

# Oracle Spatial Summit

2015

## LocationBox

Deploying Nationwide, Scalable LBS Solutions at Turkey's National Credit Registry

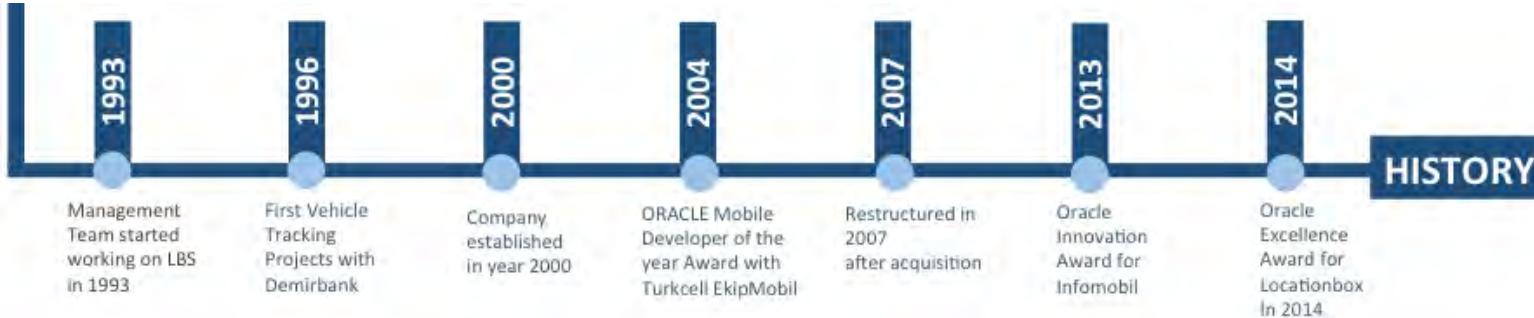
Ali Ufuk Peker, CEO, Dr. Kerem Par, CTO  
Infotech



# Agenda

- About Infotech
- About LocationBox
- KKB Implementation
- Avea Implementation
- M2M Implementation

# Infotech



# Infotech

- Strategic Partnerships

**ORACLE**



**ERICSSON**

- Oracle: certified partner in spatial technologies in EMEA region

**ORACLE** Gold  
Partner

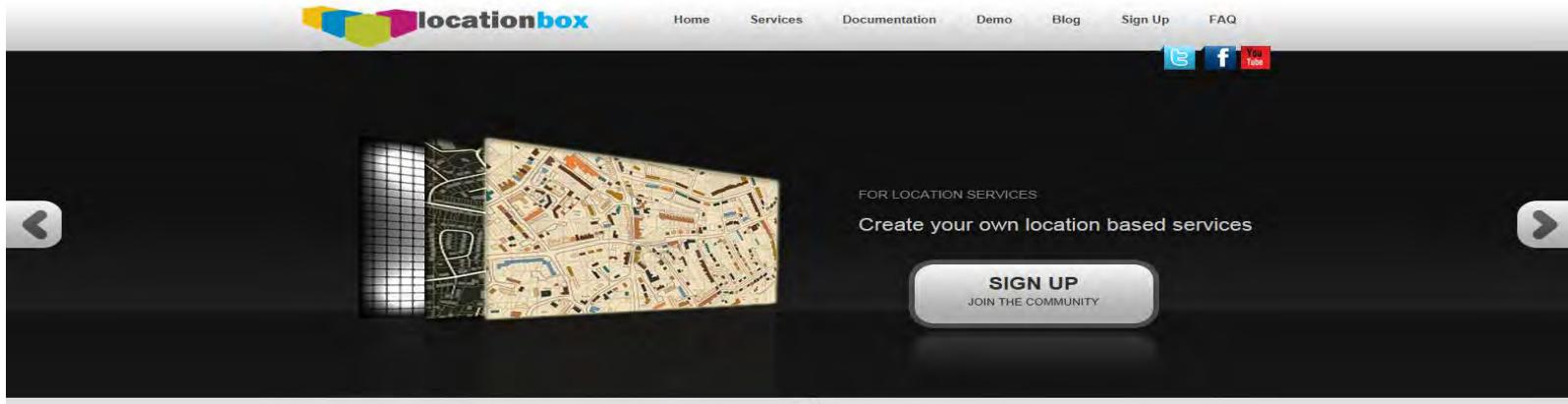
Specialized  
Oracle Spatial 11g

**ORACLE** Gold  
Partner

Specialized  
Oracle Database 11g

# LocationBox

- Location Intelligence Platform



## About LocationBox

### How does it work?

LocationBox is a set of tools for developers creating location based applications.



You can simply [sign up](#) to get your developer key and start using LocationBox today.

