

**Annual Mobile and Wireless Syndicated Research Studies
-- 2009 Mobile Location Research --**

Annual North American Mobile Enterprise Applications Outlook

As the wireless data ARPU (Average Revenue Per User) metric becomes even more critical to wireless operator success, industry participants realize the growing importance of creating new premium mobile applications for the workplace. Up-and-coming revenue generators include handset-based solutions that provide real-time industry- and company-specific value-add. This macro 2009 Outlook provides a revenue view of the 2007-2014 Mobile Data Services market, including a breakout into Consumer vs. Enterprise Premium Mobile Application sectors.

The body of the report provides an overview of 2008 results and 2009 expectations around four key Mobile Enterprise Application categories in the North American region:

- [Mobile Resource Management \(MRM\)](#)
- [Mobile Field Asset Management](#)
- Mobile Office Email and PIM
- Mobile Sales Force Automation (SFA)

The following topics are addressed on a high-level basis for each of the above premium solution categories: subscriber and revenue results/forecasts, adoption drivers and barriers, major market trends and issues, and enterprise preferences and plans.

Note: The latter information is based on initial findings from Frost & Sullivan's 1Q 2009 Mobile Enterprise Applications IT decision-maker survey. Survey questions cover: Level of perceived need, deployment plans, barriers to implementation, and primary ROI metrics. Responses are broken out into North America, U.S., and Canada results.

North American Mobile Resource Management (MRM) Markets – Handset-based Field Productivity Solutions

A few years ago, MRM was typically a fleet management play, tracking and monitoring trucks via expensive in-vehicle systems and dedicated servers. Today's handset-based MRM solutions are significantly more affordable and have opened up our very under-penetrated North American market to a variety of new applications across an array of industries. Now, key MRM players -- including application developers, wireless carriers, device manufacturers, Independent Software Vendors (ISVs), and Systems Integrators -- must assess their strategies as MRM market consolidation pressures continue to build.

This report covers the following topics:

- Market Overview
- Market Challenges and Drivers
- Subscriber and Revenue Projections, by application category
- Application Trends
- Location Determination Technologies
- LBS Architecture Alternatives
- **NEW FOR 2009:** Enterprise Preferences and Plans (based on 2009 IT Decision-Maker Survey conducted by Frost & Sullivan)
- Wireless Carrier Profiles (for each: history, strategy, location technolog(ies) deployed, partnerships, MRM portfolio and price points, available mobile devices)
- Key Stakeholder Profiles (for each: solutions, partnerships, business strategy)
- Recommended Actions for key stakeholder segments (wireless carriers, application developers, independent software vendors, systems integrators, mobile handheld device manufacturers)

North American Field Asset Management (FAM) Market – Managing Assets on the Move

Any company with assets in the field needs to protect, maintain, and manage their condition, location and cost. Field Asset Management (FAM) solutions utilize wireless technology to remotely locate, track and manage mobile assets. FAM solutions fall into three general categories:

1. Field fleet vehicle management
2. Field service inventory tracking
3. Monitoring product/cargo that is on the move outside the customer's four walls (including Proof of Delivery)

Wireless data capture technologies include barcode scanning, small wireless asset tracking devices, RFID, image capture, and GPS. This report lays the groundwork for future study as technology, price points, and customer requirements more closely converge.

This report covers the following topics:

- Market Overview
- Market Challenges and Drivers
- Subscriber and Revenue Projections, by application category
- Application Definition and Trends, by category
- Technology Trends (barcode scanning, RFID, wireless asset tracking devices, image capture, location tagging)
- **NEW FOR 2009:** Enterprise Preferences and Plans (based on 2009 IT Decision-Maker Survey conducted by Frost & Sullivan)
- Wireless Carrier Profiles (for each: history, strategy, vendor/developer partnerships, FAM portfolio and price points, available mobile devices)
- Key Stakeholder Profiles (for each: solutions, partnerships, business strategy)
- Recommended Actions for key stakeholder segments (wireless carriers, application and platform developers, independent software vendors, systems integrators, mobile device manufacturers)

North American Consumer Location-Based Services Market – The Wireless Carrier Opportunity

Mobile phone-based Consumer Location-Based Services are poised for a period of impressive growth, as carriers are increasingly identifying opportunities to integrate location-aware capabilities into their existing and new mobile data applications. However, while LBS portfolios and adoption are expanding, industry stakeholders are still sorting out which applications have the potential to be immediate winners and which will take additional nurturing to establish a foothold. Add to this the dynamic conditions surrounding developments in infrastructure, gateways, middleware, and geospatial capabilities – and we have a fascinating stew of participants, technologies, and products to evaluate.

