TACTICAL EDGE

CUSTOMERS FIRST. SOLUTIONS THAT LAST.

Total Visibility Anywhere

Asset Visibility Anytime, Anywhere, Any Platform

Author
Steve Palmer, Director, East Coast Operations

Contents

Corporate Overview

Name of Organization Submitting Partnership:
Tactical Edge, Inc.

Full Address and Postal Code:
2820 Camino Del Rio South, Suite 200
San Diego, CA 92108

For Profit or Not for Profit:
For Profit

Industry Affiliation:
Government Consulting / Logistics Consulting

Links to Participant Biographies:

Steve Palmer
Position: Director, East Coast Operations
https://www.linkedin.com/in/steveapalmer/

Megan Gerstenfeld
Position: Systems Engineer and Logistical Subject Matter Expert
https://www.linkedin.com/in/megan-gerstenfeld-mba-pmp-csm-10b592/

Paul Danckaert
Position: Chief Technology Officer / Software Architect
https://www.linkedin.com/in/pauldanckaert/

Has Your Organization Partnered with the U.S. Government?
Tactical Edge has formed multiple partnerships with the United States Government, including Cooperative Research and Development Agreements with the United States Transportation Command and demonstration events such as Ship-to-Shore Maneuver Exploration and Experimentation.

What stage is your partnership business plan?
Existing Program Going to Scale

Problem Statement:

According to a Government Accountability Office report from February 2015, the Department of Defense manages approximately $98 million in secondary inventory items, yet it faces great challenges in Material distribution. Specifically, the DoD has difficulty meeting delivery standards, time lines for cargo shipments, and often deals with incomplete delivery data.

These challenges trickle down and manifest themselves in over-ordering of resupply which forms "iron mountains." On top of the additional costs and degrading performance of the DoD supply chain, the "iron mountains" can have devastating effects on our troops, from robbing them of their mobility to making them a target for the enemy.

According to the February 2015 report, TRANSCOM has created a Distribution Performance Branch to access the global distribution performance; however, this is difficult with the incomplete delivery data noted above. And, to pile on the data issue, DoD Logisticians need to leverage multiple Authoritative Data Sources to attempt to get the total picture.

DoD Logisticians are handcuffed because of too much disparate data, which they are asked to manually convert into information, and not enough information that is actionable. These disparate data sources not only require a lot of manual work, but also require high levels of competence to perform medial tasks, lead to high error rates, and reduced amount of time to make and take actionable decisions.

Idea:

Through a variety of Research and Development efforts sponsored by the Office of Naval Research, Code 30, Tactical Edge has built an In-Transit Visibility application that can read in data from a variety of authoritative data sources and other inputs, extract the relevant information, and provide it to a DoD Logistician in ways that make their jobs easier.

For the operationally-focused Logisticians, we extract information and compose it into relevant shipments that we then put on a map, allowing users to track them as they leave the Point of Embarkation and head overseas. For the tactically-focused Logistician, we push relevant updates and alerts about shipments of interest to their trusted handheld devices. Our system can also leverage the unique capabilities of the mobile platform to crowd source the data collection of shipments, connecting with sensors via Blu-tooth Low Energy (BLE) and automatically updating the location of a shipment using the mobile devices built-in GPS capabilities. This is a brand-new capability set for the DoD Logistician, based on proven technology, and designed to address the incomplete delivery data founds by the GAO.

To enhance our tracking capabilities, our solution leverages low-cost BLE Beacons and Sensors that can track a variety of measurements and exposures; including temperature, moisture, and shock. Our solution would align with U.S. interests by providing better tracking capabilities of assets moving overseas, ensuring that they are not tampered with and that they are in working condition when they arrive at their destination.

Resource Requirements:

For our partnership, we would be looking for security specialists that could help us lock down our solution. Through our various efforts, we have had opportunities to run code analysis and are comfortable with where we stand from a code vulnerability perspective; however, we would need security experts to verify our BLE beacons and sensors are not putting Americans at risk.

As the BLE beacons and sensors would need to transmit information through shipping containers, our team would need access to a container yard, so we can test and configure the appropriate signal strength needed for the beacons and sensors to communicate with the Logistician's trusted handheld.

And then finally, our team would be looking for mentors or some way to get introductions to government officials that would be interested in testing and deploying our solution. Through our examination of industry players, coupled with our current experimentation with TRANSCOM, we feel that our solution is feasible. But, we will not be able to work out the final glitches, or accurately determine the cost savings potential of our platform, until a pilot program is deployed.

Best Potential Partners:

As we are stronger on the technical side of the solution, our ideal partners would fit into one of a few forms.

One, they would understand the contracting side of doing business with the government, and would be able to help find us a pilot program when everyone in the government is already over tasked. They could also help us find incremental funding to help us refine our prototype, purchase new equipment, or finance travel in the event our solution is deployed outside of the metro-D.C. area.

Two, they would have a firm grasp of the current Logistics authoritative source systems within the DoD, and would be able to get us access rights to their data feeds. Right now, through a separate project, the team has access to the Integrated Development Environment/Global Transportation Network (IGC); however, while access to a Test environment is great for development efforts, we would require access to the Production web services to get an accurate representation of our service.

Finally, we would be looking for an outside security audit to address any potential security concerns.

Ideal End State:

An ideal end state for our solution would involve operationally-focused Logisticians logging into our web-portal to view shipments that are out for delivery, and tactically-focused Logisticians tracking the delivery of shipments of importance. The operational Logisticians could be located anywhere around the work, while we would need one or more tactical Logisticians assigned to a variety of high-valued ports so that our system could update the locations of shipments in movement through our crowd-sourcing techniques. Our system would be feed information from the IGC Production server and other authoritative data sources, updated automatically by tactical Logisticians as they come in contact with shipments, and our Tactical Edge team would then be able to use this new data to develop algorithms to support TRANSCOM in their global distribution performance assessments.