Geospatial Technology Competency Model

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GIS as a Profession

- The Department of Labor Employment & Training Administration (DOLETA) has worked with industry and education leaders to develop a comprehensive competency model for Geospatial Technology.
  - Model is designed to evolve along with changing skill requirements
  - Model frameworks are based on the competency model building blocks
    - GTCM approved by DOL, 2010
    - GMCM approved by DOL, 2012

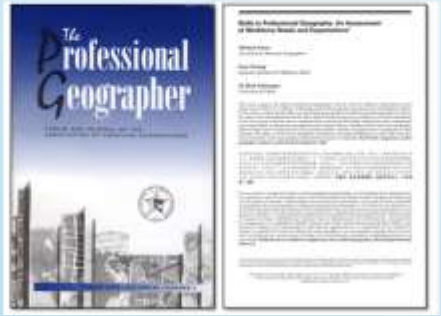
GTCM: Prior Work

2000-2003:
Original GTCM

2005-2006: Industry
Definition Workshops

2004-2006: *GIS&T*
Body of Knowledge

2008: Skills in
Professional Geography



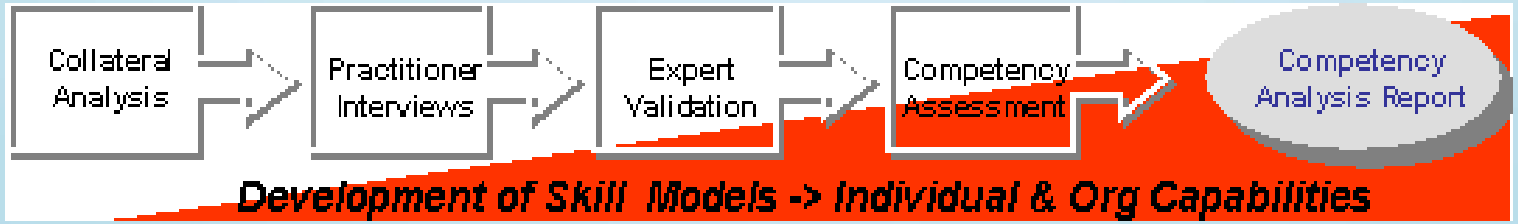
2008-2010: New GTCM

GTCM and the Body of Knowledge (BoK)

- Relationship between the GTCM and the Geospatial BoK
  - The Geospatial BoK is an exhaustive listing of formal educational objectives related to geospatial information science
  - The GTCM is more generalized and tries to focus on those competencies and tasks that a geospatial professional may encounter over the span of a career

Competency Model Foundation

- Competency Defined
  - *Competencies are behaviors that encompass the knowledge, skills, and attributes required for successful performance that enable a person to deliver superior performance in a given job, role, or situation.*
- Competency Modeling
  - *Competency modeling is the activity of determining the specific competencies that are characteristic of high performance and success in a given job.*
    - * Maggie LaRocca, Learning Program Manager, Hewlett-Packard



DOLETA Competency Modeling Process

- Steps to Build an Industry Competency Model
  - Gather background information
  - Develop draft competency model framework
  - Gather feedback from industry representatives
  - Refine the competency model framework
  - Validate the competency model framework
  - Finalize the model framework

