QuTech Customer Case Study

▸ **Client:** U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS), Center for Emerging Issues (CEI), Geographic Information System (GIS) Group

▸ **Client Scenario:** The APHIS Veterinary Services, GIS group created maps and provided critical mapping and spatial analysis support during the 2002-2003 outbreak of exotic New Castle Disease in Southern California. However, the creation of maps for surveillance efforts became a time consuming task that often pulled key personnel away from other critical responsibilities. For future animal health emergencies, they needed a web-based centralized mapping tool or kiosk that could provide epidemiologists and other emergency response personnel with essential tools for generating commonly requested maps. This requirement necessitated contracting out for state-of-the-art GIS solutions and support.

▸ **QuTech Solution:** QuTech developed a professional, modern looking and user-friendly web-based application (MAP Kiosk) and updated the enterprise spatial database (VSAtlas) so that the agency would be better prepared for the next animal health emergency. The map kiosk was designed to be scalable and extendable so that additional functionality could be easily added and was extremely well-received by the APHIS stakeholders.

The overall system supported access to existing mission critical databases such as Engineering Management Reporting System (EMRS) and VS Atlas using ArcSDEas the underlying spatial database engine. In order to support multiple users, the system was developed to correctly handle multiple simultaneous requests and was designed to allow for integration of new mapping templates over time. QuTech completed the research phase by meeting with the GIS Group to formally capture the systems requirements as Use Cases using an industry standard Object Oriented Analysis and Design (OOAD) methodology. This approach was successfully implemented with the GIS staff in developing the VS Atlas database and supporting client-server toolsets. In addition, QuTech compared options for developing the system using a more traditional desktop based approach using ArcMapwith what then available in ArcGISServer.

Once the overall system design had been agreed upon, QuTech delivered the solution in an iterative and incremental fashion, while fully documenting the process. Based on milestones identified during the research phase, we delivered beta versions of the system to allow maximum feedback from users and the GIS staff. Development of the map kiosk application used standard practices for software development.

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