CREATING A CAMPUS GIS COORDINATION AND TECHNICAL SERVICES PROGRAM AT THE UNIVERSITY OF WYOMING

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VISION
To promote, integrate, standardize and advance the utilization of geographic information systems (GIS) for administrative, management, and service-related purposes throughout the University of Wyoming.

NEED
As campus GIS use increases in both scope and complexity, a need exists for strategic coordination of technical support services, and development, maintenance, sharing and use of geospatial data and applications. Such coordination will be critical for avoiding costly duplication of effort and future incompatibilities, and for realizing economies of scale in creating an enterprise-wide geographic information infrastructure.

The current University Planning III process provides an opportunity to more inclusively link academics, support services, and capital facilities. Coordinated GIS implementation can both benefit from and contribute to such an effort.

CURRENT CONDITIONS

RECENT TRENDS
In the last several years, a growing need has emerged for better coordinated policy and technical support for GIS implementation and use in non-academic applications at the University of Wyoming.

Increasingly, the hardware, software and technical resources of the Wyoming Geographic Information Science Center (WyGISC) have been utilized for non-teaching/research applications on campus. To date, the greatest use of GIS technology outside of teaching and research has
been in the Division of Administration, where the Department of Real Estate Operations (REO) has partnered with WyGISC to design and develop a geo-referenced database of land records and related data for university property holdings, leases, and easements, with an accompanying set of custom query and mapping applications built by WyGISC to streamline REO’s workflow tasks.

Initiated in 2004, the REO-WyGISC partnership has resulted in a data foundation for additional information products to support work by the Physical Plant, Facilities Planning, and Risk Management. Related, cross-department coordination accomplishments include CAD-GIS interoperability protocols and standardized location coding for campus structures and improvements.

**Potential Application Areas**

Similar to growth of GIS applications in teaching and research (stemming in part from interdisciplinary synergy linked to the School Of Energy Resources and the National Center for Atmospheric Research), potential exists for significant additional GIS utility in the Division of Administration, including other aspects of Campus Operations (e.g., Campus Police and Central Scheduling) as well as Facilities Planning and Institutional Analysis.

Potential application areas in other UW divisions include the following:

- **Office of the President**
  - Board of Trustees support

- **Governmental, Community & Legal Affairs**
  - Public Relations

- **Information Technology**
  - Telecommunications

- **Institutional Advancement**
  - Alumni giving
  - Fund-raising strategies

- **Student Affairs**
  - Recruitment targeting
  - Analysis of current enrollment
PROGRAM GOALS

- Assess GIS needs and implementation “readiness” across campus
- Develop strategic plan for campus-wide GIS coordination, including identification of common data and technology needs
- Provide GIS technical support, training and related resources to (academic and) non-academic units
- Establish central repository for commonly required geospatial data and software applications
- Define standards and policies for geospatial data creation, sharing, discovery, access, use and maintenance
- Create and support custom applications and tools to facilitate the use of geospatial information across campus

PROPOSED PROGRAM SCOPE

SERVICES

The following list outlines the range of potential services provided by a campus GIS coordination and technical services program:

COORDINATION

- Needs assessments
- Business planning
- Technology advocacy
- Interdepartmental agreements
- Standards and policies
- Methods development and documentation
- Outreach

TECHNICAL SUPPORT

- Data automation and geo-referencing
- Cartography and geospatial analysis services
- Management of statewide higher education GIS software license
- Software installation and use
- Data model design and management
- Central data repository
- Custom application development
STAFFING AND BUDGET

Staffing and budget for a campus-wide GIS coordination and technical services program is envisioned to include one to two dedicated full-time staff (i.e., a program coordinator and programmer/analyst) with some level of student internship staffing. It is proposed that the program be housed within the Wyoming Geographic Information Science Center to utilize and leverage existing center expertise and computing infrastructure. Annual cost for the program is estimated at $125,000 to $200,000. This assumes a continuation of current funding for the campus-wide ESRI GIS software license ($25,000 annual) and a fully-funded system administrator position at WyGISC.

ANTICIPATED BENEFITS

INCREASED EFFICIENCY

- Standards and protocols support streamlined data development
- Policies and agreements facilitate and expedite sharing of data
- Centralized data holdings decrease time spent discovering and accessing data

MORE EFFECTIVE DECISION MAKING

- Standards and protocols result in better quality data
- Users provided with better understanding of appropriate uses and limitations
- Place-based approach supports better informed decisions
- Accessible maps and geographic visualizations support analyses and communication

CAPACITY BUILDING DONE RIGHT

- Prevention of isolated “stove pipe” implementations
- Elimination of redundancy in data development, storage, and maintenance
- Smaller long-term investment by building upon existing infrastructure and expertise
- Coordinated knowledge base supports broad technology integration
- As GIS needs increase, scalable framework can be expanded with additional resources

SUPPORT FOR UP-III GOALS

- Links academic, support services and capital facility implementations
BIBLIOGRAPHY


