GISP UPDATE

Presented By: Scott Swan, GISP (7/25/2006)
IMAGIN Board of Directors
June 2019

GISP UPDATE

2003: GISCI - First GISP certification
2015: GISCI - Core Technical Knowledge Exam®

This session will focus on the value and growth of GIS professional certification and where GISCI and the GISP certification will go from here.

GISP – An Updated Perspective

Certification

GISP Certification History

GISP Current Process
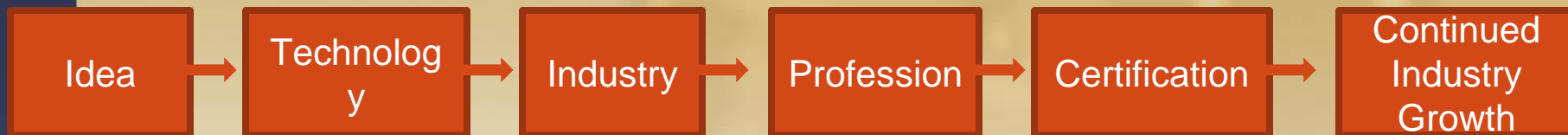
Exam Creation

Future Direction

GISP – An Updated Perspective

WHY CERTIFY?

Professional certification is a process by which a person shows that she has acquired the knowledge, experience, and skills to perform a specific profession.

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

Idea → Technology → Industry → Profession → Certification → Continued Industry Growth

ALL INDUSTRIES FOLLOW THE SAME PATHWAY, REGARDLESS OF TIMEFRAME

One certification generally leads to another

Managerial Certification

Higher Level Certification

Entry Level Certification

General Certification

Provisional Certification

GISP – An Updated Perspective

CERTIFICATION vs LICENSURE

Over 1,600 types of Certifications exist across a myriad of industries

In 2016, approx. 17% of civilian, noninstitutional workers held a certification or license.

(data: Bureau of Labor Statistics 2016)

Board Members

One of the strengths of GISCI has been the strong and diversified Board representation over the years!
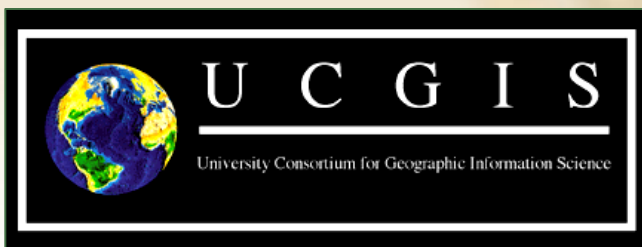
Our current Board makeup reflects that same passion, experience, and service.

GISCI is composed of a group of Member Organizations & Strategic Partners representing the full range of the geospatial community.

Member Organizations

GISP – An Updated Perspective

Certification

→ GISP Certification History

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ACTIVE GISPs: CERTIFICATION HISTORY

Since its inception, the number of GISPs has expanded from 29 in 2003 to over 8,000 GISPs around the world.

