

Even "The Best in Class" Defense Technology Systems can Fail:

Miss this 1 critical component and
your systems will sit in storage



Dedicated to the same ideals as those we serve

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Executive Summary

Are you a small to mid-sized Original Equipment Manufacturer (OEM) looking to deploy new technology systems outside the Continental U.S. (OCONUS)? Have you already deployed such systems with minimal to average success? You could be failing to plan, or simply just failing a critical component!

Proper planning, deployment and the highest quality support for security screening and detection systems are all critical to the success rate. **However, when timely, calculated support falls short... Well, there are no second chances.**

A Situation You Want to Avoid

One OEM introduced a top quality security system. DoD placed an order for a large number of systems which were then deployed into the war zone in the heart of Afghanistan. They did not resolve the top 4 challenges OEM's face OCONUS. Training was minimal, at best. Parts arrived late, if at all. Downtime was excessive.

As a result, Operational Readiness (OR) Rate was low and compromised safety. The military wasn't supported and protected properly by the systems. They were no longer deployed and they sit OCONUS on pallets gathering dust. **Millions of dollars worth of critical security systems ended up in storage!**

Top 4 Challenges

This white paper will review the top 4 challenges small to mid-sized OEM's face in supporting their systems on site, in severe environments, OCONUS:

- Lack of military experience
- High liability
- Insufficient manpower and lack of a diverse selection of resources
- Low OR Rates

Trends driving the protection and security technologies, and increasing the demands for rapid response and impeccable support will also be identified.

Service and support solutions will be introduced, including outsourcing. OEM's will be able to examine the benefits of outsourcing and 6 major areas of support to consider when researching and selecting a reliable resource to assist their challenges. The ultimate goal is to ensure a high state of Operational Readiness resulting in adapting and keeping systems successfully deployed, generating new orders from the end user, and saving military and civilian lives.

Audience:

- Small to mid-sized OEM's looking to deploy or have been unsuccessful in deploying new technology systems OCONUS

Problem:

- If support falls short in protecting the military, there are no second chances

Solutions:

- Resolving the 4 Top Challenges OEM's face in supporting their systems on site, OCONUS
- Examining the benefits of outsourcing
- Assessing the 6 major areas of support when researching and selecting a reliable resource

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Introduction

- Executive Summary1
- Introduction2
- Market Drivers3
 - Attacks on the Rise,
Power Magnified, the
Enemy Adapts
- The Weapon of Choice4
- Top 4 Support
Challenges Faced5
- A Brief History7
- The Solution:8
 - The "Right"
Strategic Partner
- What to Look For:.....10
 - 6 Major Areas of Support
to Consider
- Summary12
- The CSMI Strategic
Support Advantage.....13

Fortunately, very successful and competitively priced deployment and managed support models do exist for extreme conditions OCONUS, with an enemy that wreaks havoc with unconventional but effective weapons, and continually adapts to our techniques and technology.

It's a matter of life or death. Even the "Best in Class" defense technology systems have failed when support is missing the mark. As a result, their systems sit outside the Continental U.S. (OCONUS), uninstalled or in local storage. How can small to mid-sized OEM's of technology systems ensure that their deployed equipment is supported to be successful OCONUS? And, succeed in austere environments:

- over prolonged periods of time
- in extreme environmental conditions
- with an enemy that wreaks havoc with unconventional, improvised, but effective weapons
- with an enemy that continually adapts to our techniques and technology

U.S. military at seaports, land borders and Forward Operating Bases (FOB) in hostile, difficult to support environments, and/or remote locations OCONUS need solid protection. Rapid and calculated technical support and training for deployed technologies must be provided to the military on site, and on demand, in these treacherous environments. Is your company prepared to meet these demands?

Close cooperation with, and managing effective communications between soldiers in the field OCONUS, the Department of Defense (DoD), and the OEM's of deployed technologies is imperative. Do you have a strategy in place?

Only then can the U.S. Military receive the maximum benefit of the security systems designed to protect them, their equipment, and their facilities. If successful, not only will more systems be deployed, but more lives will be saved!

