



GIS CERTIFICATION INSTITUTE



GISP: A Student Perspective

**Presented By: Bill Hodge, GISP
Executive Director GISCI
March 2, 2017
Fanshawe College, Ontario**



GISP – An Updated Perspective



Certification

GISP Certification History

GISP Current Process

Exam Creation

Future Direction





GISP – An Updated Perspective

Why does any certification exist for any industry?

Any existing certification follows a similar path:



HOW DO WE MOVE FROM THE BIRTH OF AN INDUSTRY TO CERTIFICATION?





One certification leads to another

**Managerial
Certification**

**Higher Level
Certification**

**Entry Level
Certification**

**General
Certification**

**Provisional
Certification**



GISP – An Updated Perspective

Certification



GISP Certification History

GISP Current Process

Exam Creation

Future Direction





GISP – An Updated Perspective

CERTIFICATION vs LICENSURE

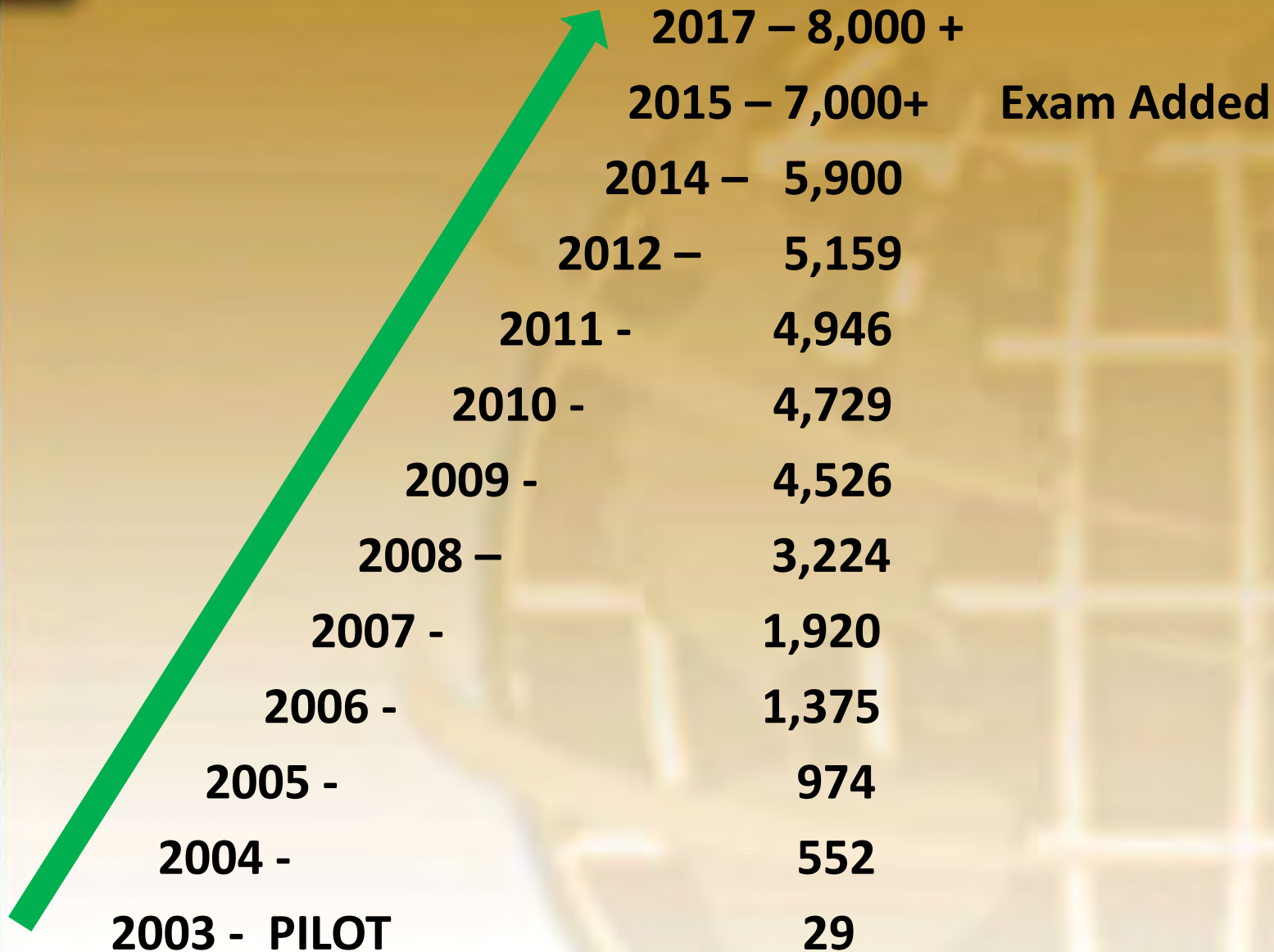
Over 1,600 Certifications Exist

The GISP is our only one!



