Chapter X

Governments and IT Sharing

Introduction

There are many reasons why today’s computerized information systems can achieve more sharing in government than ever before. Over the last decade, an increasing emphasis has been placed on taking an enterprise-wide view of governments in order to replace “stovepipe” systems that focus on one department’s needs with integrated systems that would allow users from any department to access to information they need to achieve their jobs. This ability to share information across departmental boundaries has become accepted as one of the basic goals of modern information management in government. One of its key precepts is that data should only be input once into a system and any user (with a valid need) can use that information from anywhere at any time in a variety of forms.

The implications of this enterprise-wide approach are visible when one studies the requirements to establish standards that facilitate sharing within and between governmental organizations. IT standards generally require that each department’s new applications be compatible with the organizational network and its major platforms and these requirements are aimed at ensuring compatibility as well as saving money on IT support.

There are other developments that facilitate sharing between organizations including the development of data warehousing, the World Wide Web, and software developments such as XML (Extensible Markup Language). The purpose (Weinman, 2002, p.10) of XML is to enable better interactivity between Web sites and databases. Data warehousing refers to the combination of hardware and software that allows an organization to set up a database that can integrate information from a wide variety of sources such as legacy applications on mainframes and allow for sophisticated analyses. Governments have...
made use of data warehouses and data marts to integrate data to meet the demands of the new welfare reform (Newcombe, 2000a). The World Wide Web allows easy sharing of information and the development of XML standard enhances this capability even further. For example, XML has been used as the approach for sharing of park data in an experimental project entitled Government Without Boundaries (2003). A major advantage of XML-based sharing is that it does not necessarily require major changes to legacy and mainframe-based systems and thus is affordable in times of budget stress (Peterson, 2003; National Electronic Commerce Coordinating Council, 2001). It enables governments with disparate and even antiquated information systems to successfully exchange information in a manner that is minimally intrusive and least disruptive.

In addition to the GWoB project, there are efforts by other organizations to encourage shared systems and shared data. For example, the NASCIO (National Association of State Chief Information Officers) has focused many of its efforts on achieving integration. In the human services, the U.S. General Accounting Office (GAO) has encouraged efforts to integrate human services to recipients through integration of information systems of the agencies that provide services for them (U.S. General Accounting Office, 2002a). The criminal justice area has long emphasized sharing. The online National Crime Information Center Computerized Criminal History (NCIC-CCH) was proposed in 1968 and the number and size of CCH record systems in criminal justice continue to grow (Laudon, 1986a; O’Shea, 1998). There are numerous other efforts at sharing criminal justice information such as the Regional Information Sharing Systems (RISS) Program that has been funded by U.S. Department of Justice to share intelligence across jurisdictional boundaries (http://www.iir.com/riiss/).

The growth of geographic information systems (GIS) also helps to spur sharing of information. Federal, state, and local governments have established numerous onsite sharing systems that organizations can use due to the existence of common geographic identifiers that serve as the “foreign keys” (common identifiers that allow the joining of two separate tables of data) to integrate all kinds of information from governmental organizations and the private sector. There is now an Open GIS Consortium (OGC) that is aimed at making sharing more effective. There are several examples of long-standing multi-organizational sharing of GIS data (e.g., Bamberger, 1995). The growth of “open standards” makes sharing much easier. But the sharing that is done may be of a limited nature or, as one critic said, “low-level, stripped-out, dumbed-down conversion” (Robinson, 2003). Indeed, the most promising sharing is enabled by agreements between major private vendors due to commercial reasons (Robinson, 2003). The GIS movement has also spurred some of the most advanced examples of metadata (information that describes key characteristics of data such as its source, date of creation, etc.) that assists users in finding data that meets their needs (Douglas, 2003) such as a “Geospatial One-Stop” where agencies can access data from other organizations throughout the U.S.

In short, the last few years have made the vision of almost universal, seamless, integrated information systems appear to be imminent. However, despite these strong forces that enable shared systems and data, there remain many forces that make sharing difficult. In this chapter, I review research on sharing of information technology in government. Then I study examples of sharing by organizing them into categories by types of organizations involved and/or the type of sharing. Finally, I propose a framework on sharing in
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