[KE-02-027] Value of Professional Geospatial Organizations

Abstract

There are a great many professional associations in the geospatial sector. They provide a great deal of value to the geospatial community and professionals working in that community. The value can be described in terms of professional development, technological and organizational advancement, advocacy, governance, and leadership. The following text explains the various ways in which professional associations provide value to the community.

Keywords: advocacy, collaboration, coordinating organizations, governance, leadership, operational advancement, policy, professional development, strategic advancement

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Explanation

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2. Professional Development
3. Technological and Organizational Advancement
4. Advocacy
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1. Introduction

There are an infinite number of professional associations organized around every imaginable professional activity. The sheer number of such associations would cause one to think that there must be value to be gained by participating in them…otherwise, why would so many exist? But their value is not always intuitively obvious, and not every professional association spends effort and time to explain the value proposition for prospective members.

The value of professional associations in the geospatial profession can be described in several ways, some related to individual organizations and some related to the collective

value of such associations. There are a few dozen professional associations around the world, including about 20 in the United States, that are primarily focused on the advancement of professional activities related to use of geospatial technology, and to collection, management and use of geospatial data. There are many, many more professional associations that are primarily focused on other professional activities but that have specialty groups with a significant interest in such technology and data. Those other associations are in nearly every field of human endeavor, including public health, tax assessment, conservation, economic development, infrastructure, defense and public safety, education, planning, and so on. Geography and location play an important role in nearly all professions and serve as a connection between and among professions.

2. Professional Development

The value of professional associations that one hears about most often is their role in professional development. Most, if not all, professional associations provide training and educational opportunities. Those opportunities are usually tailored to meet the specific needs of the association members. The leadership of an association usually pays careful attention to the needs of its members for professional development. Many employers rely on professional associations to provide opportunities for continuous learning, improvement of skills needed for particular jobs, and even development of new skills and knowledge not gained through formal education.

There is an important connection between professional associations and professional certification, as well as professional licensure. Professional certification is the endorsement of one's expertise by a credible third party (Barnhart, 1997). That third party is normally a non-governmental organization. Licensure is the state's grant of legal authority to practice a profession. Some geospatial professionals, such as surveyors, engineers and photogrammetrists, require licensure to practice their professions in most states. Many other geospatial professionals may require certification to ensure employers that they possess appropriate skill sets for particular jobs. But certification is not a legal requirement to practice a profession, as with licensure.

Professional certification for geospatial professionals is an important development that began in the early 2000s. For a brief history of geospatial professional certification, see the GIS Certification Institute (GISCI) website. Professional associations often develop relationships with certification and licensure organizations in order to offer credit toward certification or licensure for their members as a result of participation in classes, seminars, workshops, etc., that the associations sponsor or develop. Certification and licensure are very beneficial from both a professional development and career development standpoint, so the role of professional associations in aiding the certification and licensure process is highly valuable.

There is another aspect of professional development in which associations play an important role. Most associations offer conferences, which are one of the venues for training and educational opportunities. But conferences offer much more for members, as well. Conferences are a place to network with one's peers, expanding professional connections and learning how others deal with the problems, issues and situations that are common to nearly everyone. New ideas, concepts and information gained at conferences

from colleagues in other regions, states, and even countries provide extremely high value for association members. Some of this information exchange comes from formal conference activities such as work sessions, panel discussions, workshops, keynote addresses, breakout sessions, etc. But the information exchange that happens informally among conference attendees between, before and after formal activities is equally valuable, both for members from a professional and career development standpoint and for the organizations that employ association members. Significant technological and organizational advancement ideas are gained at conferences and carried home by association members.

3. Technological and Organizational Advancement

Professional associations are responsible for technological and organizational advancements in other ways, as well. Individual associations or groups of related associations are involved, from time to time, in activities that form the foundation for:

- software application development
- strategic and operational improvements in business processes
- policy changes that benefit data and technology governance

In 1999, seven professional associations (NSGIC licensing web page) representing the land surveyor and geospatial communities initiated a collaborative effort to draft an extension to the Model Law for engineering and land surveying licensure. The Model Law is a publication of the National Council of Examiners for Engineering and Surveying (NCEES). It is designed to assist legislative counsels, state legislators, and state licensing boards in preparing or updating licensure legislation. NCEES also publishes the Model Rules that provides guidance to state licensing boards for implementing the Model Law.

