Knowledge Based Systems, Inc.

Knowledge Based Systems, Inc. (KBSI) is a dynamic engineering and system analysis, consulting, and systems/software development company specializing in business process redesign, production optimization, corporate integration of software, and technical service support.

We have more than two and a half decades of experience in systems analysis, design and development and in developing cutting-edge technologies for business process analysis, discrete event simulation, process modeling and analysis, data mining, activity based costing, workflow optimization and system engineering methods in a host of government and commercial projects.

Providing *solutions*, however, means more than providing the latest technology. Our success in helping clients realize sustained process improvement is a product of our commitment to their business. We take a customer-centered approach that ensures we not only understand the challenges faced by our clients, but that, as partners, we work together to design and implement the right solutions for their needs and develop their capabilities for sustained improvement in the future.

Our history reflects our capability and determination to complete projects on schedule, within budget, and with high quality results.

Leadership Statement

Byon Williams, Director of Marketing and Sales
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Solutions   Services   Research

Company Capabilities

Knowledge Based Systems, Inc. (KBSI) provide services for a wide range of enterprise needs including business process analysis, project and cost management, activity based costing, process and data modeling, discrete event simulation, workflow optimization, and functional analysis.

Our capabilities include the following areas:

- 3-D Modeling and Solid Modeling

- Asset Management

- Building Information Modeling (BIM)

- Control Systems

- Cost Modeling and Analysis

- Cyber Security and Threat Detection

- Data Mining, Knowledge Discovery, Forecasting

- Decision Support Systems/Decision Making

- Energy Management

- Health Informatics

- Information Data Modeling

- Inventory and Supply Chain Management

- Knowledge Management

- Multi-sensor Integration and Design

- Natural Language Processing

- Optimization

- Persistent Power

- Planning and Scheduling

- Process Analysis and Design

- Production Management

- Semantic Technologies / Ontologies

- Simulation Modeling and Analysis

- Simulation-based Training

- Systems Engineering and Methods

- Systems Integration

- Visualization and Display

Solutions   Services   Research

Despite the diversity of size, purpose, and need among our clients, they all share a few common goals. Recognizing the best way to achieve these goals for each individual client is the foundation of our customer-oriented approach.

- *Workable Solutions, not Unrealizable Ideals:* Picturing the perfect information system or manufacturing process isn't difficult. In the real world, however, an enterprise must operate within resource, time, expense, technology, and personnel constraints. KBSI professionals identify and analyze individual *client* needs and design and implement solutions to meet *those* specific needs.

- *Sustained Performance Improvement:* Consulting firms typically recommend changes with immediate savings in mind, but these changes often don't address the needs of a growing company's long term goals— the quickest route to a profitable bottom line is not necessarily the best route for reaching long term goals. We thoroughly analyze our client's enterprise processes, establishing the foundation for a client- oriented solution that can evolve to meet their changing business needs.

- *Measurable Results*: KBSI provides solutions that help our clients realize quantitative results: *revenue growth, shorter lead times, lowered cost, high-quality performance, and enhanced information management and control*, to name a few. We apply proven standard methods, techniques, and technologies; use *open architecture* implementation concepts; and assist our clients in effectively *managing change*.

Core Advantage

- *Building Client In-house Capabilities:* Introducing new technology without proper training and employee buy-in could leave an enterprise dependent on consultants for their continued development. KBSI understands that our clients know their business best, and we work with clients to build a *corporate knowledge* base. This helps enterprise personnel to more seamlessly adopt the solution systems and adequately understand how those systems work.

Helping our clients meet the needs of *their* clients.

Solutions   **Services**   **Research**

Clients & Partners

For more than two and a half decades, KBSI has been successfully performing research, technology development, and consulting and training initiatives with a host of government and commercial organizations. An abbreviated list of our clients and partners includes:

- Corpus Christi, Anniston, and Letterkenny Army Depots

- NSF, NIST, and DARPA

- The Department of Health and Human Services

- The American Red Cross

- General Motors, Chrysler Motor Corporation, and Ford Motor Company

- Faraday Technology

- Digital Equipment Corporation

- SEMATECH Consortium

- Army PEO Aviation, AMCOM, and Redstone Arsenal

- Lockheed Martin Corporation

- U.S. Army Space and Missile Defense Command

- The Boeing Company

- Defense Logistics Agency

- Texas Instruments

- Federal Aviation Administration

- Bollinger Shipyards, Vigor Shipyards

- Air Force Research Laboratory

- Tinker, Edwards, Hill, Warner Robins, Wright-Patterson, Eglin, and Patrick AFBs

