



# Kline Technical Consulting LLC

## Military Organizations Gain Quick-Turnaround, Expert Analysis with Kline Technical Consulting

**Challenge:** Military organizations often require expert engineering and program analysts to evaluate ongoing, critical programs and ensure the readiness, reliability, and efficiency of those programs.

**Solution:** By partnering with Kline Technical Consulting (KTC), military organizations benefit from proven, quick-turnaround, and in-budget engineering and program analysis.

**Application Area:** Physical Security, Electronic Warfare, IT Systems

*“The long-standing relationship between DSSI and KTC grew stronger through KTC’s consistent, successful project completions and engineering and technical expertise. KTC not only helps analyze our business, but also has developed and implemented management and technical solutions. Their results-driven methodology and deep understanding of military applications serves us well, time and again.”*  
– **D. Armstrong, Dynamic Service Solutions, LLC**

### Areas of Engineering Analysis Expertise

- **Physical Security:** KTC is well studied in areas including ceramics-based composites with patents in ceramic materials, explosives and explosive impact models, and ballistic/explosive reactive materials.
- **Electronic Warfare:** KTC engineers have decades of experience in electronics – defending and testing network systems – and are trusted partners to many federal agencies.
- **IT Systems:** KTC specializes in working with and monitoring software. KTC teams have created virtual emulation systems for complex systems, designed and fielded electronic warfare control and deployment systems, and developed security monitoring software packages.

### Background:

The US government has relied on KTC’s expertise since the mid-1960s for organizations including the Navy, Army, Air Force, DOJ-FBI, ATF, and the intelligence community.

### Process:

When military organizations see a need for an analysis of their practices or programs, they typically have two options:

- Internally seek out, identify, and qualify the technology and expertise required for analyzing each component of the program based on its intended use and goals
- Choose a third-party partner with the expertise to analyze each piece of the program and its technology accurately

Military organizations often prefer to use KTC, a third-party partner, because of KTC’s long-standing history with the military, the company’s ability to develop and implement new solutions to remedy any systems that proved unready, unreliable, or inefficient through the analysis, and its straightforward pricing. As a government-listed contractor, KTC has an approved rate schedule, so a customer knows exactly how much it will cost to complete a job.

### **Proven Examples:**

KTC's expertise in engineering analysis includes evaluating program design; modeling of characteristics as diverse as thermal change, vibration, propagation of shock, blast dynamics, hypervelocity impact, fuel-air mixing, and dispersion; and testing fundamental electronic control of high-speed processors through simulation. This expertise is supported by the ability to design, fabricate, and field programs and products that implement improved capabilities if the customer chooses to make changes after the results of the analysis.

In the last two decades, multiple U.S. military organizations have used KTC to analyze a variety of physical security, electronic warfare, and IT systems, including:

- *1990-2002, Department of Defense (DOD) and Department of Commerce (DOC)*  
The DOD requires that the country have adequate ceramics production capability to use in military switches for high-power/high-gain systems, in laser systems, and in high-band-gap electronics. The DOD partnered with the DOC/NIST to conduct annual reviews, and used KTC as an independent, proven expert to review its military ceramics production capability in the U.S. This analysis helped the DOD understand the country's level of readiness in case of national emergency.
- *1999-2004, Federal Bureau of Investigation (FBI)*  
For the FBI, KTC conducted accurate, periodic analyses and briefings on the state of thin film battery development and potential applications in the U.S. and abroad.
- *2006, National Science Foundation (NSF)*  
At the Antarctic IceCube Neutrino Observatory, teams were looking for point sources of neutrinos in the TeV range to explore very high-energy particle movement. The NSF hired KTC to complete an independent analysis and projection of expected success of the teams at the IceCube site and their stateside support through the University of Wisconsin at Madison.
- *2008-2010, US Army Corps of Engineers (USACE)*  
KTC helped the USACE conduct an engineering analysis to test the reliability of an electrical power generation infrastructure in Iraq as the USACE rebuilt it. And, KTC worked with prime vendor Wintara to create a SCADA remote monitoring system for the infrastructure.
- *1985-2010, Department of Energy (DOE) and DOD*  
The DOE and DOD sought KTC's analysis and recommendations for new approaches to personnel and nuclear material security at critical-defense nuclear operations.
- *2008-present, Department of Homeland Security (DHS)*  
The DHS used KTC to conduct assessments and provide new ideas for secure portals and perimeter security at specific office buildings and complexes. The DHS then hired KTC to implement the recommendations at certain installations.

### **Deliverables:**

Because KTC has found that the best modeling and analysis tools are those that apply directly to the customers' software and control systems, KTC teams use their expertise, rather than proprietary toolkits, to conduct analysis. With this approach, the customer gets an analysis that is in the format that the customer uses, providing a deliverable that is more easily understood than an analysis partner who uses its own, proprietary tools. KTC's deliverables exactly fit the customer's internal language, systems, and operational processes.

**Results: KTC**

customers realize time and cost savings with a proven, third-party analysis partner, and can be certain that their projects will be completed on time and on budget.

**KTC: A History of Military Analysis**

From assessing and renovating turbine electrical generator plants in Iraq, to analyzing efficacy of software programs for electronic warfare and missile guidance systems, to designing classified IT frameworks, KTC has proven itself to various U.S. government groups as a trusted engineering and program analysis expert.

*“Military organizations enjoy working with our teams because we understand where they’re coming from and where they need to go. Our expertise with the military runs deep. We speak their language and can not only evaluate their processes and systems, but create realistic, implementable solutions to make them more ready, reliable, and efficient.” –Dr. Robert Kline*