

# Microsoft Fusion Framework

## Enhance information sharing and security with a mission-critical technology architecture and solution for fusion centers

### **Intelligence fusion for prevention, preparedness, and response**

The 9/11 Commission Report made it clear that because information was not shared and analysis was not conducted, preventive action was not taken and the nation was left unprepared. The tragic aftermath of Hurricane Katrina also highlighted the need for collaboration between federal, state, and local governments and the private sector—to gather, share, and analyze information that results in actionable intelligence and leads to safer communities.

### **Connecting silos of information**

Barriers to communication occur both horizontally and vertically—between and within intelligence agencies and also between and within local, state, and federal levels of government. Collaboration between so many different types of entities requires that people get the information they need but not more than they are authorized to have.

As a joint project between the Department of Homeland Security and the US Department of Justice, many states now have fusion centers to gather information from both government sources and the private sector. Fusion centers should promote information sharing—at the federal level, between agencies such as the CIA, FBI, and Department of Justice, and at the state and local level—towards the objective of creating one complete picture that aids situational awareness, planning, prevention, and response to an incident. However, fusion center directors and analysts continue to experience frustration with:

- The inability to exchange information with internal and external partners in an effective and timely manner.

- Difficulties distilling large volumes of data into relevant and actionable intelligence.
- Ineffective collection and management of information from disparate sources through a single portal.
- Geographic information system (GIS) tools that are challenging to learn and use, and difficulties getting GIS data to those who need it.

### **The Microsoft commitment to a replicable fusion center IT architecture**

Microsoft is committed to developing a referenceable and replicable mission-critical architecture—for fusion centers and for connecting fusion centers together. As objectives for this architecture, Microsoft used five of the 18 Guidelines and Key Elements found in the Department of Homeland Security/Department of Justice “Fusion Center Guidelines” (these five relate to IT support):

1. Create a collaborative environment for intelligence and information sharing.
2. Leverage existing databases and systems to maximize information sharing both internally and externally.
3. Create seamless information exchange using NIEM (National Information Exchange Model) to integrate existing systems.
4. Develop appropriate security measures to help ensure access to networks and systems.
5. Integrate technology, systems and people through a senior leader vision, operator analyst driven IT architecture

In partnership with the Illinois Statewide Terrorism Intelligence Center (STIC), Microsoft designed a technology platform and architecture for sharing law enforcement intelligence that fills a critical void and could make the world a safer place.

## Microsoft Fusion Framework

The Microsoft Fusion Framework architecture, based on the requirements-gathering alliance with the Illinois State Police and other law enforcement organizations, delivers a solution tailored to state and local intelligence and to fusion center missions and practices, and is interoperable with existing technology infrastructures.

The Microsoft team designed an interoperable solution that moves information smoothly from **intake** to **analysis** to **dissemination** in a multiple-agency, multilevel environment. This solution also integrates with existing assets and domain-specific applications to provide:

- **Consolidated views of intelligence data.** Enables collection, intake, workflow management, collaborative analysis, dissemination, auditing, and the capture of business performance metrics with a consistent user interface across multiple applications.
- **Easy sharing of data among intelligence analysts.** A collaborative environment facilitates reliable information exchange both internally and externally.
- **Granular data access control.** Access to networks, systems, and information is better controlled and monitored; supports multiple information access eligibilities of government agencies and private sector entities.
- **Reduced manual processes.** Emulates and improves the ways organizations perform work, and magnifies personnel productivity.
- **Rapid deployment capability.** Offers guidance, best practices, and a technology roadmap to assist in planning.
- **Adaptable and interoperable.** Offers flexible adaptation to new missions and unforeseen operational challenges; defined integration points can be used for localization.

## ArcGIS for Situational Awareness

ESRI ([www.esri.com](http://www.esri.com)), a partner in Fusion Framework, provides the GIS tools needed to equip fusion centers with the best possible methods of displaying and analyzing data. As the market leader in GIS, ESRI software is used by more than 21,000 public safety agencies and each of the 200 largest cities in the United States.

The ArcGIS<sup>®</sup> Situational Awareness Bundle included in the Fusion Framework provides a complete framework for geospatial intelligence and decision-making. It also includes terabytes of pre-rendered nationwide and worldwide street and transportation data, place-names, administrative boundaries, raster imagery, topographic maps, shaded relief imagery, and elevation data.

**“GIS is infectious.  
Once people see their  
data visualized on a  
map, they love it.”**

*— Brian Egnitz,  
GIS program manager,  
Massachusetts State Police*

## Fusion Core Solution

Soon to be available as a rapid deployment solution, Fusion Core Solution is a package of software that combines the robust features from Microsoft and ESRI to provide fast data management, visualization, and geospatial capabilities to help produce actionable intelligence. System components include:

- Microsoft<sup>®</sup> Office SharePoint<sup>®</sup> Server 2007
- Microsoft SQL Server<sup>®</sup> 2008 Enterprise
- Windows Server<sup>®</sup> 2008 Enterprise
- Systems Center Virtual Machine Manager
- Microsoft Windows Vista<sup>®</sup> Enterprise
- Microsoft Office 2007 Enterprise
- Bing<sup>™</sup> Maps for Enterprise (Used to be Virtual Earth<sup>™</sup>)
- ESRI ArcGIS Situational Awareness Bundle

## How to get started

Contact your [Microsoft Fusion Framework team \(fusion@microsoft.com\)](mailto:fusion@microsoft.com) to discuss your operational and technology requirements and to help you evaluate Fusion Framework for your information analysis and collaboration needs.

For more information, please visit:  
[www.microsoft.com/fusion](http://www.microsoft.com/fusion)