The professional associations worked to develop a revision to the Model Rules to articulate inclusions and exclusions to the Model Law related to geospatial data creation and GIS activities. The revised Model Rules were first published in 2006 and have provided significant benefit to the geospatial community by clearly delineating the professional boundary between GIS and surveying activities. In many parts of the country, this has enabled associations and organizations across the geospatial community to work together more closely to serve their members and constituents, solving problems and addressing shared issues.

In 2009, 12 geospatial professionals and 15 reviewers representing at least a half dozen professional associations, as well as a number of government organizations, were convened by the National Geospatial Technology Center of Excellence, a project of the National Science Foundation, to complete and validate the U.S. Department of Labor's Geospatial Technology Competency Model (GTCM). The Department of Labor released the GTCM on June 18, 2010. The GTCM identifies what successful geospatial professionals know and are able to do. Competency models promote understanding of education and training needs for workforce development. Universities and colleges across the nation now use the GTCM to help establish curricula for geospatial education. Hiring officials in government and the private sector now use the GTCM to help write job descriptions to use in filling geospatial positions.

The Urban Regional Information Systems Association (URISA) established a working group of GIS and addressing professionals in 2005 to create the United States Thoroughfare, Landmark, and Postal Address Data Standard. URISA invited participation from a number of other associations, including the National Association of Counties, the Geospatial Information Technology Association, the American Association of Geographers, the National States Geographic Information Council, and the National Emergency Number Association (NENA). This working group evolved from URISA's and NENA's collaborative conferences on addresses in the late 1990's and early 2000's. The Address Standard was endorsed by FGDC in 2011 and now has data cross-walks to maintain compatibility with the USPS Address Standard and the NENA Next Generation 911 Address Standard (Wellar, 2012). In addition, a number of government organizations around the country have developed data models to fully implement the FGDC Address Standard into their operations, thus transforming the way in which addresses are developed and used to provide government services.

4. Advocacy

All the geospatial professional associations consider advocacy to be an integral part of the value they bring to their membership. They advocate on behalf of their members with regard to topics that benefit their members directly or indirectly. Most involve their membership in one way or another to determine an advocacy agenda. For some associations, this means directly polling or surveying their members to define an advocacy agenda. In other cases, definition of the association's advocacy agenda is determined by the Board of Directors or assigned to an advocacy committee, acting as representatives of the membership.

Advocacy is typically engaged to affect policy issues. For example, a state agency or a county commission may be in the process of making a decision to restrict access to geospatial data related to land ownership. That restriction could have a negative effect on many organizations and individuals in the geospatial community. In that case, one or more geospatial professional associations could advocate in a variety of ways to affect the decision by the state agency or county commission. That advocacy would likely involve conducting research, producing materials, communicating with decision makers, and testifying at public hearings to suggest a particular decision that benefits the association's membership.

Often, the work to conduct advocacy falls to the association's advocacy committee members. The advocacy agenda guides the work of an advocacy committee, or the Board of Directors if an advocacy committee isn't established. In the case of the example above, the advocacy agenda might indicate that open access to land ownership data is of fundamental importance to the members of the association. The advocacy committee or association staff would be watchful for policy decisions that are in opposition to the advocacy agenda. Most decision making bodies are required to provide some sort of notice regarding their decisions, so the association would have an opportunity to advocate for a decision that is in alignment with their advocacy agenda.

Geospatial professional associations can have particularly significant influence on policy decisions when they can find common ground to collaborate on advocacy positions and

activities. The Coalition of Geospatial Organizations (COGO), initiated in 2008, has been a good example of this kind of advocacy collaboration. The Coalition is comprised of 13 geospatial professional associations representing more than 170,000 individual members, mostly in the United States. Their rules of operations were established to ensure that the Coalition only takes policy positions when there is unanimous consent to do so. Among many other things, the Coalition has:

- communicated directly with the Federal Communications Commission to oppose an action that would have negatively impacted GPS operations
- communicated directly with the Federal Trade Commission to advocate for continued open access to geospatial data in light of a data privacy proposal that would have limited such access
- communicated directly to Congressional leadership:
    - on behalf of STEM education to include geography
    - urging use of geospatial data and technology in the stimulus expenditures of 2009
    - to advocate for the USGS 3D elevation program

In 2015, and again in early 2019, COGO published its Report Card on the National Spatial Data Infrastructure (NSDI). The Report Card is a comprehensive evaluation of the status of the NSDI. It is intended to promote renewed action and investment to make progress toward completing the NSDI, an effort that was initiated in 1993, has been underway ever since, but remains only partially complete. The COGO Report Card has been at least partially responsible for some significant progress on the NSDI between 2015 and 2019. That progress can be attributed to collaborative advocacy by many geospatial professional associations.