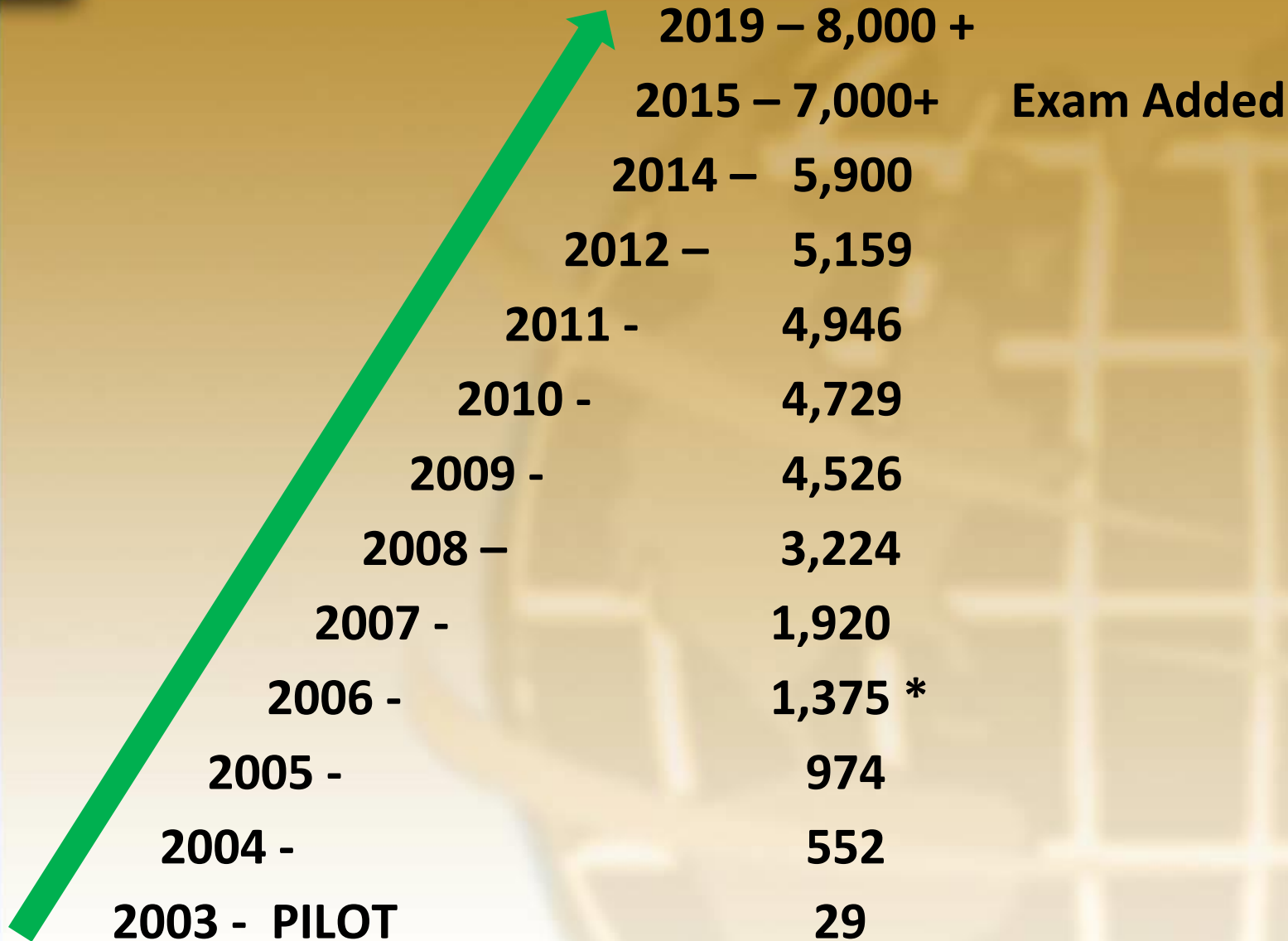**2004 - 2019 - ⟶ 8,000 + Active GISPs**

2015 - 2018 - ⟶ 14,000+ Potential GISPs have registered on our site to start/explore the process since the exam was added

2018 & beyond – 20,000 GISPs + by 2024 ?

GISP – An Updated Perspective

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GISP Current Process

Initial GISP: 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
- Exam Fee - $ 300 International
- 3 Year Certification Period
- **Annual Maintenance Fee of $ 95/yr** starts in the 2nd year of initial certification period

GISP Current Cost

Recertification Cost:

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

GISCI – An Updated Perspective

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Exam Creation History

Aug 2012 - GISCI Board Selects Exam Development Project Mgr & Psychometric Consultant – Starts Job Analysis

Nov 2015 - Inaugural Exam Deployment

Summer/Fall - Exam Testing Windows

The exam is administered twice each year

Exam Creation

- Written by GISPs for GISP Certification

- Composed at a 4 Year Experience Level

- Centered on Applied Knowledge

- Based on the jobs performed by the interviewed GISPs – 44 KSAs* were selected for exam coverage

*KSA – Knowledge, Skills, Abilities

Exam Creation Considerations

MAJOR CONSIDERATIONS

- **The Exam is now required in addition to the Portfolio Process**
- **Two Exam offerings each year in early June & Dec**
- **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 the Certification process once you either pass the exam or get a Portfolio approved**

Exam Creation Considerations

Selection of Knowledge Areas for Exam

- **Started with the GISP community**
- **Used combination of job analysis, DACUMs, focus groups to examine major tasks used in the GISP community**
- **The total number of GIS Knowledge areas exceeds 400+, as defined by the GIS&T Body of Knowledge**

- **GISCI found approx. 10% of total GIS knowledge areas relevant to a GISP professional across the range of GIS certified professionals**
- **44 KSAs (knowledge, skills, abilities) were selected for exam coverage**

