

# Book Review

## The GIS Management Handbook

by Peter L. Croswell. Kessy Dewitt Publications: Frankfort, Kentucky. 2009.

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Peter Croswell, PMP, GISP, ASPRS-MS, clearly states his purpose for writing this book in a box appearing on its back cover. "I have written this book to serve as a guide and resource for GIS managers and staff. My intention is to provide GIS professionals and researchers with a tool to make them more effective, to support organizational improvements, and to deliver increased benefits to GIS user communities."

The book is organized into an introduction, ten chapters and thirteen appendices. In the introduction, Croswell outlines the ten chapters and their unifying theme of covering the technical, humanistic, societal, financial, and organizational aspects of GIS planning, development, and operational management. Chapter titles include:

- GIS Management Overview and Context
- GIS Program Development
- GIS Program Organizational

- Structure, Governance, and Coordination
- Human Resources
- Funding, Financial Management, and Multiorganizational Agreements
- GIS Program Legal Issues
- Management of GIS Program Technical Elements
- GIS Office Operations, Service, Delivery and User Support
- GIS Projects and Project Management
- Guide to Additional Resources for GIS Managers

Apparent from this list is that this book will not detail other aspects of a geographic information system, such as system configurations or GIS data. Croswell explicitly states this on the first page of Chapter 1, indicating that instead the book will focus on "organizational structures and people" and "standards and policies." (p. 1) As such, this book is comprised of and a valuable addition to discussions of components of GIS which are underrepresented in the existing body of literature.

Chapters vary in scope from very broad to quite narrow. An example of a broadly ranging chapter would be "GIS Program Organizational

Structure, Governance and Coordination," which summarizes a lot of high level organizational information. In contrast, "GIS Office Operations, Service Delivery, and User Support" focuses more on the goings-on in an office. Details here are as specific as the well laid-out floor plan for a GIS office presented as an example in Figure 8.1 (p. 180). Chapter 10 is unique in its lack of a narrative. Instead, it provides lists of resources, including books, periodicals, professional organizations, internet resources, and a glossary of GIS management terms.

The range of topics covered in this book will ensure that any professional working in the field of GIS will benefit from its information, even if (s)he is not in a leadership role. Additionally, managers in the industry, whether team leaders, project managers, managers, or geographic information officers, will find useful guidance and resources here. The reader should be aware, however, that the broad scope of this book also results in limitations regarding how detailed Croswell can address topics related to any particular management role. For example, although concepts useful to project managers are discussed throughout the book, only



one chapter (GIS Projects and Project Management) has this specific focus.

Croswell illustrates his ideas in a clear and well organized manner using three different techniques. The first is figures, which often display the flow of concepts, ideas, or work, but also include summary diagrams of key concepts. The second is tables, which include large amounts of synthesized information. Some tables additionally function as matrices. These matrices list key elements in title rows and columns, and then indicate with dots or codes which grid cells of the matrix are most relevant for certain variables. For example, Table 3.3 (p. 66) provides a list of GIS program organizational components, compared to program types. Codes entered in each grid cell indicate whether each relationship usually, sometimes, or rarely/never occurs.

The third method by

which Croswell illustrates ideas discussed in the body of the book is by use of “exhibits.” These function in a manner similar to text boxes or sidebars, and discuss, classify, or provide examples in support of ideas presented in the book. Topics range from classifying disparate information such as “Exhibit 1.1: Geographically Related Program Areas in Government and Utility Organizations” (pp. 12-13), to providing specific examples of topics such as “Exhibit 3.1: Illustrating Organizational Culture Impact on a GIS Program” (p. 74).

The thirteen appendices are full of practical and useful information and resources concerning the following:

- GIS Technology Status and Trends
- Types of Organizations that Use GIS Technology
- Descriptions of Successful GIS Programs in Different Organizational Environments
- Examples of Business Processes Improved by GIS
- Suggested Format for GIS Standards and Policy Manual
- Summaries of Key Information Technology Framework Initiatives

- Annotated Outline for a GIS Requirements Document
- Cost-Benefit Evaluation Examples
- Sample Position Description
- Code of Ethics
- Descriptions of Sources and Approaches for Training and Professional Development
- GIS Funding Vignettes
- Examples of User Satisfaction Surveys

Although these resources will obviously not provide a custom fit in all situations, they should prove to be useful starting points for numerous practical considerations which often arise.

The unique and important contribution of this book is the detail specific to GIS which Croswell brings to management. Numerous books address management in general or information technology management in particular, but this book is the only to offer such a detailed level of GIS context to the subject. Examples from numerous GIS organizations are integrated into a detailed management framework. A case in point is Appendix C, which discusses exemplary GIS programs in a number of different types of organizational

environments.

One interesting and recurring perspective provided by the author is the timeframe for which numerous trends have arisen in the GIS industry. For example, Croswell cites that it has really been over the last 15 years that most public-sector organizations and many private companies have moved away using more general IT job position descriptions and towards ones specific for GIS professionals (p. 98). Documenting such trends should give younger GIS professionals an interesting perspective regarding what a recent and maturing industry GIS is, especially when put into the context of their current experience by Croswell, someone who has experienced and documented the last 30 years of this change.

Although outside the author’s objectives, what is not present in this book are hands-on exercises, topics for further discussion, or other activities which would allow the GIS professional to test or refine his/her understanding of the concepts presented here. As such, this book would need to be combined with

other resources if one were considering using it in a more structured learning environment, such as the classroom.

I believe that Croswell

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has fulfilled his objective in creating a book to serve as a guide and resource to GIS managers and staff. I am sure a GIS professional would refer to this book often, and would be able to understand where an aspect of interest fits into the overall framework of management. More importantly, (s)he could understand how the unique context of GIS projects are likely to result in special consideration beyond typical needs of information technology management by referring to the author’s extensive collection of examples, templates, and other resources.

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