## Benefits

### why should I use?

A few more reasons for choosing LocationBox are



- More than 500.000 POIs
- More than 500 brands
- The biggest road network with 400.000km
- The most accurate route calculation
- Up-to-date map data

• Pharmacies on-call and other dynamic data  
• Special address functions designed for Turkey

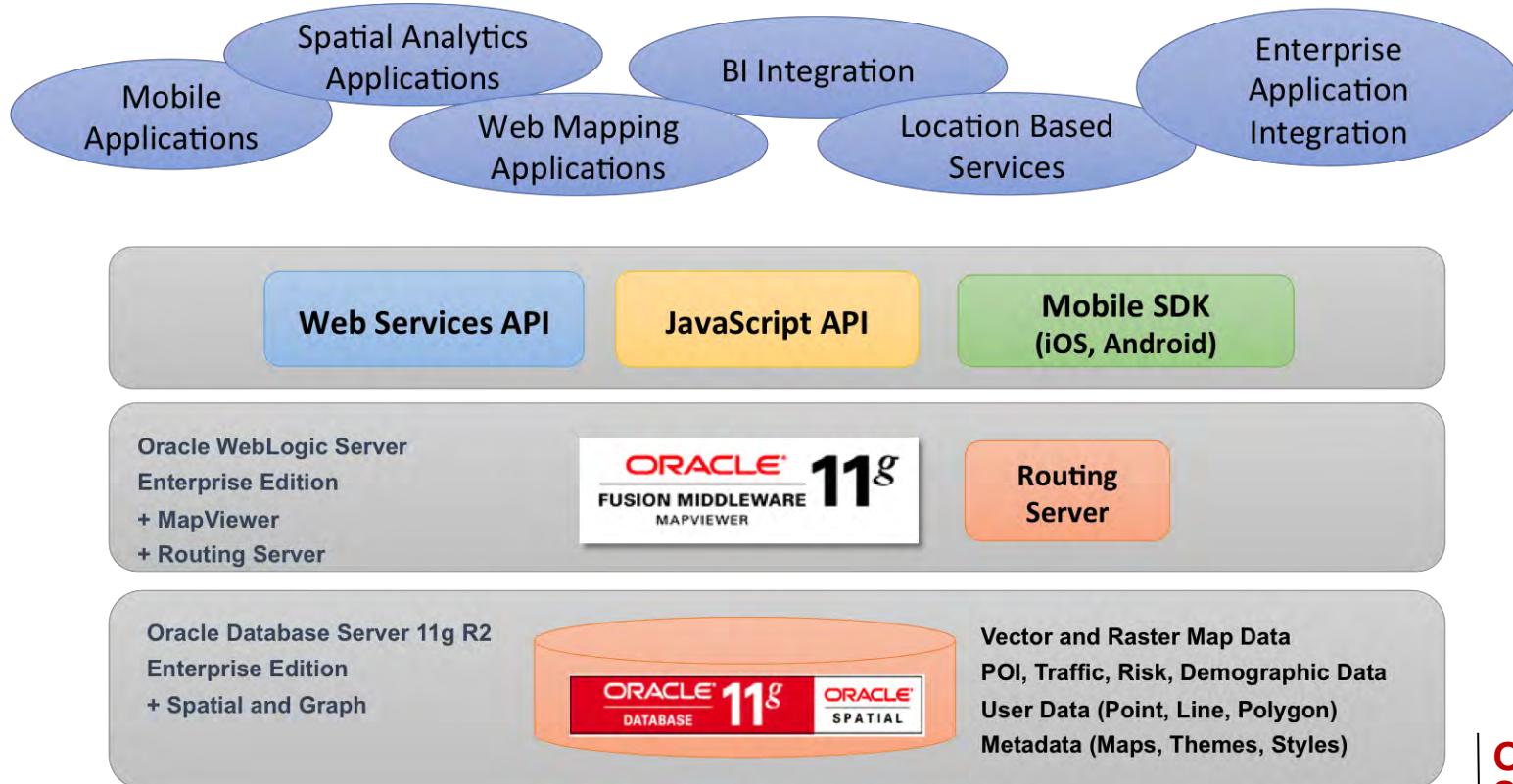
# Services

- Mapping
- Geocoding / Reverse Geocoding
- Routing
- Traffic
- POI Search / Display
- Address Services
- Campaigns, Social Events
- Map based reporting / Heat Maps / Spatial Analysis
- User Data (Point, Line, Polygon)
- User Defined POI Attributes

The screenshot displays three main pages of the locationbox website:

- Services**: A landing page for address, POI, and route services. It includes sections for Geocoding, Reverse Geocoding, and Locationbox Address Service, along with a "Watch it in action" API page.
- API**: A page for the Locationbox API, listing various service endpoints such as Address, Geocoding, POI, and Map.
- Demo**: A page for Locationbox Java/Script Demos, featuring a map of Istanbul with several heatmap overlays and a "Demo" button.