Small to mid-sized OEM's face 4 top challenges in deploying and supporting their systems on site. Fortunately, after years of trial and error, very successful and competitively priced deployment and managed support models do exist for extreme conditions OCONUS. They produce 3 critical results:

1. **Operational Readiness (OR) Rates averaging 90% and above**
2. **Increased orders and deployment of more systems in the field increasing ROI**
3. **Timely, dedicated and maximized security to protect the military and save more lives**

This paper will discuss the complexities of a support effort in severe environments, OCONUS. Trends will be identified that are driving the increased demands for rapid response and impeccable support. Solutions will be introduced to eliminate failures of deployed systems. The results will deploy more systems, and save more lives.

Terrorists and insurgents aren't just in Iraq and Afghanistan.

Defense operations occur in many areas OCONUS such as Pakistan, Kuwait, Djibouti, and Somalia to name a few.

And, it isn't going away anytime soon.

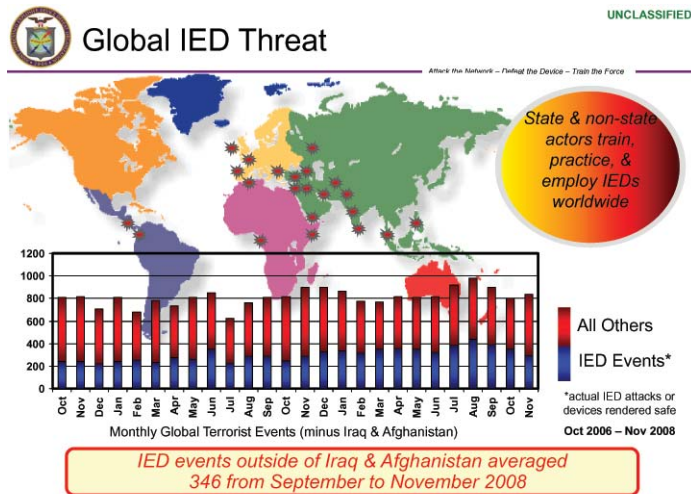
Market Drivers: Attacks on the Rise, Power Magnified, the Enemy Adapts

We have entered an era of unpredictable and relentless conflict. The Global War on Terror (GWOT) strikes lives OCONUS, as well as in our homeland. And, it isn't going away anytime soon. The U.S military uses a great deal of technology to offset the disadvantages regarding the environment, and the enemy's unconventional TTPs, especially detecting IEDs. In fact, Counter IED Systems have been a successful component in Iraq where casualties of coalition forces are down.

But, that is not the case in Afghanistan and Operation Enduring Freedom (OEF).

- According to new map released on September 10, 2009 in a press release by the *International Council on Security and Development (ICOS)*, <http://www.icosgroup.net>, "The Taliban now has a permanent presence in 80% of Afghanistan. Another 17% is seeing "substantial" Taliban activity."
- According to www.icasualties.org/OEF, over the last 8+ years during OEF, coalition military fatalities in 2009 have taken the biggest toll.

Terrorists and insurgents aren't just in Afghanistan and Iraq. Defense operations occur in many areas OCONUS such as Pakistan, Kuwait, Djibouti, Peru, Colombia, Thailand and Somalia to name a few.



Courtesy of the Joint IED Defeat Organization (JEIDDO)
AUSA Aviation Symposium & Exposition LTG Thomas Metz- 8 Jan 09

Not only are IEDs, ambushes, rocket-propelled grenades and other types of insurgent attacks on the rise, but the power behind them has magnified. According to Anna Mulrine, from U.S. News & World Report November 17, 2008, "U.S. troops

Bombs from the past weighed between 10–20 pounds. Now, bombs pack a powerful punch at 200–500 pounds.

"They've flipped MRAPs 15 feet in the air sometimes, and they break them in half," says one U.S. officer in Afghanistan.

and intrepid Afghan truck drivers alike are facing a growing threat from the Taliban's roadside bombs: They are getting bigger and are being deployed more frequently, to devastating effect." ¹

Bombs from the past weighed anywhere between 10-20 pounds. Now, bombs pack a powerful punch at 200-500 pounds. The explosive impact in some cases has even destroyed some of the U.S. military's mine-resistant, ambush-protected (MRAP) vehicles that in the past have taken a magnitude of hits. These vehicles were originally designed to absorb and disperse roadside bombs but not to withstand 200+ pounds of explosives. ²

"They've flipped MRAPs 15 feet in the air sometimes," says one U.S. officer in Afghanistan. "And they break them in half." Injuries to the troops inside these vehicles have been serious to deadly. ³

As our military and manufacturers revise and continue to improve the technology and design of our security screening and detection systems the insurgents and terrorists adapt to the new changes. Sometimes overnight.

