

## Information Systems Key to Early Warning, Timely Decisions

# Businesses Explore Benefits of Data Monitoring

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*Special to the Business Journal*

At the AFCEA West conference in San Diego last month, Adm. Dennis Blair's words were heard loud and clear — technology must be brought into the defense fold much faster.

While the admiral's sentiments may sound like something we've heard before, we can all agree that the circumstances are quite different and more urgent. And, surprisingly enough, the needs of the government and commercial sectors are right on par.

Beyond the obvious large budgets dedicated to homeland defense, there are two major catalysts that seem to indicate the timing for partnerships is ripe.

The first catalyst? Government and business needs are almost identical.

For business the cost of not identifying problems and anticipating opportunities, then rapidly responding, is immense. In intelligence and defense, the cost as we've learned first hand is incalculable.

New information systems need to provide decision makers with more than just an alert. It's about saying, "there's something going on and here is all the related information that will help you make a well-informed, timely decision." It's what the Gartner Group calls business activity monitoring.

Gartner vice president of research, David McCoy, offers a simple analogy. When something happens to a car, an alarm goes off. It doesn't wait two weeks. In business, when there's an inventory problem or a major sale falls through, should you wait to adjust production levels and forecasts?

In defense, we may want to be alerted when someone purchases a one-way plane ticket in cash, or a ship is off course and heading for

San Onofre nuclear generating station.

### • Information Overload Leads To Flawed or Tardy Decisions

The moment a car alarm goes off, do we know how to respond? Do we immediately call the police?

Of course not. We don't know the full nature of the problem until we've gathered enough data. We have to find out why the alarm went off.

Our response is based on a number of criteria. Without readily available supporting data, a decision maker may have to spend too much time finding the right information and with unorganized or poorly presented data, the decision maker may suffer from "information overload." Both lead to delayed and/or poor decisions.

Without any data, the decision maker may unwisely commit vital resources or the wrong resources. The point is that no matter how real-time a warning is, if you can't quickly put together data that relates to the subject matter, it's all for nothing.

The second catalyst — information technology — has finally progressed far enough to address these needs, but it will take best-of-breed and emerging technologies from both sectors.

This all seems like common sense and a clear need that has been bubbling for years. The problem is that business has become much more complex, and the supporting information infrastructure consists of a myriad of applications like customer relationship management, supply chain management, enterprise resource planning, and business process management, to name a few.

These all generate a lot of data and were not developed to talk to each other. These systems are great at creating efficiencies in silos, but have made it nearly impossible for decision

makers to access and assimilate the right information to make well-informed, timely decisions.

At the moment, decision makers either get limited access to silos using traditional business intelligence and reporting tools or attempt to construct data warehouses that put all the information into a single silo. The problems with data warehouses are that they suffer from costly and long implementations, require batch loading (periodic vs. real-time updating of information) and cannot deal with unstructured data.

Beyond well-trained analysts and IT personnel, most users find these solutions cumbersome and restrictive.

### • Overwhelming Amount of Data

It's not just a similar problem for the defense segment, but it's one that's bound to get worse as we start capturing even more data. To compound this, much of the data captured won't be structured, but sensory, audio and video.

As a recent *Wall Street Journal* story pointed out, "The capacity to produce oceans of data often isn't matched by sufficient tools to sort and interpret it."

The article, titled "Bush's New Surveillance Proposals Could Bring Information Overload," went on to say, "Attorney General John Ashcroft acknowledged in congressional testimony Monday that the proposals now before lawmakers might not have done anything to stop the attack two weeks ago. And senior Justice Department officials have acknowledged in interviews in the days since Sept. 11 that there is some justifiable skepticism about the Federal Bureau of Investigation's ability to handle the massive amounts of information being generated by the current terrorism investigation, let alone head off future attacks."

This is why partnering is so imperative.

Successful solutions will be comprised of technologies and expertise present in both the commercial and government sectors.

It will take all the skill and perseverance of government contractors to navigate lengthy and complex procurement and integration cycles. Along with that, include a mix of commercial infrastructure players who will help deliver data in real-time from one location to another and a new breed of software capabilities that rolls everything up into business activity monitoring.

Successful business activity monitoring solutions will fulfill the critical elements addressed earlier — real-time visibility into hotspots across an enterprise and access to related information that helps managers execute the right decisions.

There are three major components in a successful business activity monitoring solution. The first, although very clear, isn't easy — getting the data.

Next is a framework for expressing the nature of the activities that must be monitored and the relationships of those activities and supporting data. Are you monitoring sales, ships, terrorist cells, marketing activities and how is it all related?

Finally, this all must provide users with the capabilities to visually and intuitively discover hotspots and trends, constantly build automated notifications based on complex activities (the intersection of multiple events), drill into associated structured and unstructured data and share insights with colleagues and partners.

A lot of the right companies and technologies are here in San Diego. Let's put them together.

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