboration with

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[1] IBM, 2001, Creating and implementing an e-government portal solution: Requirements, solution options and business model considerations. IBM Global Industries. http://ibm.com/sosultions/government.
[2] Rob Kling et. al., 2000,"Learning from Social Informatics: Information and Communication Technologies in Human Contexts", Center for Social Informatics, Indiana University.

Indiana Interactive. The State of Indiana web portal, Access Indiana[34], provides an electronic gateway to Indiana state government services and information. First created in 1995 and at the forefront of the e-government movement in the United States, the Access Indiana Information Network, which is more commonly known as "Access Indiana", is a state-owned, state-regulated digital telecommunication network. It features the Internet and web-based applications as the primary technologies for delivering information and services electronically to the public. The Access Indiana portal provides access to more than 190,000 pages of government information from more than 75 state agencies, departments, and commissions, the judiciary system of Indiana, and the legislative branch. Access Indiana includes 175 custom-designed online applications attracting 6.5 million accesses per month. The most widely used applications include on-line automobile registration, sex offender registries, unclaimed property, online election results, job information and registered licensed child care database.

Access Indiana is operated through an innovative public-private partnership between the State of Indiana and its private partner Indiana Interactive, Inc. Indiana Interactive is a subsidiary of the National Information Consortium, which builds Internet portals for state and local governments. The National Information Consortium also operates e-government services through similar agreements in fourteen other states.   In each of these agreements, the National Information Consortium gets part of the revenue that states generate through each online transaction. The State of Indiana owns the Access Indiana Information Network service and retains control of all online information. The various state agencies are responsible for determining what is a public record and what public records and services will be distributed through the Access Indiana web site. As network manager, Indiana Interactive provides services for the development, operation, maintenance, and expansion of electronic transactions and information access with the public agencies and organizations. Indiana Interactive is also responsible for educating the public on how to use Access Indiana, which includes marketing the State's online services. The National Information Consortium also developed the state government guide for America Online[5]. This greatly improves NIC's position to market Access Indiana, as well as the other state portals, under its umbrella.

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[3] The url for Access Indiana is http://www.indiana.gov

[4] Background information about Access Indiana was obtained from the current web site at http://www.in.gov/ai/aboutai/, archived minutes of the Enhanced Data Access Review Committee available at http://www.in.gov/intel/events/meet_minutes.html, and author's personal interviews conducted between May, 2001 and November, 2001. I would also acknowledge the background research provided by the graduate students enrolled in V516 – Public Management of Information Systems, Indiana University, School of Public and Environmental Affairs, Fall 2001.

[5] Mark Davis, "Deals Link Two Companies with Overland Park, MO-based E-Government Firm", Kansas City Star, August 29, 2000.

The Self-Funding Business Model

The private partner, Indiana Interactive, earns revenue to operate Access Indiana through a self-funding financial model[6]. Across the United States, state governments employ two funding strategies to support such e-government projects as Access Indiana: 1) government financed; and 2) private-vendor financed, which is commonly referred to as the "self-funding" model. In the self-funding model, the private vendor invests capital to support the up-front development of the portal and web site with expectations of earning future revenues from cash flows derived from transaction and access fees for the available information and services. The private firm generates revenue from two sources: 1) charging users for the "convenience" of transacting business over the web rather than through traditional channels such as over-the-counter and mail-in; and 2) charging business for "enhancing" the value of basic government information.

Indiana Interactive generates a significant portion of its revenue through access fees for enhanced or premium online services. 95 percent information and services on the network are available to the public at no cost. User fees are collected for online services that provide access to such services that have a commercial value attached to them as driver's records, vehicle titles, or health professional licenses. Access Indiana has recently expanded these services to include enhanced access to Universal Commercial Code data, and limited criminal history online searches. These fees from the "premium services" subsidize the cost of the entire Access Indiana web site. Access Indiana does not replace conventional modes for getting government services and information that were already free. The premium services are geared mostly toward business users who would rather pay for the convenience to obtain instant access to services and information. Indiana Interactive, the private partner, deploys applications without the use of tax dollars and requires no appropriations from the State of Indiana legislature.

Two entities directly represent the State of Indiana's interests in the collaboration – The Intelenet Commission and an oversight committee called the Enhanced Data Access Review Committee. Access Indiana operates under the authority of the Intelenet Commission. The Intelenet Commission plans and coordinates the design, implementation, and operation of all voice and data communication networks and information technology services for the state of Indiana, which includes direct control over Access Indiana. The Intelenet Commission used its contracting authority to award, through a competitive bidding process, the initial five-year long service agreement to Indiana Interactive in 1995. The Intelenet Commission awarded a second five-year long service agreement in 2000 to Indiana Interactive.

The State of Indiana establishes polices for Access Indiana through a governing body referred to as the Enhanced Data Access Review Committee (EDARC). The Enhanced Data Access Review Committee, which was created in 1995, is comprised of nine members including such state officials or their designees as: the Director of the State

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[6] See Diana Burley Gant, Jon P. Gant, and Craig L. Johnson, "State Web Portals: Delivering and Financing E-Service", January , 2002, PriceWaterHouseCoopers Endowment for the Business of Government. Available at (http://endowment.pwcglobal.com/pdfs/JohnsonReport.pdf)

Budget Office, the Commissioner of the Department of Administration, the Director of the State Library, and a liaison from the Governor's office. The Governor has also added non-voting members to EDARC to represent the interests of professional associations, businesses and citizens. Indiana Interactive managerial team also attends to provide operational updates to the committee. EDARC uses its authority to establish policies governing the layout, design, and function of the interactive services. EDARC reviews the operation of Access Indiana during monthly meetings that have met regularly since September 21, 1995. It reviews and approves agency agreements with the service provider, oversees the implementation and operation of the web services, encourages participation in the use of the web services, and establish fees for enhanced access to public records and transactional services.