One of the outcomes partially attributed to the COGO Report Card is the enactment in November 2018 of the Geospatial Data Act (H.R. 302, P.L. 115-254). This new law provides statutory authorization for the NSDI governance structure, ensures that federal geospatial expenditures will be reported to Congress, and directs federal agencies to work in partnership with state, local, and tribal governments, higher education and the private sector to complete the NSDI. In addition to the impetus provided by the COGO Report Card, the Geospatial Data Act was enacted as a result of a great deal of collaborative advocacy and cooperation from many geospatial professional associations.

The National Geospatial Advisory Committee (NGAC), statutorily part of the NSDI governance structure, is comprised of representatives from many professional associations, as well as representatives of some federal agencies. NGAC provides advice to the Federal Geographic Data Committee with regard to the NSDI. This advisory committee is an opportunity for geospatial professional associations to advocate on a regular basis, both individually and collectively, to impact national policy decisions that impact all association members.

5. Governance

Professional associations have often been at the forefront of advancements made in collaborative governance for geospatial systems. Development and maintenance of GIS is fundamentally a collaborative endeavor requiring a collaborative governance structure by

which participants can make decisions together. Multiple participants at various levels in the public and/or private sector are usually required to collaborate to successfully develop a geographic information system and the associated geospatial data to be used by all.

Work done by URISA in the 1980s is a good example of the impact a professional association can have to advance geospatial governance (Wellar, 2012). In 1987, the National Science Foundation established the National Center for Geographic Information and Analysis (NCGIA). The NCGIA set up a competition to establish a geospatial research agenda for the nation. URISA created a research agenda focused on the needs of the geospatial user community in an effort to influence the NCGIA process. The development of the URISA research agenda had far-reaching effects.

The involvement of URISA in the activities related to the NCGIA competition led to the establishment of the GIS/LIS series of conferences that were held around the country from 1988 to 1998. Many GIS professional associations were part of the GIS/LIS organizational structure, including the American Congress on Surveying and Mapping (ACSM), the American Society of Photogrammetry and Remote Sensing (ASPRS), the Association of American Geographers (AAG), the Geospatial Information Technology Association (GITA), and the American Public Works Association (APWA). That collaborative governance structure, comprised of geospatial professional associations making collective decisions on behalf of the geospatial community, has continued with the Coalition of Geospatial Organizations (COGO), as described earlier. COGO is an example of a collaborative governance structure at the national level, comprised of a group of professional geospatial associations. They have many shared interests and need to develop agreement on a wide range of policy issues in order to enact change and improve the use and potential of GIS nationwide.

Collaboration is necessary for this coalition, and a collaborative governance structure and processes are essential to achieve agreement. There are many processes where organizations from multiple levels of government, and sometimes non-governmental organizations, are already working separately on public policy issues like childhood trauma, workforce development, emergency response, public health, stream restoration, and much more. But significant progress on those issues is often difficult and sometimes fails because there is no collaborative governance structure that enables the organizations to form effective partnerships to make decisions together on an authoritative, consistent basis. The lack of a formally recognized method for making collaborative decisions results in inefficiency, inconsistency, and waste (Emerson & Nabatchi, 2015). Professional associations have worked together over many years to improve governance processes, directly through GIS/LIS and later COGO, and indirectly by example.

6. Leadership

Finally, professional associations provide many opportunities for their members to gain and improve leadership skills. There are opportunities for members to serve on the national governing boards of most professional associations. This usually involves an election process, which necessitates an increased understanding of national, regional and local issues facing association members. Campaigning to some extent, related to these issues, is often part of winning the right to serve on a professional association’s governing board.

The national governing boards generally have a variety of committees and work groups aimed at resolving issues of concern to association members or conducting the business of the association. These committees and work groups also provide an opportunity for gaining and improving leadership skills. The committees and work groups are often comprised of a mix of members of the governing board and other members of the association, so they present leadership opportunities for members who aren't necessarily occupying positions on the governing board.

Regional and local professional associations are often, but not always, affiliated in some way with a national association. They also provide leadership opportunities in much the same way as national associations. Leadership in a regional or local professional association can be a stepping stone to leadership at the national level, thus providing a path to greater and greater leadership skills. Developing leadership skills through participation in a professional association is one of the key rationales for granting and funding such participation by public and private sector organizations for their employees.

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