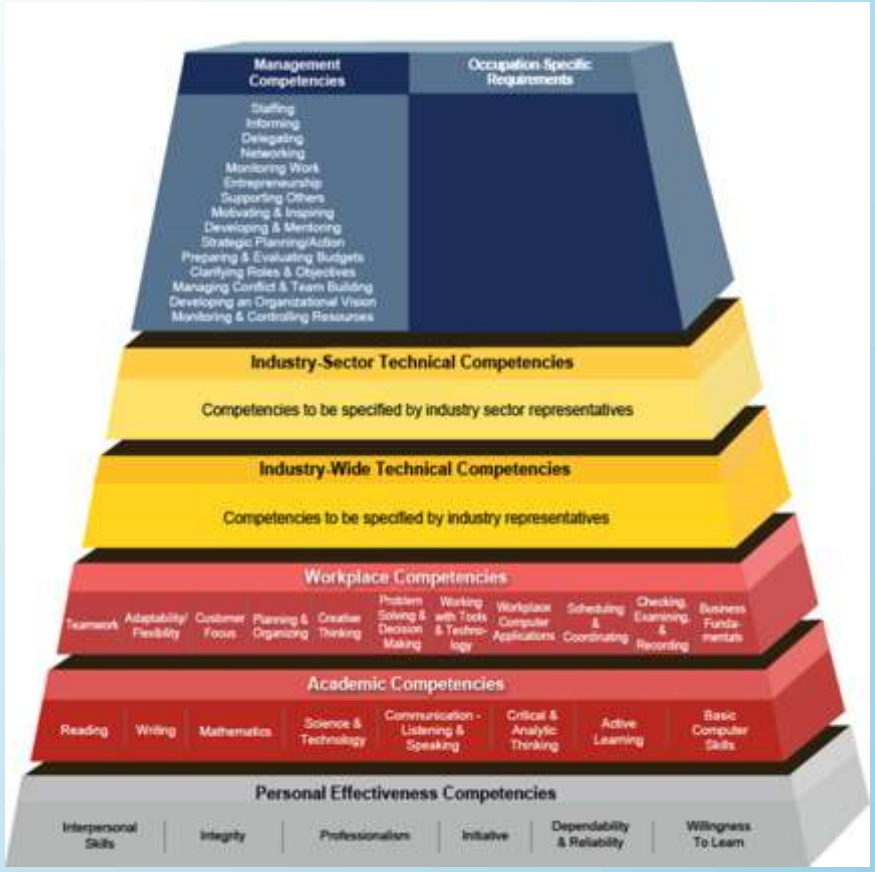
  - PMRI, Inc. (2005). Technical Assistance Guide for Developing and Using Competency Models—One Solution for a Demand=Driven Workforce System. http://www.careeronestop.org/competencymodel/Info_Documents/TAG.pdf

Geospatial Technology Competency Model (GTCM)

- Department of Labor Employment & Training Administration (DOLETA)
  - The GTCM consists of five initial "tiers" of industry competencies
  - Portrays "geospatial" as an interdisciplinary field
  - Industry-specific geospatial expertise is built upon a foundation of more generally applicable competencies
  - The GTCM defines the core competencies and skill sets that every person working in the geospatial profession should possess

A Competency Model is Composed of 3 Major levels

- Occupation Related
  - Tier 9 -- Management Competencies
  - Tier 8 -- Occupation-Specific Requirements
  - Tier 7 -- Occupation-Specific Technical Competencies
  - Tier 6 -- Occupation-Specific Knowledge Competencies
- Industry Related
  - Tier 5 -- Industry-Specific Technical Competencies
  - Tier 4 -- Industry-Wide Technical Competencies
- Foundational Competencies
  - Tier 3 -- Workplace Competencies
  - Tier 2 -- Academic Competencies
  - Tier 1 -- Personal Effectiveness



Tier 1: Personal Effectiveness

- Interpersonal Skills
- Integrity
- Professionalism
- Initiative
- Dependability
- Lifelong Learning

Tier 2: Academic Competencies

- Reading
- Writing
- Mathematics
- Geography
- Science and Engineering
- Communication
- Critical and Analytical Thinking
- Basic Computer Skills

Tier 3: Workplace Competencies

- Teamwork
- Creative Thinking
- Planning and Organization
- Problem Solving and Decision Making
- Working with Tools and Technology
- Checking, Examining and Recording
- Business Fundamentals

Tier 4: Industry Wide Technical Competencies

- Earth Geometry and Geodesy
- Data Quality
- Satellite Positioning and Other Measurement Systems
- Remote Sensing and Photogrammetry
- Cartography
- Geographic Information Systems
- Programming , application development and geospatial information tech
- Professionalism

Tier 5: Industry – Sector Technical Competencies

- Positioning and Data Acquisition
- Analysis and Modeling
- Software and Application Development

GTCM Update - Goal 2.2.1

¿Questions?

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