The State of Indiana is able to quickly develop new applications or update existing ones as new work practices designed to facilitate communication and coordination among the management and development teams from Indiana Interactive and the state agency clients emerge. State agencies, for the most part, contract with Indiana Interactive to develop and place services and information on Access Indiana. Shortly following, cross-organizational project teams comprised of technical and executive agency leaders begin to work together closely with the Indiana Interactive staff. Indiana Interactive provides the project management services, while the agency teams facilitate the design, development and implementation process by monitoring the work, providing domain expertise, and developing suitable technical solutions for application integration.

One of the early problems that the development teams experienced was ineffective communication among employees participating in these teams. Early on, employees were confused about roles, responsibilities, and decision-making authority. These factors impeded the coordination between the agencies and Indiana Interactive since employees from both sides were reluctant to share information and knowledge with each other. To address this issue, the State of Indiana and Indiana Interactive developed and implemented work practices that now facilitate greater cooperation among employees on cross-organizational project teams. This include such formal mechanisms as sharing responsibility for application design, using knowledge management tools to store and retrieve domain knowledge, adopting metadata standards, assigning project liaisons, and updating reporting standards. Underlying the formal mechanisms are informal practices that further strengthen the working relations between the agencies. The executive management team from Indiana Interactive meets monthly with a cross-section of executive and technical managers from various state agencies and the CIO office in a less formal setting. This gives everyone a chance to discuss face-to-face many of the difficult issues, identify new opportunities for further application development, and establish strategies. Members of each team also form informal relationships through their frequent meetings and system analysis and design activities.

One of the sources for the communication and coordination gaps stemmed from significant confusion over the scope of responsibility for developing applications. As discussed earlier, most transaction-based e-government applications require extensive integration between the web interface and databases, server-side applications, network

architecture, among other backend software and hardware. Application solutions often require functional dependencies where programs need to communicate with each other. The cross-agency development teams on early Access Indiana e-government projects were often unsure about which part of the application they were responsible for and how to coordinate application development with tightly coupled requirements. For example, the Indiana Interactive team, experts in building web interfaces, often faced making decisions about the extent to which work agreement required them to resolve problems with databases residing on legacy mainframe systems. Expertise about the legacy databases clearly lies with the state agency MIS department.

Learning from these earlier experiences, the State of Indiana and Indiana Interactive now divide the application development work around the different information technology architecture layers. This IT architecture is divided into three major layers – the presentation layer; middle-wear layer; and backend layer. Indiana Interactive is responsible for all work associated with building the presentation layer. The respective MIS departments, and as appropriate, the State of Indiana central Information Services division are responsible for all backend work. The Bureau of Motor Vehicles plans to retire its legacy mainframe system and replace with a client-server based enterprise database systems. The BMV in this case is responsible for this work. The middleware layer requires coordination between both sides. This structure has reduced the conflicts significantly. And through a number of communication efforts by the State of Indiana Information Services Division and the Governors Task Force on Information Technology, employees across the agencies and Indiana Interactive are beginning to share common mental model of the architecture and the respective roles and responsibilities of each organization.

Conclusion

The working relationship between Indiana Interactive and the State of Indiana and its various state agencies is evolving into a model of a highly effective collaboration. Key stakeholders and employees are making great effort to improve cooperation, communication and coordination by articulating and formalizing the roles and responsibilities of each partner. Through this, project development teams indicate a greater sense of trust and more willingness to share risks. Access Indiana should fully expect to evolve successfully into a high-function E-government service as the State of Indiana and Indiana Interactive continue to develop involvement oriented work practices that facilitates an environment where employees are comfortable working across boundaries to share knowledge and information.

Figure 1 – Comparison of Old and New Access Indiana Web Portal

Figure 1a – Original Access Indiana Web Portal
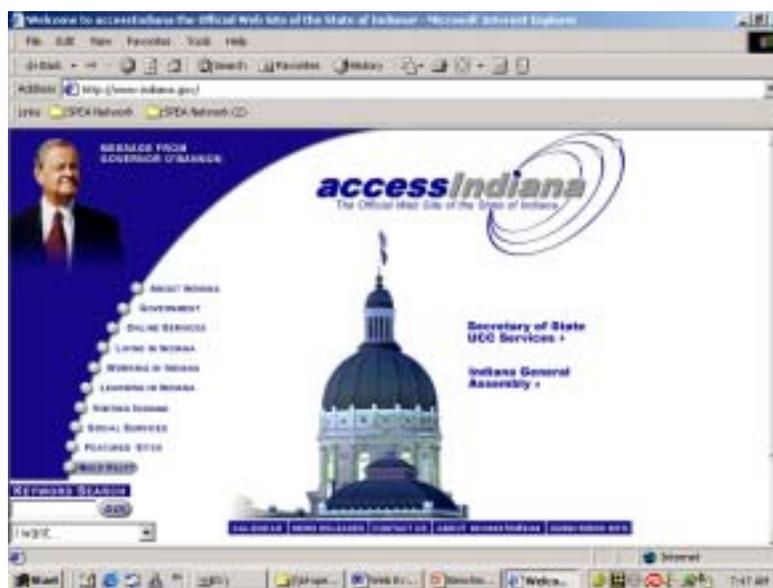
Figure 1b – Current and New Access Indiana Web Portal