# Architecture



# **KKB ( TURKISH CREDIT REGISTRY OFFICE) IMPLEMENTATION**

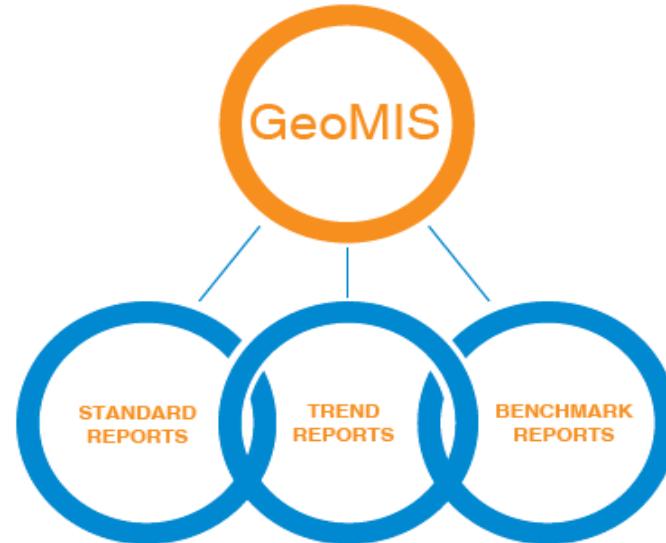
Customer	Challenges	Solutions	Results
<ul style="list-style-type: none"> <li>• The Only Credit Registry Office in Turkey</li> <li>• Supports, 145 Members 39 Banks, 13 Consumer Finance etc.</li> <li>• Supports Business Functions, Departments, Constituents</li> </ul> 	<ul style="list-style-type: none"> <li>• Nationwide address cleanup and geocoding ( 700 M records)</li> <li>• Map based statistical data display</li> <li>• Different access levels for different banks</li> <li>• Detailed reporting : Standard, trend, benchmark</li> <li>• Spatial, Datawarehouse and OLTP Requirement</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle Database 11g Enterprise Edition <ul style="list-style-type: none"> <li>• Spatial Option with GeoRaster, Network Data Model</li> <li>• Partitioning</li> </ul> </li> <li>• Oracle Fusion Middleware <ul style="list-style-type: none"> <li>• MapViewer 11.1.1.7</li> </ul> </li> <li>• Oracle Business Intelligence Enterprise Edition</li> <li>• Oracle Exadata</li> </ul>	<ul style="list-style-type: none"> <li>• Single System for Spatial, Datawarehouse, OLTP</li> <li>• Lower license and hardware costs</li> <li>• Easier management</li> <li>• Single system with no extra integration</li> <li>• Consolidation</li> <li>• OLTP and Reporting</li> <li>• Performance <ul style="list-style-type: none"> <li>• 50x faster transaction processing</li> <li>• 100x faster reports</li> </ul> </li> <li>• Storage: 5x compression</li> <li>• Fast spatial operations</li> <li>• 40 M Geocodes / day</li> </ul>

# KKB Introduction

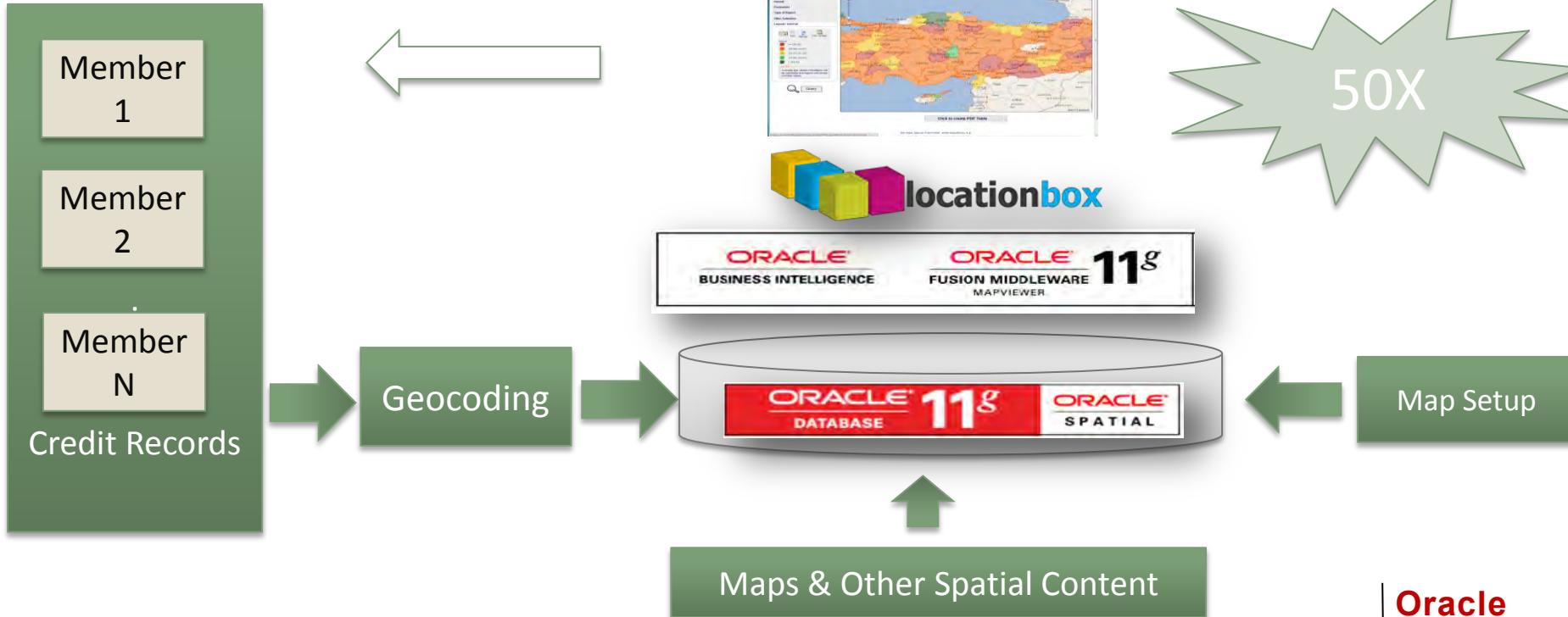


# About GeoMIS Project

- Geocoding and Address Clean-up for entire country's credit transactions
  - More than **700,000,000** Records
- Map based statistical data display
  - Including micro regions
- Accessible to all member banks
- Map based reporting for
  - Standard reports
  - Trend Reports
  - Benchmark Reports



# Components



# Applications



# Business Benefits

- Marketing & Sales Departments
- Credit Allocation Departments
- Credit Monitoring Departments
- Credit Collections Departments
- CRM Departments