GIS CERTIFICATION INSTITUTE

ACTIVE GISPs: CERTIFICATION HISTORY





ACTIVE GISPs: CERTIFICATION HISTORY

2004 - 2017 - 8,000 + Active GISPs

**2015 - 2017 - 10,000+ Potential GISPs have registered on
the GISCI site to start/explore the process**

2017 & beyond – 20,000 + by 2024 ?



Board Members

One of the strengths of GISCI has been the strong and diversified Board representation over the years!

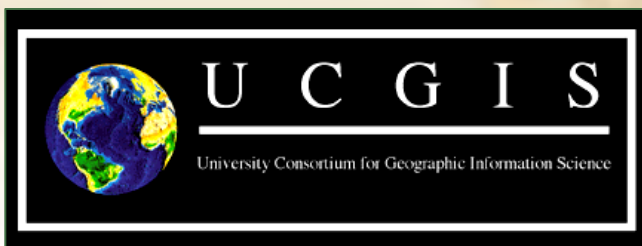
Our current Board makeup reflects that same passion, experience, and service.

**GISCI is composed of Member Organizations &
Strategic Partners**



GIS CERTIFICATION INSTITUTE

Member Organizations





GIS CERTIFICATION INSTITUTE

Strategic Partners 2015





GISP – An Updated Perspective

Certification

GISP Certification History



GISP Current Process

Exam Creation

Future Direction





GISCI Current Process

Initial GISCI: Portfolio Requirement + Exam

- Ethics Statement
- 4 Years Min Geospatial Experience
- Portfolio Application
 - Education, Experience, Contributions
 - Minimum Points Req in Each Category
- **GISCI Geospatial Core Technical Knowledge Exam Now Required**



GISP Current Process

Recertification: Portfolio Requirement

- Education & Contributions Required
- Experience Optional
- Exam Not Required for Recertification

- Online Application
- 3 Year Recertification Period



GISP Current Cost

Initial GISP Cost:

- Application Fee - \$ 100
- Portfolio Review Fee - \$ 100
- Exam Fee - \$ 250 North America
- Exam Fee - \$ 300 International
- 3 Year Certification Period



GISP Current Cost

Recertification Cost:

- Annual Maintenance Fee - \$ 95/year or \$ 285 as one payment
- No Exam Required
- 3 Year Certification Period
- Recertification Application Online



GISCI – An Updated Perspective

Certification

GISP Certification History

GISP Current Process



Exam Creation

Future Direction





Exam Creation History

- Aug 2012 - GISCI Board Selects Exam Development Project Mgr & Psychometric Consultant – Starts Job Analysis**
- Nov 2015 - Inaugural Exam Deployment**
- Summer 2016 - Exam Testing Window**
- Fall 2016 - Exam Testing Window**



Exam Creation

- Written by GISPs for GISP Certification
- Composed at a 4 Year Experience Level
- Centered on Applied Knowledge



Exam Creation Considerations

MAJOR CONSIDERATIONS

- **The Exam is required in addition to the Portfolio Process**
- **Two Exam offerings each year in 2016 & 2017**
- **Exam can be taken at any time in a person's career**

- **Students can test at the time they graduate or before**
- **There is a 6 year window to complete all parts of Certification process**



Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

Conceptual Foundations	12%
Cartography & Visualization	14 %
GIS Design Aspects & Data Modeling	29%
GIS Analytical Methods	17%
Data Manipulation	15%
Geospatial Data	13%

Based on 100 scored items on a 4 hr exam with 180 questions total

Exam to be offered every 6 months – Summer & Fall Windows



Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

Conceptual Foundations

12%

- 101 - Knowledge of spatial relationships
- 102 - Knowledge of standard spatial data models (vector, raster, object-related models)
- 103 – Understanding the conceptual foundations
- 104 - Knowledge of Earth geometry
- 105 - Knowledge of georeferencing systems, including coordinate systems

Cartography & Visualization

14 %

- 206 - Knowledge of contour mapping
- 207 - Knowledge of basic physical geography
- 208 - Knowledge of how data collection methods influence map design
- 209 – Knowledge of graphic representation
- 210 - Knowledge of principles of map design
- 211 - Understanding of how data classification techniques affects the thematic map



Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

GIS Design Aspects & Data Modeling 29%

- 312 - Knowledge of data exchange procedures
- 313 - Knowledge of security restrictions on data
- 314 – Knowledge of database administration
- 315 - Knowledge of systems architecture & design
- 316 - Knowledge of the enterprise environment
- 317 - Knowledge of schemas and domains
- 318 – Knowledge of digital file management
- 319 – Knowledge of database design
- 320 - Knowledge of database general structure
- 321 – Knowledge of geospatial data structure
- 322 – Understanding of desktop, server, enterprise, and hosted applications
- 323 - Working knowledge of GIS hardware and software capabilities
- 324 – Knowledge of data models, including vector, raster, grid, TIN, etc.



Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

GIS Analytical Methods

17%

- 425 - Knowledge of overlay analysis
- 426 - Knowledge of planar geometry (e.g., Points, lines, polygons)
- 427 - Knowledge of algebra
- 428 - Knowledge of statistics
- 429 - Knowledge of basic programming
- 430 – Knowledge of raster/vector principles
- 431 – Knowledge of scales (e.g., visual, verbal, relative, absolute)
- 432 – Knowledge of units of measurement (e.g., conversion & angular vs. metric)



Exam Creation

EXAM BLUEPRINT: Exam Components

Knowledge Category

Data Manipulation

15%

- 533 - Knowledge of selection queries
- 534 - Knowledge of different data types (e.g., shp, GDB, coverage, DGN, TXT, IMG)
- 535 – Knowledge of different field types
- 536 - Knowledge of data relationships
- 537 - Knowledge of data collection
- 528 – Knowledge of data quality, including accuracy, precision

Geospatial Data

13%

- 639 - Knowledge of metadata and standards
- 640 – Understanding of the difference between geospatial QC & QA
- 641 - Knowledge of date archiving and retrieval
- 642 - Knowledge of differences among join, merge, union, clip, intersect
- 643 - Knowledge of basic field data
- 644 – Knowledge of basic field data collection



Exam Creation

PREPARE FOR AN EXAM

- Download and study the Exam Candidate Manual from GISCI's site
 - **Concentrate on the 44 KSAs identified**
- Examine the GIS&T Body of Knowledge for reference material
- Examine URISA's site for Exam Preparation Workshop Info
- Search the web for individual KSA materials
- Refer to your own textbooks and class materials
- Visit previous exam taker's searched materials (link on our site)

https://docs.google.com/document/d/1wifTSbtaR_5oT14U_6aydFmArLp_kML8Fd4IMwqlf8qg/edit?usp=sharing

https://docs.google.com/document/d/1ioKARKLJJpG3IFbPqSqXxNHIdVBh_BTrfiQ-H9ivXs_w/edit?usp=sharing



Exam Creation

PREPARE FOR AN EXAM

- Visit the GeoTech Center website
 - www.geotechcenter.org
- Take the Personal Assessment Tool Online Survey



- Look for a geospatial practice exam early in the 2nd Qtr 2017
- Exam preparation materials will follow

The key is to focus on the 44 KSAs covered – NOT the entire geospatial world!



Exam Creation

ADVANTAGES OF AN EXAM

- Provides for a Measurable Level of Competency
- Provides Increased Visibility for GISP Professional Certification
- Builds Upon The Established, Successful GISP Portfolio
- Provides for Increased Student Participation
- Provides An Entry For Students Early In Their Careers
- Provides A Basis For A Move To More Specialized Certifications
- It Continues To Advance And Consolidate The Profession
- More companies now recognize the GISP as a preferred credential



Exam Creation

ADVICE TO A STUDENTS & ASPIRING PROFESSIONALS

- Start a profile on LinkedIn & maintain it
- Plan to take the GISCI Exam as a means to differentiate yourself
- Join an association while in school and remain active
- Attend a local GIS User Group
- Start planning to become a GISP in the future
- **Show an employer you are looking to the future**



GISP – An Updated Perspective

Certification

GISP Certification History

GISP Current Process

Exam Creation

Future Direction





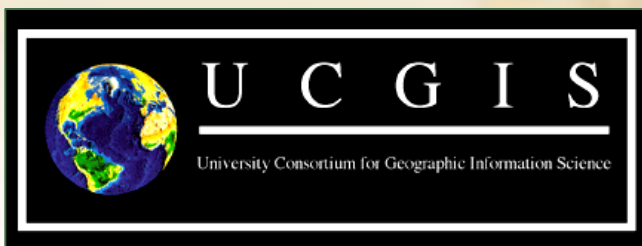
Future Direction

- **Exam Maintenance & Updating**
- **GISP Certification Specializations**
- **Increased International Growth**
- **New Member Organizations**
- **Increased participation - 20,000 GISPs by 2024?**



GIS CERTIFICATION INSTITUTE

Member Organizations





GIS CERTIFICATION INSTITUTE



THANK YOU!

bhodge@gisci.org

www.gisci.org

