



# Microsoft® Virtual Earth™

## Location Services for the Manufacturing Industry

Manufacturing companies around the world are pushing to innovate and deliver, while at the same time trying to optimize complex business processes. Managing growth and scaling new technology are critical business concerns for manufacturers as old technologies cease to work as efficiently as before. Successful supply chains rely heavily on agile technologies for profitability, reduced process complexity, and improved insight into customer needs.

### Today's Challenges in Manufacturing:

#### Poor Customer Connections

- :: Acquiring, aggregating, and reporting customer feedback is difficult when manufacturers have limited direct interaction with customers.
- :: Manufacturers need a way to obtain the necessary foresight to enable consistent delivery to customers.
- :: Extending brand reach and differentiating the customer experience can be difficult when manufacturers are not selling to end users.

#### Limited Business Insight

- :: Low visibility into raw material delivery schedules creates challenges for keeping manufacturing schedules on track.
- :: Analyzing business statistics and key performance metrics from multiple plant locations can be difficult.
- :: Manufacturers need a way to integrate data management systems and group relevant information in a central location.

#### Barriers to Innovation

- :: Changes in systems and Web sites can be difficult to scale, costly to implement, and cause substantial downtime.
- :: Manufacturers need a way to tighten control and increase visibility into the status of both supply chain shipments and deliveries.
- :: Manufacturing companies and supply chains do not always use the same technology and integrating various technologies can be challenging.

### Virtual Earth Advantages

The Microsoft Virtual Earth platform is an integrated set of services that combines advanced viewing options, including exclusive bird's eye<sup>1</sup> and hybrid views, aerial, and enhanced 3D models, with innovative mapping, location and search functionality. It enables manufacturing firms to engage business partners and customers by providing innovative solutions and a visual display of data. Additionally, the service-oriented architecture enables manufacturing firms to easily develop solutions that leverage customizable features and imagery, dynamic maps, driving and walking directions in 15 languages, and powerful data visualization and reporting capabilities without significant financial investments.

#### **Manufacturing firms use the Virtual Earth platform to realize the following benefits:**

**Empower:** The Virtual Earth platform empowers manufacturing firms by providing tools to help them manage data and connect to users more effectively. By leveraging the powerful Virtual Earth data visualization capabilities, manufacturing firms can use the platform as a foundation for building location intelligence solutions. Empowered with the most up to date information, manufacturing firms can also focus on connecting with users and delivering the best products and services.

**Real:** The Virtual Earth platform offers reliable imagery and data, allowing manufacturing firms to build a precise view of their organization. Exclusive bird's eye imagery helps manufacturing firms create richer connections with their users by allowing them to view and familiarize themselves with locations before arriving. Enhanced geocoding and reverse geocoding provide the most accurate and up-to-date results possible for efficient driving directions and position locators. Pushpin information boxes allow users to learn about a location or quickly visualize information relevant to that location. Combined, these features result in a more enhanced and immersive Web site experience.

**Professional:** The Virtual Earth platform utilizes open standards-based technologies, and offers flexible licensing options that fit almost any budget, enabling manufacturing firms to develop innovative solutions through a cost-effective approach. With 99.9% availability, manufacturing firms can be confident that the platform services will be available when needed.

## Virtual Earth Platform for the Manufacturing Industry

With the Microsoft Virtual Earth platform, manufacturing firms can create an immersive experience that enables clients to easily search, locate and visualize supply chain and other locally relevant information. Seamlessly integrate the Virtual Earth platform with Web sites, applications, and services to deliver the highly visual and locally relevant manufacturing information your customers and end users care about most. *Imagine the possibilities with Microsoft Virtual Earth:*

### Strengthen Customer Connections

- :: Empower customers by creating a place for them to express opinions and concerns, using the Virtual Earth platform to view this information.
- :: Improve customer satisfaction by using walking and driving directions in 15 languages and multipoint routing to create efficient routes that help guarantee consistent delivery.
- :: Expand current services by allowing customers to visualize manufacturing sites through exclusive bird's eye<sup>1</sup> and hybrid views, and offering visuals of shipments in transit.

### Improve Business Insight

- :: Implement RFID or GPS technology into the Virtual Earth environment to create a way to visualize shipments in transit.
- :: Integrate Virtual Earth with business intelligence applications to visualize information, such as operational performance per location or regional sales statistics.
- :: Visualize data by integrating line-of-business applications with location-based information, such as GeoRSS feeds or manufacturing schedule status per location.

### Grow Through Innovation

- :: Speed time to deployment and helps minimize IT costs by integrating with existing technology investments through an open standards platform.
- :: Allow easy integration with existing technologies and provides scalability for future solutions when developed with Virtual Earth's powerful APIs.
- :: Improve control over shipment and delivery schedules by tracking and visualizing status reports and potential risks on a Virtual Earth map.

## Virtual Earth in Action

**Scenario:** A major energy products and services manufacturer wanted a better way to locate company resources and material assets in the aftermath of major weather disasters. Weather patterns historically cut down on the ability to enact emergency disaster plans and impeded safety protocol for employees in danger zones. This manufacturer needed a way to make quick decisions in critical situations and to visualize unforeseen risks.

**Solution:** Together with Microsoft Virtual Earth, a Microsoft Partner created a data visualization solution using real-time weather streams that fed into a centralized locator dashboard. Integrating with aerial satellite imagery, the partner created a disaster response model that enabled crisis managers to quickly visualize weather patterns and respond to potential risks. This allowed them to provide higher levels of protection by creating a way to locate resources, before and during weather disasters.

**Benefits:** By implementing the Virtual Earth solution, this manufacturer has been empowered with predictive controls that assist in situations needing quick decision making. They have also been enabled to provide pre-emptive solutions that will avert resource disasters, streamline location efforts, and cut hours off emergency response time. Real-time data visualization and the integration of many data sources have enabled better monitoring of crisis teams' responses, resulting in enhanced collaboration efforts and helping to save time, money, and lives.

To learn more about how BP cut asset tracking hours, saved costs and helped resources in emergency situations, please go to: <http://www.microsoft.com/casestudies/casestudy.aspx?casestudyid=201427>.

### More Information

For more information, please visit: [www.microsoft.com/virtualearth](http://www.microsoft.com/virtualearth). For more information on Virtual Earth for Manufacturing, please visit: [www.microsoft.com/resources/manufacturing](http://www.microsoft.com/resources/manufacturing).

In addition, you may contact a Virtual Earth Sales Specialist: North, Central, and South America, e-mail: [mapic@microsoft.com](mailto:mapic@microsoft.com). In Europe, Africa, Middle East, and the Asia Pacific region, e-mail: [mapemea@microsoft.com](mailto:mapemea@microsoft.com).

<sup>1</sup> Available in many metropolitan areas across the U.S. Not available for government customers.

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