The Weapon of Choice

The weapon of choice by insurgents and terrorists today is the "hand made element of surprise", the Improvised Explosive Device (IED).

They are cheap to make. The materials are easily accessible. They are difficult to detect and counter. They are designed to kill or severely injure by the use of explosives. IEDs can also be built using chemicals, biological toxins and radioactive materials - "dirty bombs". And, they can be psychologically debilitating for conventional forces.

The "Hit and Run" Tactic

In Afghanistan for instance, the average insurgent has been fighting continuously for the last 30 years. As a patch work of tribes, the Afghans have been fighting for thousands of years. Insurgents and terrorists in these areas do not have the forces, equipment, or organization to fight conventionally. Instead, they use guerrilla warfare and techniques they've been developing for centuries to take advantage of their environment.

It's very effective for the terrorists to plant explosives and then physically leave these devices to do the work. They "hit and run." They can cover vast territories and do severe damage all without engaging in a fight. This keeps conventional forces spread out over large areas of land, distracted with locating the hidden IEDs.

It is also psychologically debilitating to conventional forces carrying out their work knowing that their next step could detonate a bomb. It's a perceived threat. The

^{1,2,3} Chicago/Turabian: Humanities Bibliography Mulrine, Anna. "Taliban's New Superbombs." U.S. News & World Report 145, no. 11 (November 17, 2008): 43. MasterFILE Premier, EBSCOhost (accessed September 30, 2009).

psychological effect of potential road side bombs, rockets, or snipers, enables a small group of trained Terrorists to hold up battalions of conventional personnel.

Terrorists can easily blend into the local populace with legitimate jobs and trades. This makes them difficult to find. Terrorists use the "locals" as a support mechanism. This tactic was used as far back as World War II. It provides them with the freedom of movement and access to supplies as required.

Top 4 Support Challenges Faced

Small to mid-sized OEM's face 4 major challenges in supporting their systems on site, in severe environments, OCONUS.

1. Lack of military experience

Most field service representatives (FSR) are civilian contractors with no military background or tactical experience, especially in dynamic operations in hostile and hard to support areas.

They are presented with several challenges in the field they were not trained to endure.



Photo by CSMI, Sand Storm
Kabul Afghanistan



Photo by CSMI, FSR Deployment

Some of those challenges include:

- Training, both physically and mentally, to deal with the possibility of high stress during ongoing insurgent action with rapid response under fire.
- On call 24/7 and 365 days a year to sustain system operational readiness in designated Area of Responsibility (AOR).
- Enduring extreme heat, dust and/or sand conditions for potentially prolonged periods of time and possibly without shelter. Required to endure these conditions for up to 72 hours, or as long as it takes, while deploying to "hard to get to" locations.
- Must consistently provide rapid, flexible support programs specifically tailored to the U.S. military requirements.
- Understand the urgency of rapid response and repair times, and take action to make it work.
- Ability to be self-sufficient, carrying all personal needs on the back, while adapting and integrating seamlessly into the military units they are servicing.

Low OR rates decreases the number of systems purchased, deployed and used in the field successfully.

2 essential elements can be controlled to increase OR rates:

1. Positive management control of ground technical support activities.

2. Management of the DoD end-use customer.



An IED Detection System left unsupported

2. High liability

Regardless of the experience, OEM's face the consequences of high liability for their field service representatives (FSRs) in the field. OEM's have to be ready for the worst. It is likely that FSRs will be faced with the lack of secure transportation in remote areas. They also need to be ready to face the same dangers as the military does during transport.

OEM's not only risk the possibility of severe injury to their employees, but loss of life as well. It is crucial to maintain ongoing safety and contingency planning to keep their staff safe, as well as the end user.

3. Insufficient manpower and/or lack of a diverse selection of resources

During rapid integration into a war zone, OEM's must meet the demands required by the military.

They must be able to provide:

- A sufficient number of experienced support technicians on site to conduct training, support and maintenance 24/7 on demand.
- The ability to quickly assemble a full service support team for rapid large scale deployments of equipment.
- Supply a large resource pool of technicians from a wide variety of disciplines.
- The ability to provide Defense Security Service (DSS) Facility Clearance wired for classified programs or technologies.
- Develop a logistics trail that seamlessly integrates into Theatre Logistics Support Systems to ensure reliable parts availability and delivery.

