

Geographic Information Systems (GIS) Services

Services provided in this category would be in support of a geographic information system (GIS). GIS is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data in maps, and present the results of all these operations.

Resource skills and experience include the following:

- Expertise in the complete system development life-cycle from conceptualization through requirements definition, design, development, testing implementation, maintenance, and user training as it applies to Geographic Information Systems (GIS) related technology and data in support of State business needs. (Resource/skillset needed: GIS application development, data modeling, data analysis, security analysis, GIS administration, technical design/architecture.)
- Expertise with GIS software such as: ArcGIS, ArcObjects, ArcGIS Server and ARCIMS.
- Application programming expertise in such GIS programming languages as: C++, Visual Basic, Visual C#, Java, JSP, ASP, XML, GML and Cold Fusion.
- Expertise in this category also includes GIS database design, use of ESRI's SDE, data conversion and management, Internet mapping and remote sensing.
- Providing GIS services consistent with the OCIO Geographic Information Technology Policy and Standards Process, OCIO Geographic Information Technology Standards for Horizontal Datum and Coordinate System, and OCIO Geographic Information Technology Standards for Metadata.
- Proficient in use of Information Engineering tools and methodologies.
- Completing conceptual, logical and physical data models using Entity Relationship and/or UML Class Diagrams.

Technical skills and experience in this category include but are not limited to the following technologies:

- ARCIMS Internet map server
- ARCGIS Server
- ERDAS Image Processing Products
- ESRI ArcGIS
- ESRI ARC/INFO and AML
- Microsoft Visual Interdev
- Microsoft .Net application languages including Visual Basic and Visual C#
- Microsoft Visual Basic for Applications
- Java/JSP
- Tomcat/Apache
- Other ESRI/Suite of products & tools
- IIS
- Apache/Tomcat
- Windows/Unix/Linux
- Python scripting
- Cartography and map production
- Advanced spatial analysis techniques
- Expertise with mobile computing and its application to GIS