What's Your Score? Implementing the Geospatial Technology Competency Model
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Abstract

The Geospatial Technology Competency Model (GTCM) identifies the knowledge, skills, and abilities needed for employees to be successful in the geospatial industry. The value of this model is measured by its implementation as a tool for performance management, employee recruitment and selection, career development, and as a curriculum framework for training and education. Learn to evaluate an organization's preparedness to implement the GTCM with the Competency Model Implementation Scorecard. This innovative tool will help geospatial companies respond to workforce needs.

Characteristics of the Geospatial Technology Competency Model

The Geospatial Technology Competency Model offers the capacity to develop and nurture an expanding pool of skilled workers who will be in increasing demand as the need for geospatial information increases; not only in the federal community but in state, local, and private sectors as well. The Geospatial Technology Competency Model helps move toward the goal of developing a well-trained workforce for the geospatial technology marketplace to establish the nation as a world leader in geospatial technologies.

The Geospatial Technology Competency Model developed at The University of Southern Mississippi provides a way to articulate the kinds of workers needed in the industry. The GTCM provides a research-based set of competencies for hiring organizations' use to improve employee recruitment and selection and to create competency-based performance management systems to help professionally develop existing employees in the industry. Finally, the GTCM offers a research framework for training providers and academic institutions' use for creating the most effective and efficient training and education opportunities.

Benefits of a Competency Approach towards Geospatial Workforce Development

Competency modeling is an attempt to describe work and jobs in a broader, more comprehensive way (Zemke & Zemke, 2000). Competency-based performance models yield a common language across positions within an industry. It is the best approach when creating a performance management system, and it enables workforce development professionals to identify core capabilities required of any employee in any position across an entire organization or industry (Gilley & Maycunich, 2000). Robinson and Robinson (1996) encourage the use of a performance model when describing good performance for a specific position or job cluster.

In addition to performance management benefits, results from competency models can be easily translated into training curricula. While training programs based on work-oriented task analysis can become dated as work undergoes dynamic change, training programs based on competency assessment are more flexible and perhaps have more durability.

Competency models also provide the framework necessary for companies in today's competitive job market to hire the best available people. Organizations want to ensure that hiring costs are expended wisely. By clarifying specific behaviors and practices of effective employees, competency models increase the likelihood that hiring costs such as the use of recruitment firms and signing bonuses contribute to placing the right people in the right jobs (Lucia & Lepsinger, 1999).

Competency models have been in use for more than three decades. In the last five years, interest in competency models and their potential to help staffing and development efforts has increased dramatically. Intensified competition, aggressive cost management; proliferation of 360-degree feedback, downsizing, and emerging technological industries will continue to draw interest to competency model development and use (Lucia & Lepsinger, 1999).

Tools Which Can Assist Implementation of the GTCM

Several competency model workforce training tools and approaches are available or can be developed for organizations interested in implementing the GTCM. At the organizational level, these tools include the development of an organizational change readiness scorecard, the use of a web-based competency assessment tool, and the examination of relevant geospatial training available through an online geospatial education directory. A brief overview of each of these tools is provided below.

The Competency Model Implementation Scorecard

The development and validation of change readiness scorecard is currently underway under the auspices of the National Workforce Development Education and Training Initiative (NWDETI), lead by the University of Southern Mississippi. The goal of this scorecard is to provide to geospatial companies an assessment tool that allows the organization to examine the organizational support, communication, and commitment levels to implementing the GTCM. By providing this tool to geospatial companies and their decision-makers, organizational barriers to implementation can be identified and potentially addressed, thus ensuring that the implementation of the GTCM can proceed without the structural or institutional impediments that often accompany training and development change processes.

The GTCM Online Assessment Tool

In implementing the GTCM, it is critical that roles, competencies, and levels of expertise within the geospatial technology worker be ascertained and, if need be, improved upon through training and development initiatives. Using a structured approach, and online role and competency assessment will be available through the NWDETI's GeoWDC website.

Using input from existing geospatial technology professionals, the online assessment tool can determine 1) the primary roles that the employee occupies within the organization; 2) the level of expertise within each competency that pertains to that role; and 3) an evaluation and training worksheet which can be used to improve those competencies that require additional training or support. Additionally, the online assessment tool can be used by geospatial supervisors to ascertain which roles are required within their work unit, and thus make recommendations concerning recruitment and selection of potential employees.

2-Year and 4-Year Online Education Directory

Through efforts supported by NWDETI, a national survey of geospatial education or related curriculums from 2-year and 4-year colleges and universities has recently been completed. This education directory of geospatial programs is available at the national or state level, and will provide to geospatial technology companies a source of education and training for their geospatial workforce. This directory includes detailed information related to college and university geospatial technology education programs, and includes contact information for further information concerning these programs.

Conclusions

Through the sponsorship of these initiatives, the NWDETI has continued to work towards providing support towards the implementation of the GTCM in geospatial technology organizations. The development of the GTCM serves simply as the first step towards the development of a trained geospatial workforce. Through the implementation of the GTCM, organizations will be able to see the benefits of using a competency-based approach to developing a geospatial workforce.

References

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