4. Low Operational Readiness Rates (OR)

Consistently, low OR rates decreases the number of systems purchased, deployed, and used in the field. OR rates are affected by a multitude of factors beyond control, such as rough war zones, severe weather, and transportation restricted conditions.

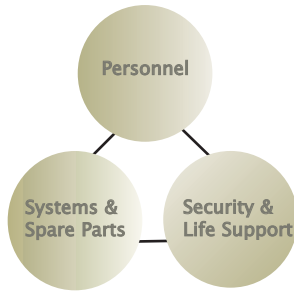
But, there are two essential elements that can be controlled.

a. Positive control of ground technical support activities.

b. Management of the DoD end-use customer.

OEMs need to quickly establish an infrastructure to support

Infrastructure Implementation & Maintenance



Low Operational Readiness Rates continued

the implementation and maintenance of systems on behalf of the US Government, including reporting and tracking of systems, personnel, secure movement, and spare parts.

OEMs must provide flawless repair times in hostile environments. They must be able to maintain systems on demand with rapid response resulting in minimal down time.

A plan for backup parts in multiple locations throughout the AOR needs to be implemented. It is critical for repair parts to arrive in the region in a timely manner. FSRs must be resourceful if parts are delayed, especially in remote areas. In the event of a component failure, the up-time of systems needs to be optimized.

Solutions to these 4 challenges must carefully be addressed to be successful. How have these support challenges been met in the past when deploying security and protection systems OCONUS, and have these efforts been successful?

A Brief History of Past Deployment Operations

Several factors lead to the increase in protection and sophistication of security screening and detection systems for military troops and civilians OCONUS. The biggest demand occurred after the September 11, 2001 attack on the U.S. by the terrorist group Al-Qaeda, supported by the Taliban.

The invasion of Afghanistan, Operation Enduring Freedom (OEF), began in October 2001 in efforts to stop the Taliban, the Al-Qaeda terrorists and other insurgents. Thousands of troops were deployed from the U.S., Great Britain and other nations.

Then, in March of 2003 the Iraq invasion began. It was also known as Operation Iraqi Freedom (OIF). According to www.globalsecurity.org, Iraq is one of the most heavily mined nations in the world. By 2003, Iraq was infested with IEDs and booby traps estimated at over 10 million. Iraqi insurgents gained significant experience and proficiency in the use of IED's and booby traps.¹

Spotty Service and Support

In the beginning of both wars, the U.S. military was challenged with unbearably rugged terrain, mine and bomb infested roads along with extreme ground and weather conditions. The military was dealing with an enemy who was shrewd and unpredictable, and used unconventional tactics. As a result, the U.S. Department of Defense (DoD) deployed everything they could get their hands on to help protect the troops. Some technologies were proven. But, many were not!

Technical service and support was spotty and even non-existent for many of the initial security systems purchased by the DoD. Engineering industries lacked the

¹ <http://www.globalsecurity.org/military/intro/ied-iraq.htm>

In a war where every second counts, the military needs to be focused on protecting themselves and others, not on repairing systems or using devices with a high rate of failure.

knowledge regarding the planning and execution of technology deployments for military operations OCONUS. They especially lacked the experience required to operate, under these austere conditions, with an enemy adapting to countermeasures, in areas like Iraq and Afghanistan.

Early Solutions Missed the Mark

Problems with initial solutions from OEM civilian engineers based in the Continental US (CONUS) included:

- Sending non-mission capable (NMC) systems to Kuwait or Dubai for repairs
- Attempting to teach soldiers and marines how to repair systems
- Sending systems back to CONUS for repairs
- Spending large sums of money to keep replacement systems on the ground
- Rudimentary or no system operator training
- Not providing maintenance or sustainment after the initial sale

In all cases, these solutions missed the mark completely and were widely unsuccessful, both operationally and financially. Many systems were left unused.

In a war where every second counts, the military needs to be focused on protecting themselves and others. They cannot be forced into repairing systems they know little about, or using systems with a potential high rate of failure.

Obviously the systems that were most reliable and beneficial to the military were looked upon favorably with follow-on orders. OEMs that reacted swiftly to customer feedback from the field to enhance system efficiency were rewarded with follow-on orders as well.

