SYNECTICS
FOR MANAGEMENT DECISIONS, INC.

NITAAC **CIO·SP3**
OMB Authorized GWACs for IT Acquisition | SMALL BUSINESS
SERVICES/SOLUTIONS

Bringing EXPERIENCE, INNOVATION, and RESULTS

Software Development

Synectics has designed, developed, and operated custom software solutions for HHS and other federal agencies for more than 30 years. We have developed systems ranging from relatively simple, single-user, stand-alone applications to highly complex systems that support thousands of named users in multiple agencies.

Synectics developed a federal grants management system for an HHS agency that replaced almost 40 legacy, stand-alone systems. These legacy systems operated on various operating systems and were written in a wide variety of programming languages and several different database management systems. Synectics designed, developed, and deployed a single, integrated system based on the Oracle RDBMS that supported each of the grant programs in operation at this agency.

This system was subsequently chosen by HHS, after a comprehensive analysis of alternatives, for department-wide deployment, and it was later selected by OMB as a government-wide GMLoB solution. Synectics is currently supporting and extending automated grants management solutions for a wide variety of external federal agency partners.

Synectics was awarded an "Outstanding Contractor of the Year" by HHS on the strength of an enterprise management system that we developed and currently support. This system was developed utilizing an enterprise architecture (EA) model. Synectics also has designed, developed, and currently operates significant IT solutions designated by HHS as health IT investments. These include automated systems that support the Drug Addiction Treatment Act (DATA) and the Behavioral Health Services Information System.

The table below cites our Task Area 10 Software Development capabilities under our CIO-SP3 SB contract.

Requirement	Experience and Qualifications
Requirements Analysis, Design, Coding, and Testing	Provide industry standard SDLC support processes—including the HHS Enterprise Performance Life Cycle (EPLC)—for requirements gathering for the continued development and maintenance of software and database applications. Promote a collaborative, stakeholder-involved approach to system planning, design, and implementation. Our projects undergo formal requirements analysis, design, coding, and testing phases before deployment. Perform a wide range of test types including regression testing to ensure that system calculations and form field validations are performed, load testing to ensure adequate system performance under widely varying workloads, and usability testing to ensure that end users understand and are quickly able to make productive use of the system. Also conduct Section 508 compliance testing to ensure that systems are accessible to visually impaired users and perform overall unit, system, and user acceptance testing to ensure smooth, end-to-end system operations prior to delivery.
Production Deployment	Ensure that system modifications are installed and made operational in a production environment. Refine the system until it operates in production according to the defined user requirements. Conduct pre-deployment readiness reviews prior to implementing the new system or enhancement in a production environment.

Requirement	Experience and Qualifications
Application Prototyping	Application prototyping processes involve creating and validating technical solutions and business processes with test groups prior to finalizing the full solution and rollout to the government and citizen community. To assess fiscal and program risk associated with specific applications, a centralized risk management module was conceived from a manual process used within a single geographic region. Prototyped and validated the applications with representatives from 12 regions, resulting in the evolution of a manual process to an enterprise-wide solution for all regions.
Administration and General Decision Support Software	Provide hardware technical support for network servers—responsible for monitoring performance of installed applications and servers, administering vendor changes/patches, and conducting performance tuning. Use administrative and general decision support software to support decision making for State and local governments in terms of targeting prevention dollars; business intelligence and analytics.
Business Intelligence and Analytics	Use COTS and Open Source software for data mining, data analysis, and creating standard and ad hoc reports. Data warehouses facilitate data mining through BI tools (such as Cognos, Business Objects, Oracle BI, SAS BI). By eliminating or federating isolated data silos, data marts and data warehouses provide an architecture for reviewing data in both near and real-time environments.
GIS-Enhanced Planning and Program Evaluation Software	Supported the evaluation and implementation of GIS software for graphing and producing maps. Evaluate software and graphics to support decision making for State and local governments. The implementation of the GIS provided a snapshot of State- and county-level data for increased surveillance and monitoring. Designed, developed, and deployed databases to support GIS software.
Web 2.0 Development and Management	Use the latest Web 2.0 technologies to assist with custom programming tasks such as dynamic in-memory generation of Excel Workbooks and charts that stream to the client browser. Implement Internet-based user interfaces for monitoring Web site usage statistics and analysis. Developed a rich Internet application that is based on SOA and qualified as a Social Web for G2B, G2C, and G2G collaboration. Ajax and XML methodologies are used for asynchronous data retrieval and page loading, which allows for robust offerings. RSS data feeds and Web Services are part of the SOA.
Database Development and Management	Our certified DBAs design, build, maintain, and tune databases using various COTS and open source tools. Administration and management responsibility is formally assigned to our DBAs.