# Second Phase

- Commercial Credits Universe
- Collections Universe
- Household Aggregation Universe
- Credits Cards Expenses Universe
- Credit Card Merchants Monitoring
- ATM/Branch Location Analysis
- Whitepages Integration



# AVEA IMPLEMENTATION

Customer	Challenges	Solutions	Results
<ul style="list-style-type: none"> <li>The sole GSM 1800 mobile operator of Turkey,</li> <li>Founded in 2004. Being driven by a spirit of innovation, Avea, the youngest operator of Turkey</li> <li>Has a nationwide customer base of 14,5 million as of the last quarter of 2013.</li> </ul> 	<ul style="list-style-type: none"> <li>Many applications using maps, all with different maps and interfaces</li> <li>BI integration requirement</li> <li>Different interfaces: Web, SMS, MMS, Mobile applications</li> <li>Internal / External users</li> <li>High performance requirements</li> </ul>	<ul style="list-style-type: none"> <li>Oracle Database 11g Enterprise Edition</li> <li>Spatial Option with GeoRaster, Network Data Model</li> <li>Partitioning</li> <li>Oracle Fusion Middleware</li> <li>MapViewer 11.1.1.7</li> <li>Oracle Business Intelligence Enterprise Edition</li> </ul>	<ul style="list-style-type: none"> <li>Consolidation: <ul style="list-style-type: none"> <li>Oracle Spatial</li> <li>MapViewer</li> <li>BI</li> <li>LocationBox</li> <li>Infotech Maps</li> </ul> </li> <li>Applications <ul style="list-style-type: none"> <li>Coverage Information</li> <li>Asset Tracking</li> <li>Taxi Tracking</li> <li>BI Integration</li> <li>CRM Integration</li> <li>Nearest Pharmacy</li> </ul> </li> </ul>

# Asset Tracking

Asset Display on Maps

Bilgilerim Bilgilendirme Ayarlar ? Yardım Çıkış

Harita Aeve Bayileri Adres Ara

Son Konum

Gruba Göre Seçim

(1 of 1) 50

Kişiler

cemal sahbaz

Önemli Noktalar

İşlemler

Göster Yenile İşlemler

Önemli Noktalar

Aktif Görevler

cemal sahbaz

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# Work Order Dispatch

**+ Yeni Görev Ekle**

**- Yeni Görev Ekle**

Göreve Atanacak Kişileri Seçiniz:

Gruba Göre Seçim

**Tüm Kişiler**

Göreve Atanacak Kişiler: cemal şahbaz

Görev Kodu: 111

Görev İsmi: LocationBox

Konum Tanımı: test

Görev Konumu: İstanbul, Kadıköy, Kozyatağı, Şehit İtknur Keleş

**Harita** **Avea Bayileri**



**Work Order Dispatch**

# CRM Integration

Bilgilerim Bilgilendirme Ayarlar ? Yardım

## Önemli Nokta Listesi

Filtrele

Kısa İsim: Tanım:

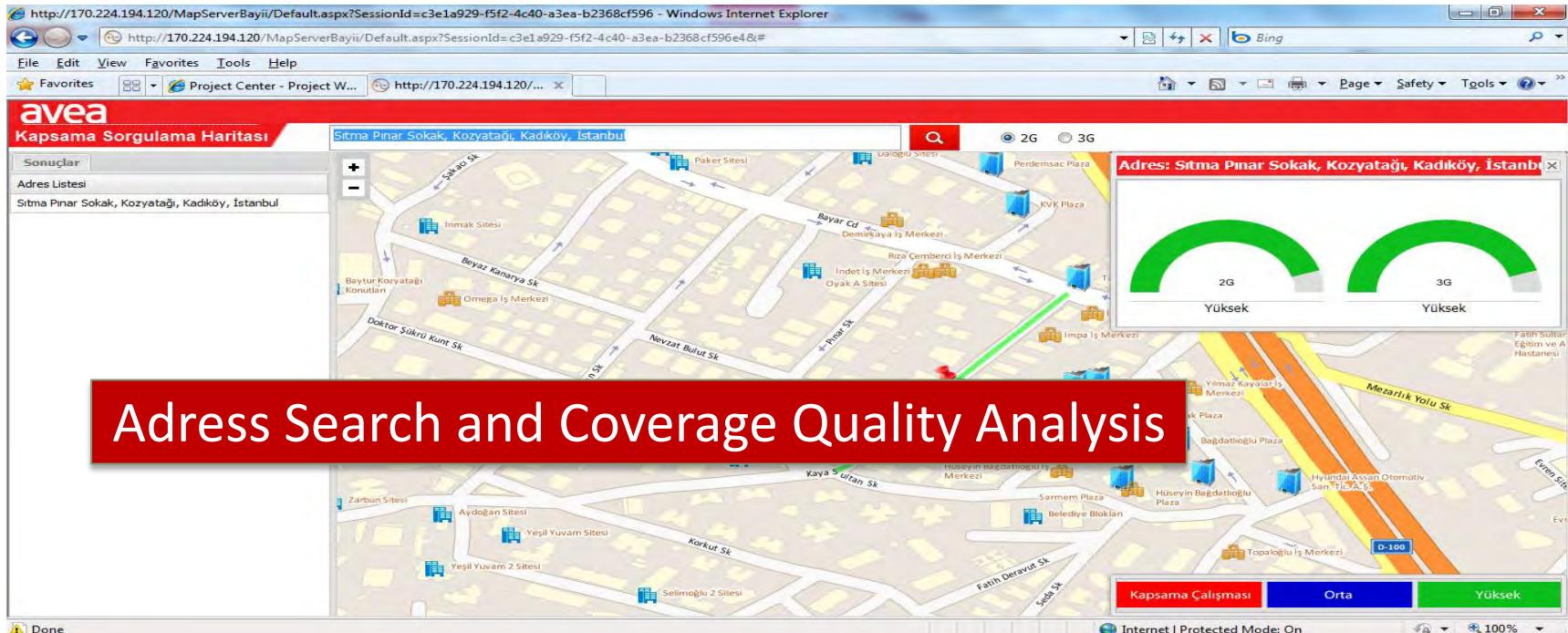
(2 of 2) 1 2 10

Kısa İsim	Tanım	Konum
anadolu bölge giriş alarmı m1		
macka		
Çağdaş Test		
kadıkoy		
ziyaret		
feneryolu		
sdisa		
blk		
beykoz		
Avea Arge		

+ Yeni Alarm Kuralı Tanımla

Ana Sayfa Dil Seçimi

# Coverage Analysis



Adress Search and Coverage Quality Analysis

# INFOMOBIL – M2M IMPLEMENTATION

# Vehicle Tracking & Fleet Management

- Cloud based M2M Platform

- 50.000+ Mobiles
  - 800+ Companies
  - 10.000+ Users

- Services

- Tracking
  - Telemetry
  - Reporting
  - Alarms & Notifications
  - Routing
  - Driver Scoring
  - Web, Mobile, SMS, Social Media Interfaces
  - Various Tracking Device Options



Congratulations

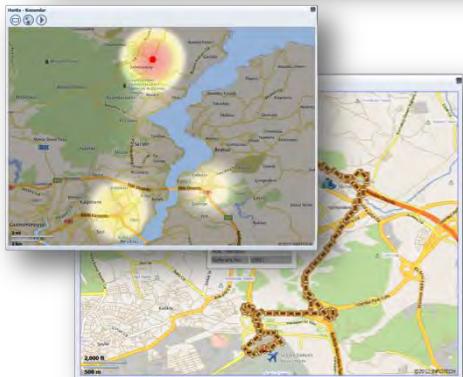
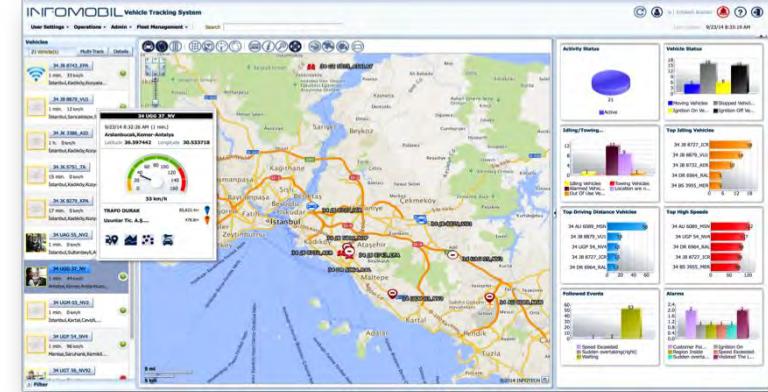
2013 Oracle Excellence Awards for Fusion Middleware Innovation  
Winner

Oracle Application Development Framework (Fusion Development)