This report covers the following topics:

- Market Overview and the LBS Value Chain
- Market Challenges and Drivers
- Subscriber and Revenue Projections, by consumer application category
- Application Definition, Trends, Key Developers, Carrier Solutions and Pricing -- by C-LBS category (Information, Security, Social Mapping, Entertainment)
- Location Determination Technologies
- LBS Architecture Alternatives (control plane vs. user plane)
- Wireless Carrier Profiles (for each: history, strategy, vendor/developer partnerships, C-LBS portfolio and price points, available mobile devices)
- Key Stakeholder Profiles (for each: solutions, partnerships, business strategy)
- Recommended Actions for key stakeholder segments (wireless carriers, application and content developers, mobile device manufacturers, location gateway and middleware vendors)

Strategic Analysis of the Telematics and Location-Based Applications and Services Market in North America

Telematics applications utilize location and communication technologies to simplify and

enhance the driving experience. Combining global positioning (GPS), onboard computing, and wireless data and voice communications, telematics solutions provide a range of safety, security, information, convenience, and communications benefits. The North American light passenger vehicle market is the focus of analysis. This in-depth study analyzes the dynamics and trends of the market and projects the future opportunities it offers to the different members of the North American telematics value chain.

This report covers the following topics:

- Market Definition and Segmentation (Embedded, Connected, and Hybrid Telematics)
- Market Dynamics (drivers, restraints, challenges)
- Telematics Market Revenue and Subscriber Forecasts
- Application and Technology Roadmap
- Value Chain Mapping
- Competitive Analysis of Telematics Service Providers
- Competitive Analysis of Vehicle Manufacturers
- Conclusions and Key Findings

BONUS STUDY: 2008 Asia Pacific Location-Based Services Highlights

The diversity in culture and state of mobile penetration among thirteen of Asia Pacific's mobile markets has resulted in huge variations in the adoption of Location-Based Services. While the Japanese and South Korean markets are at the forefront of LBS adoption, markets in other countries are still in the fledgling stage. Strong initial adoption hurdles persist, including privacy concerns, erroneous detection methods, interoperability issues, and lack of GPS-enabled handsets. As service providers create and consolidate their strategies, it is imperative for market participants to understand the idiosyncrasies of specific regions, with each country posing differing LBS adoption challenges and drivers.

This report covers the following topics:

- Market Overview

- Technology Assessment
- LBS Applications
- Business Models and Pricing Analysis
- Value Chain Analysis
- Market Drivers and Restraints
- Market Sizing and Forecasts
- Mobile Operator Profiles
- Application Developer Profiles
- Conclusions

BONUS STUDY: Context and Communities – The Evolution of Mobile Location-Based Services in Europe

Navigation services have been the core of location-based services for many years through the diffusion of positioning technologies such as GPS. Innovation on positioning technologies, the spread of the mobile Internet, and the success of social networking applications have introduced new business opportunities in mobile location-based services. The concept of location, combined with the concept of mobile communities, transforms the classical navigation and presence service into a facilitator of other services such as dating services and find-a-friend solutions.

The structure of this research service is as follows:

- Defining mobile location-based services
- Technologies for mobile location-based services
- Classifying mobile location-based services
 - Navigation and location services
 - Context-aware social networking services
- Case studies of mobile location-based services providers
- Discussion on the value chain
- The role of mobile network operators
- The role of mobile device manufacturers
- Revenue models
- The role of advertising
- The status of the market in Europe in 2008
 - The economics of mobile location-based services
 - Privacy and regulation
- Future directions of the market
 - Drivers, Restraints, Challenges
 - Market Forecasts

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