Exam Creation

For Comparison: GIS&T Body of Knowledge 2006

GIS&T Body of Knowledge: 400+ topics included

Knowledge Area	Units	Topics
Analytical Methods	12	59
Conceptual Foundations	6	30
Cartography & Visualization	6	27
Design Aspects	7	32
Data Modeling	5	23
Data Manipulation	3	14
Geocomputation	9	40
Geospatial Data	12	47
GIS&T Society	7	21
Organizational & Institutional Aspects	6	32

Exam Creation

EXAM BLUEPRINT: Exam Components selected for testing

Knowledge Category – 44 KSAs Included

Conceptual Foundations	**12%**	**(12 scored questions)**
Cartography & Visualization	**14 %**	
GIS Design Aspects & Data Modeling	**29%**	
GIS Analytical Methods	**17%**	
Data Manipulation	**15%**	
Geospatial Data	**13%**	
	100%	**(100 scored questions)**

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

Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

Conceptual Foundations   12%

- **Knowledge of spatial concepts**
- **Knowledge of standard spatial data models (vector, raster, object-related models)**
- **Knowledge of Earth geometry**
- **Knowledge of georeferencing systems**

Cartography & Visualization   14 %

- **Knowledge of contour mapping**
- **Knowledge of basic physical geography**
- **Knowledge of   how data collection methods influence map design**
- **Knowledge of principles of map design**
- **Knowledge of graphic representation techniques**
- **Understanding of how data classification techniques affects the thematic map**

Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

GIS Design Aspects & Data Modeling   29%
- **Knowledge of data exchange procedures**
- **Knowledge of security restrictions on data**
- **Knowledge of systems architecture & design**
- **Knowledge of database design**
- **Knowledge of geospatial data structure**

GIS Analytical Methods   17%
- **Knowledge of overlay aspects**
- **Knowledge of statistics**
- **Knowledge of basic programming**
- **Knowledge of raster/vector principles**
- **Knowledge of units of measurement**

Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

Data Manipulation   15%
- **Knowledge of selection queries**
- **Knowledge of different data types**
- **Knowledge of data relationships**
- **Knowledge of data collection**

Geospatial Data   13%
- **Knowledge of metadata and standards**
- **Knowledge of date archiving and retrieval**
- **Knowledge of differences among join, merge, union, clip, intersect**
- **Knowledge of basic field data**

Exam Creation

ADVANTAGES OF AN EXAM

- Provides for a Measurable Competency Level
- Industry increased use of GISP as a preferred credential in job descriptions
- Provides Increased Visibility for GISP Professional Certification
- Builds Upon The Established, Successful, Recognized GISP Portfolio
- **Provides for Increased Participation for Students and early career professionals**
- Provides A Basis For A Move To More Specialized Certifications
- **It Continues To Advance And Consolidate The Profession**

Exam Creation

ADVICE TO A STUDENTS & YOUNG PROFESSIONALS

- Start a profile on LinkedIn and start making connections
- Start a Portfolio on the GISCI site and work towards a GISP
- Plan to take the GISCI Exam as a means to differentiate yourself
- Join an association/s while in school – participation counts
- Attend a local GIS User Group

- **Show an employer you are looking to the future**

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 GISCI's link on our site to Exam Information
- **https://www.gisci.org/ExamInfo.aspx**

Exam Creation

PREPARE FOR AN EXAM

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

Personal Assessment

- **A geospatial practice exam is posted on the GISCI site**
- **Exam preparation materials are posted on the GISCI site**

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

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Future Direction

Future Direction

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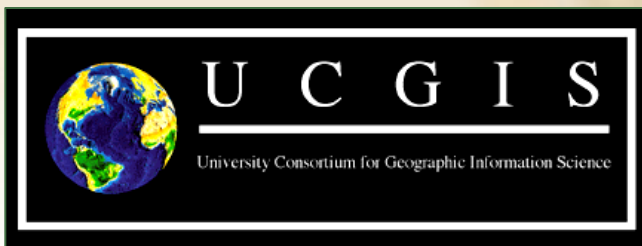
Future Direction

- **Greater Student Involvement**

- **USGS – GISCI GIS Summer Intern Program**

- **Students who register with GISCI & start their Portfolio are eligible for early consideration for GIS Summer Intern positions with USGS**

www.gisci.org/Students/Internships.aspx

Member Organizations

THANK YOU!

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