- ONR, NSWC, NAVAIR, and NASA

- SAIC, and DRC

- AMARC

- SPAWAR

- USA Medical Research and Materiel Command

- S&K Technology

- Missile Defense Agency

- Computer Sciences-Raytheon

- Office of Naval Research

- Vanderbilt University

- United Space Alliance

- Aberdeen Proving Grounds Research Laboratory

- Brooke Army Medical Center

Solutions　　　　　　**Services**　　　　　　**Research**

Founded in 1988, KBSI has a mission focus of turning research and technology development results into fielded and supported commercial applications. Our reputation for research excellence comes from our history of implementing solutions in more than 450 research and development efforts for a wide array of clients.

In the Air Force funded Information Integration for Concurrent Engineering (IICE) project, KBSI developed the engineering foundations, Integration Definition methods and tools, and migration frameworks for next-generation manufacturing and logistics environments. This early success inspired the development of our IDEF tool suite; IDEF methods and tools are now the standard for process, activity, information, and data modeling and analysis world-wide.

KBSI's research work has focused on developing decision support tools and frameworks for predicting and managing asset failure rates; process modeling and simulation tools using knowledge based simulation model design environments; algorithmic development for manufacturing systems and simulation engines; principals and practice for repair and depot asset sustainment as well as systems that improve asset visibility, coordination, resource planning, and scheduling.

Our Blood Availability and Safety Information System (BASIS) demonstrates our commitment to transitioning research into commercial solutions. The OSD-funded Assessment, Tracking, and Management System (BRAMS™) allows users to collect blood data, manage blood inventories, and optimize blood supply chains using advanced analytics. The commercial BASIS technology has a Protected Critical Infrastructure Information (PCII) certification and is the Department of Health and Human Services' portal for civilian and military blood inventory management and tracking across the globe.

KBSI has received a number of awards and industry accolades including the 1999 Army Aviation Association of America Aircraft Support Contractor of the Year, the 2010 Army Small Business Innovation Research Achievement Award for successfully implementing a unified modeling and experimentation framework for combat systems maintenance concepts, manpower and capacity planning, and the ITC's 2010 and 2011 Laurence Rauch Award for excellence in telemetering standards research.

Our Story

Corporate Offices

KBSI's corporate and business offices, research and development center, and marketing and sales operations are located in College Station, Texas. KBSI also maintains offices in Oklahoma City, Oklahoma to support consulting, training, and software tools primarily for the Tinker Air Force Base, the Oklahoma City Air Logistics Center, and local area manufacturing industries; and in Dayton, OH to support our ongoing efforts at Wright-Patterson Air Force Base, the Air Force Research Laboratory, and the National Air and Space Intelligence Center.

Solutions   **Services**   **Research**

Core Competencies

KBSI's creative team of researchers, analysts, and developers brings a wealth of experience to the unique needs and challenges of our clients.

Solutions

KBSI creatively applies cutting edge research and technology in delivering custom services and software solutions to clients world wide. Our approach focuses on understanding our client's needs by forging a partnership: by involving our clients in each phase of the project—from capturing how they do business to analyzing how they might improve it. Our solutions center on our business suite of software tools, which balance structured knowledge capture and analysis techniques with user friendly functionality and plug and play extensibility. We reject generic, one-size-fits-all solutions and strive to develop methods and technologies that place each client's unique needs at the center of the solution.

Services

KBSI's services focus on transferring institutional knowledge to each client. Our tool and solution training programs, such as Train the Trainer, develop training examples specific to each client's solution or technology implementation. KBSI consulting services take a mentoring approach, teaching clients the necessary methods and approaches for meeting their business goals. IT and software development services build custom software and provide web application and hosting solutions that are geared to each client's needs. You can contract services with KBSI using an array of government-approved contracting vehicles or by contacting KBSI directly.

Research

KBSI's research success reflects an environment that values inquiry, problem-solving and innovation—important aids in deciphering needs and crafting solutions for our clients. Our dedicated team of research scientists applies expertise in a variety of disciplines, including mechanical, industrial, electrical, and manufacturing design; systems design and analysis; computer science; management science; and technical communication. This diverse experience enables us to think innovatively about our clients' needs and to develop creative solutions that continually advance the state of the art in process analysis and improvement, cost modeling, simulation, artificial intelligence, and data mining. We solve the hard problems others can't.

A comprehensive approach to researching, developing, and implementing solutions.

Solutions   Services   Research