**Knowledge Based Systems, Inc.**

**Knowledge Based Systems, Inc. (KBSI)** is a dynamic engineering and system analysis, con- sulting, and systems/software development com- pany 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 tech- nologies for business process analysis, discrete event simulation, process modeling and analysis, data mining, activity based costing, workflow optimi- zation 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 improve- ment is a product of our commitment to their busi- ness. We take a customer-centered approach

that ensures we not only understand the chal- lenges 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 determina- tion to complete projects on schedule, within bud- get, and with high quality results.

**Leadership**

**Statement**

**Byon Williams,** Director of Marketing and Sales

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**Solutions Services Research**

**Knowledge Based Systems, Inc. (KBSI)** pro- vide 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

**Company**

**Capabilities**

• 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**

For more than two and a half decades, KBSI has been successfully performing research, technol- ogy development, and consulting and training ini- tiatives 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

**Clients &**

**Partners**

• 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 excel- lence comes from our history of implementing solutions in more than 450 research and develop- ment efforts for a wide array of clients.

In the Air Force funded Information Integration for Concurrent Engineering (IICE) project, KBSI developed the engineering foundations, Integra- tion 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 predict- ing and managing asset failure rates; process modeling and simulation tools using knowledge based simulation model design environments; algorithmic development for manufacturing sys- tems and simulation engines; principals and prac- tice for repair and depot asset sustainment as

well as systems that improve asset visibility, coor- dination, resource planning, and scheduling.

Upgrading your yard’s production planning organization, process, and output to industry best practices will yield improved work package accuracy, better manpower and resource allocation and improved schedule and budget realization. Our implementation of modern production planning methods in other industries has resulted in documented savings of over 30%.

KBSI has received a number of awards and industry accolades including the 1999 Army Avia- tion Association of America Aircraft Support Con- tractor of the Year, the 2010 Army Small Business Innovation Research Achievement Award for suc- cessfully 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 stan- dards 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**

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 soft- ware 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 captur- ing how they do business to analyzing how they might improve it. Our solutions center on our busi- ness suite of software tools, which balance struc- tured 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 tech- nologies 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 con- sulting 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 vehi- cles or by contacting KBSI directly.

**Core**

**Competencies**

**Research**

KBSI’s research success reflects an environment that values inquiry, problem-solving and innova- tion—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, indus- trial, electrical, and manufacturing design; sys- tems design and analysis; computer science; management science; and technical communica- tion. 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, arti- ficial intelligence, and data mining. We solve the hard problems others can’t.

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

**Solutions Services Research**