Over the years, through trial and error, the DoD narrowed the vision. They have become more selective in choosing technologies that have proven themselves. Choices such as, emerging technologies have targeted specific problems like the MRAPs designed to protect military troops from mines and IEDs in Iraq and Afghanistan.

Today support is even more critical. Terrorists and insurgent activities are on the rise. They are adapting to the latest technological advancements with bigger and more powerful bombs. The "Best of Class" systems will fail, today, without the proper support.

The Solution: "The Right" Strategic Partner

When it comes to technology systems OCONUS, on site technical support is the most rapid and effective means to deploying more systems and successfully supporting the ground troops.

However, this is a situation you want to avoid.

A Situation You Want to Avoid.

“Millions of dollars worth of critical security systems ended up in storage!”

One OEM introduced a top quality security system. DoD placed an order for a large number of these systems which were deployed into the war zone in Afghanistan.

The OEM did not have a diverse selection of resources to handle a large deployment. Their civilian technicians were not military trained. They were not conditioned to living in severe climates for extended periods of time. They were not knowledgeable about how to interact with the military, especially in the line of fire. Training was minimal, at best. Parts arrived late, if at all. Downtime was excessive. OR rates were low and compromised safety.

As a result, the military wasn't supported and protected properly by the systems. They were no longer deployed and they sit OCONUS on pallets gathering dust.

Millions of dollars worth of critical security systems ended up in storage!

On site support OCONUS leads to the top 4 challenges OEMs can face: high liability, lack of military experience, insufficient manpower and diverse selection of resources, and low Operational Readiness Rates. The most effective way to combat these challenges is **outsourcing** through a company with a proven record in successfully deploying and sustaining technology solutions in theatre.

Eliminate the Top 4 Challenges OEM's Face

A strategic outsourcing partner can provide benefits to eliminate the top 4 challenges OEMs face in supporting their systems OCONUS.

1. Deploy their own personnel.

An outsourcing company has its own liability eliminating that of the OEM.

2. Employ FSRs that have first hand experience with the military on site OCONUS.

They can support and integrate technologies seamlessly into dynamic military operations on site in hostile and hard to support areas. Having military experience dramatically cuts the learning curve, increases OR rates, and maximizes protection in these environments.

3. Assemble and equip a full service support team on site to make the systems and devices work to maximum capacity.

They are able to supply a large resource pool of technicians from a wide variety of disciplines.

Without a management staff in place, on the ground, the whole program could fall flat!

Eliminate the Top 4 Challenges continued

4. Provide a management staff in place, on the ground, to control the field sustainment program and optimize communications with the DoD end user.

Without this in place the whole program could fall flat!

They have experienced teams that can quickly establish an infrastructure. These teams support the implementation and maintenance of systems, personnel, and spare parts on behalf of the OEM or U.S. Government OCONUS.

All of these controls, along with rapid response, are vital to achieving high Operational Readiness rates and successful system deployment.

Due to the extreme life and death nature, austere environment, and experience of the job required, outsourcing is the best way to implement an ongoing strategy for service and support OCONUS. However, it is imperative to select the "right strategic partner."

What to Look for in a Strategic Outsourcing Partner

An outsourcing company is responsible for developing and implementing a plan for forward deployment, systems integration and sustainment operations. They must have solid experience in deploying and supporting systems OCONUS, with a consistent record of high Operational Readiness rates.

There are **6 major areas of support to consider** when researching and selecting a reliable outsourcing company for technical support and service.

1. Site Survey and Vulnerability Assessments

The outsourcing company should have in depth, on-site experience in the integration of technologies in challenging environments OCONUS. Surveys and assessments should include key sustainment and performance factors such as:

- A well crafted Concept of Operations (CONOPS) development
- Logistical supply and movement of systems and spare parts
- Communications and reporting requirements
- Life support for program personnel

2. Field Service

Field personnel must have U.S military background and experience OCONUS, embedded with DoD units or located on site at host nation facilities.

6 Major Areas of Support:

1. Site Survey and Vulnerability Assessments should include key sustainment and performance factors.

2. Field Service must have U.S. Military experience, on site OCONUS— for rapid response, minimal down time and maximum equipment usage.