- Turkcell Best M2M  
Solution Award

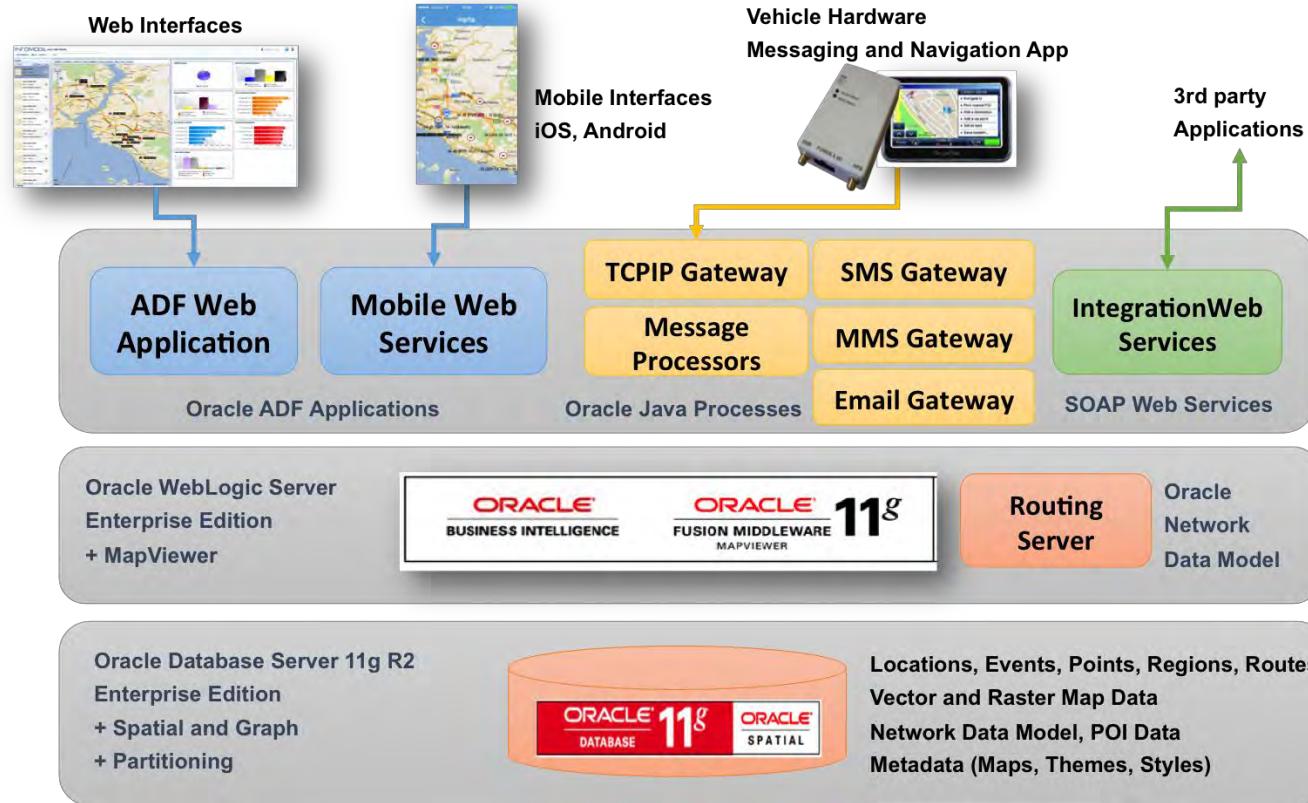


# Vehicle Tracking & Fleet Management

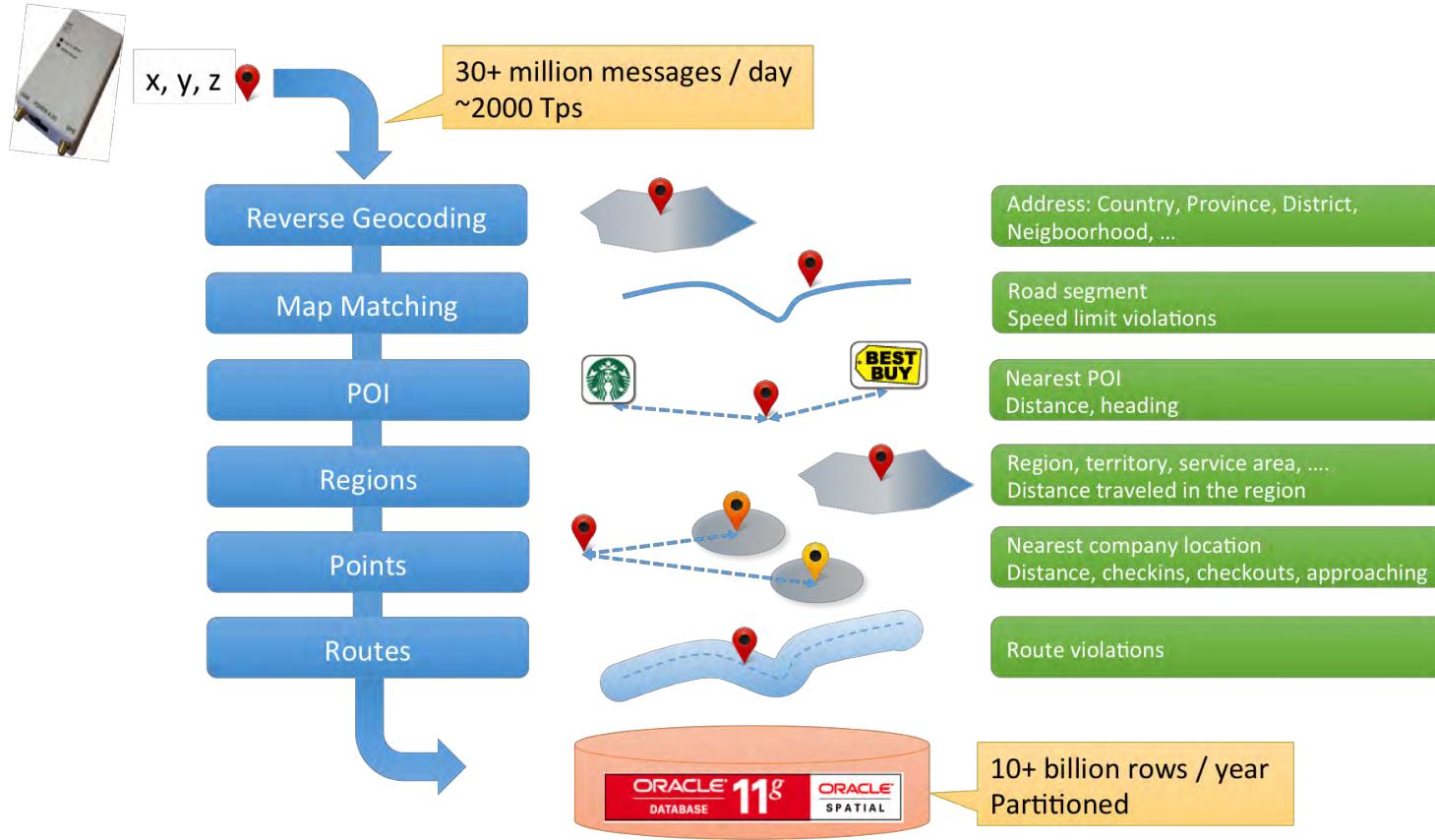


Oracle  
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Summit  
2015

# Architecture



# Spatial Transactions

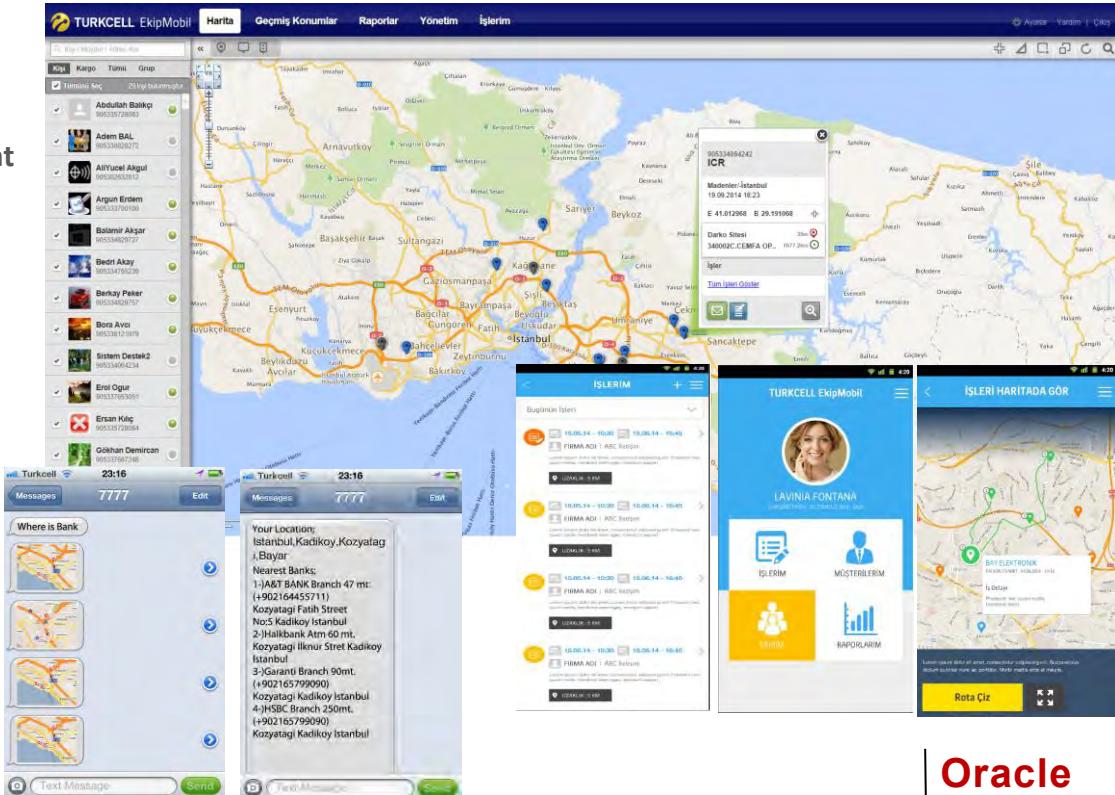


## OTHER SPATIAL / MAPVIEWER USE CASES

# Location Based Services



- **Ekipmobil - Tracking and Workforce Management**
  - 70.000+ Mobiles
  - 8.000 Companies
  - 10.000+ Users
  - GSM/GPS Positioning
  - 10 million transactions / day
- **Nearest POI**
- **Traffic**
- **Weather**
- **Agriculture**
- **Web/Mobile/SMS/MMS interfaces**



# GIS - Konya Municipality

- **Consolidated GIS Platform**
  - 2.000.000 population, 6th in Turkey
  - 39.000 km<sup>2</sup>, largest city in area, 31 districts
  - 1000+ GIS users (%90 read only, %10 editing)
- **Diverse Data Types**
  - Vector, Raster, Oblique Imagery, 3D Building Models
- **Applications**
  - 2D City Guide Application (web)
  - 3D City Guide Application (web, mobile)
  - GIS applications (read only + map editing)
  - BI Integration
- Replacement of MapInfo MapXtreme, GeoServer, OpenLayers



