



# Chicago Metropolitan Agency for Planning

433 West Van Buren Street  
Suite 450  
Chicago, IL 60607  
  
312-454-0400  
cmap.illinois.gov

**Job Title:** GIS Architect

**Grade:** 7

**Reports to:** Deputy Executive Director of Data

**Department:** Data

**FLSA Status:** Exempt

**Effective Date:** March 2026

## **Job Summary:**

The GIS Architect is responsible for designing and building CMAP's geographic information systems platform, data pipelines, and analytical frameworks.

## **Duties/Responsibilities:**

### **Organizational Stewardship:**

- Fosters communication between planning and policy stakeholders with geographic questions and the technical systems capable of answering them.
- Builds organizational awareness of spatial thinking as a core planning competency.

### **Communications/People:**

- Creates documentation and architectural diagrams that communicate system design to both technical and non-technical audiences.
- Assess the spatial analysis needs of CMAP staff and external partners and translates them into technical requirements
- Presents spatial analysis findings to non-technical audiences including elected officials, community stakeholders, and agency leadership in compelling formats.
- Collaborates to embed spatial joins, geocoding, and geographic aggregations into Python/R data pipelines and analytical workflows.
- Designs and delivers training for staff with various levels of GIS familiarity including basic map reading to intermediate spatial analysis.
- Develops self-service spatial tools and templates that empower staff to answer common geographic questions independently.

### **Execution/Project Management:**

- Assesses CMAP's current GIS state and develops a phased capability roadmap from foundational mapping through advanced spatial analytics.
- Implements data standards, metadata protocols, and spatial data governance frameworks to ensure long-term data quality and interoperability.
- Identifies opportunities to apply emerging spatial analytics approaches including network analytics, suitability modeling, and scenario development to CMAP's priority areas.



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- Maintains technical documentation, user guides, and onboarding materials for all GIS systems and datasets.
- Manages vendor relationships, software licensing, and procurement processes for GIS-related technology investments.
- Monitors budget and resource implications of proposed platform expansions, providing cost-benefit analysis to inform leadership decisions.

## **Subject Matter Expertise/Technical Skills:**

- Designs and develops CMAP's enterprise spatial data infrastructure, ensuring scalability, integration with existing data science tooling, and alignment with agency-wide data governance policies.
- Evaluates, recommends, and implements GIS platform technologies (ArcGIS, etc.) that integrates with CMAP's existing data science environment.
- Develops a data architecture that connects spatial datasets internally and externally with partner agencies, and public data sources.
- Designs Application Programming Interface (APIs) and data pipelines that allow non-GIS tools and staff to consume spatial data without manual GIS workflows.
- Develops user personas and use-case frameworks to prioritize GIS platform features based on actual planning workflows.
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- Develops user personas and use-case frameworks to prioritize GIS platform features based on actual planning workflows.
- Develops open data, dashboards, story maps, and interactive spatial applications that make geographic data accessible to staff and the public without GIS expertise.
- Develops reusable spatial analysis modules and notebooks that allow non-GIS data scientists to incorporate geographic dimensions into their work.
- Builds and maintains spatial datasets and analytical layers supporting transportation modeling, land use analysis, demographic research, and environmental assessments
- Evaluates emerging technologies including AI-assisted spatial analysis and conversational GIS interfaces and advises leadership on appropriate adoption timelines.

## **Required Skills/Abilities:**

- Ability to use clear communication to communicate effectively, both verbally and in writing.



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- Ability to work collaboratively with internal and external partners, agencies, and communities and maintain effective harmonious relationships.
- Ability to work effectively in a hybrid environment promoting resourcefulness and efficient practices.
- Knowledge of computer systems and application tools, including Microsoft Office products.
- Ability to efficiently manage work, projects, and multiple responsibilities to meet deadlines and agency expectations.
- Demonstrated experience presenting technical analysis to non-technical audiences
- Proficient with enterprise GIS platforms including Esri, ArcGIS Enterprise and spatial data management.

## **Education and Experience:**

- Bachelor's degree in geography, urban planning, computer science, information systems or related field, 6 years professional experience, master's degree preferred.
- GISP certification preferred.

## **Physical Requirements:**

- Prolonged periods sitting at a desk and working on a computer.