3. Technical, Tactical and New Equipment Training (NET) integrated for maximum performance.

4. Field Logistical Support and Infrastructure Development based on the needs of the end user.

5. Program Management in place on the ground to achieve success.

6. Proven Experience and Track Record with Operational Readiness Rates 90% or higher.

6 major areas of support to consider continued

The company should be able to supply a large pool of resources with a diversity of experience in multiple countries. Some of the disciplines should include, electronics, electro-mechanical, mechanical, communications systems, network engineering, Optical/Biometrics, Radar/Sonar Technology, imaging and infrared technology and metal fabrication.

The goal is to enable rapid response to maintenance and field repair issues. The end result is minimal down time and maximum equipment usage.

3. Technical, Tactical and New Equipment Training (NET) FSRs should receive factory training and certification on OEM equipment at the manufacturer's facility. They should also receive "train-the-trainer" classes enabling them to provide operator training on site, and on demand, especially due to frequent rotations of US military end users. The outsourcing company should provide training to the host nation and third country nationals when required, in the local language.

Tactical trainers should be available to assist and advise the integration of technologies with Tactics Techniques and Procedures (TTPs) of the end user organization.

Effective use of equipment by operators will ensure that deployed systems have a shorter integration period, rapid emplacement, and perform to their maximum capability.

4. Field Logistical Support and Infrastructure Development The outsourcing company should have established, multiple, and strategically located supply hubs in the region. The hubs should be environmentally controlled and integrate spare parts storage, communications, and repair facilities. They should coincide with DoD supply hubs and MSRs.

An effective support infrastructure should be established that provides a carefully planned and well measured response to the needs of the end-users.

The goal is to provide technically equipped FSRs with readily available critical system components for rapid repair and maintenance based on the needs of the end-user. This ensures a high state of operational availability.

The best way to achieve an ongoing strategy for service and support in extreme environments OCONUS is working with a strategic outsourcing partner.

6 major areas of support to consider continued

5. Program Management

The outsourcing company should have a Program Management Team in place with experience as U.S. Military operations and logistics planners. They should be able to assist end user commanders in the development of Standard Operating Procedures (SOPs), CONOPS, and performance metrics.

Ensure that a management staff will be in place, on the ground. This is imperative to control ground technical support activities and management on behalf of the DoD end-use customer. This is the only way to achieve a successful field sustainment program!

6. Proven Experience and Track Record

A technology systems sustainment organization must have proven experience in support and sustainment programs OCONUS. A strategic outsourcing company must have a highly successful track record with consistent Operational Readiness rates of 90% or higher.

Summary

In summary, OEM's face **4 Top Challenges** in supporting their systems OCONUS. Choosing a strategic outsourcing partner, for technical support and service, can provide benefits to eliminate these challenges.

To be successful, you must choose the "right" strategic partner. When researching and selecting a reliable outsourcing company follow the guidelines of the **6 Major Areas of Support to Consider**, listed in this white paper.

The best opportunity to ensure success is working with a company that has an extensive U.S. Military background OCONUS.

It is imperative they provide a proven track record. They must have experience in successful management of technology support and field sustainment operations, onsite. The company must also maintain a consistent OR rate of 90% or higher to keep systems successfully deployed and generate new orders.

Due to the extreme life and death nature, austere environment, and experience of the job required, outsourcing with a reliable, strategic partner is the best way to implement an ongoing strategy for service and support OCONUS.



About CSMI

CSMI is a service disabled veteran-owned small business with broad experience providing comprehensive Mission Support Services for Intelligence Operations, Language Support Services, and Cyber Security. They provide turn-key technical support for field application of Force Protection, Counter-IED, communications, IT/IS and technology based security systems.

CSMI personnel currently support DoD and Other Government Agencies. They conduct operations support, technical implementation, CONOPS development, new equipment training, field service, logistical support, program management, and sustainment of security systems in austere and difficult to support environments. Additionally, they provide the dynamic link between end user field requirements and manufacturers of security systems in challenging global environments.

CSMI is a Service-Disabled-Veteran-Owned Small Business (SDVOSB) and an ISO 9001:2008 certified company.

Take the Next Step

This white paper is meant to address key factors in a successful support operation to assist the OEM prior to the decision making process, or after, in evaluating challenges.

To discuss any of these issues in the context of your business needs and strategies call CSMI for a private, complementary consultation at **978-989-9460**. Or, email CSMI at information@csmi.com.

For readers interested in more details, review our other white papers at <http://www.csmi.com/white-papers.htm>

**We understand responsiveness, urgency and flexibility.
We manage your technical support requirements with precision
and efficiency. Responsiveness saves lives!**

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