

Florida Department of Transportation Research

Enterprise Geographic System (GIS) for Transportation
BDI40 (9/07)

FDOT applies Geographic Information System (GIS) data in most of its business processes. However, the central and district offices of FDOT have developed separate GIS data gathering, management, and application systems. There is no mechanism that allows these offices to integrate their GIS data systems. The disconnected systems have resulted in redundant data storage and applications and, consequently, inefficient work flow. FDOT needed to determine the need for an enterprise GIS system and the best way to develop such a system.

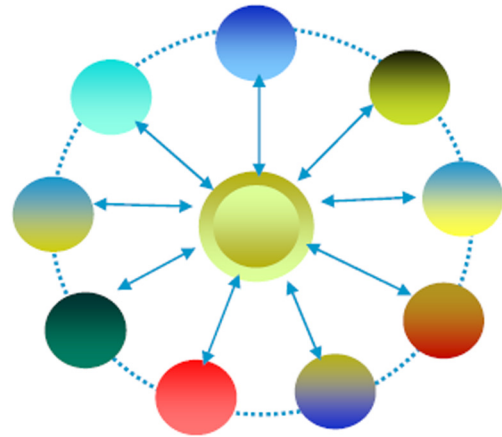
Researchers from Cambridge Systematics reviewed all the GIS systems currently in use at FDOT. They interviewed FDOT personnel regarding the utility of the available systems and improvements that could be made. The findings indicate that some members of FDOT are not fully aware of the function, purpose, and potential benefit of an enterprise GIS system. The researchers also found that in some locations, efforts to explore the possibility of developing enterprise systems had been initiated. The present study, however, marks the first step in bringing together all of these localized efforts and establishing a framework for the department as whole.

The researchers conducted a cost-benefit analysis of four different options for creating an FDOT enterprise GIS system. The options included the following:

1. No new system - keep the status quo.
2. A pseudo-enterprise GIS, which sets up

a statewide data inventory and recommends data sharing procedures. Local offices would determine their level of cooperation.

3. A distributed enterprise GIS with decentralized architecture and data storage. Local offices would follow statewide FDOT enterprise standards for data quality, format, and access.



Option three structure diagram

4. An enterprise GIS with a centralized data repository, procedures, and management.

The researchers recommended option three and prepared an implementation plan for it. This option, according to the cost-benefit analysis, would repay the cost of implementation more quickly than the other options, and it fits well into the decentralized departmental structure.

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