# LocationBox Applications



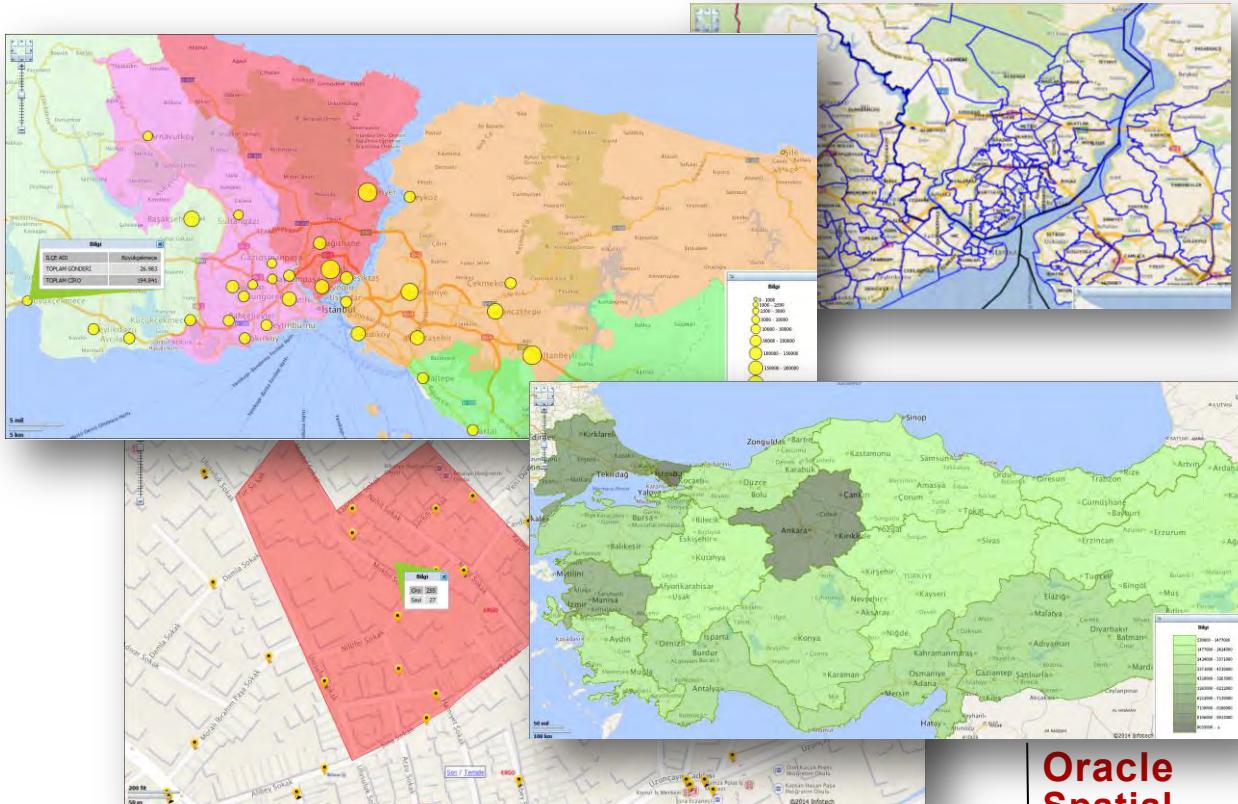
- Location based risk management
- Policy locations
- Editing high risk zones
  - Earthquake, Fire, Flood, Storm, Terrorism
- Decision support system
  - Risk scoring
- Reporting by spatial analysis
  - PML Reports
- LocationBox on Exadata



# LocationBox Applications



- **Parcel Delivery**
  - 900 Branches
  - 12 million deliveries / day
- **Operational**
  - Editing service areas
  - Geocoding addresses
  - Location based delivery destination
- **Analysis**
  - Map based reporting
  - Polygon analysis
  - BI Integration

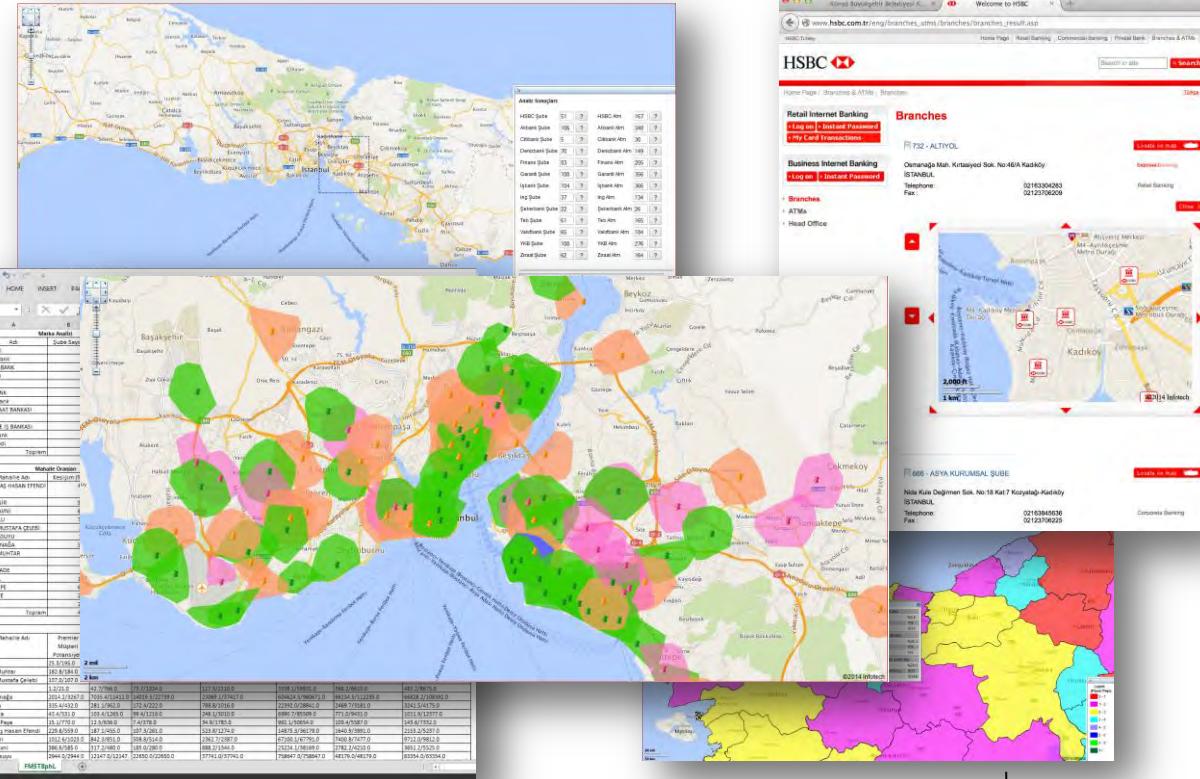


# LocationBox Applications



- Branch/ATM Locations
- Competition Analysis
- Service Areas
- Reporting
  - Branch / ATM Scoring
  - Market Shares
  - Reporting by spatial analysis

- Branch, ATM locator on public web site

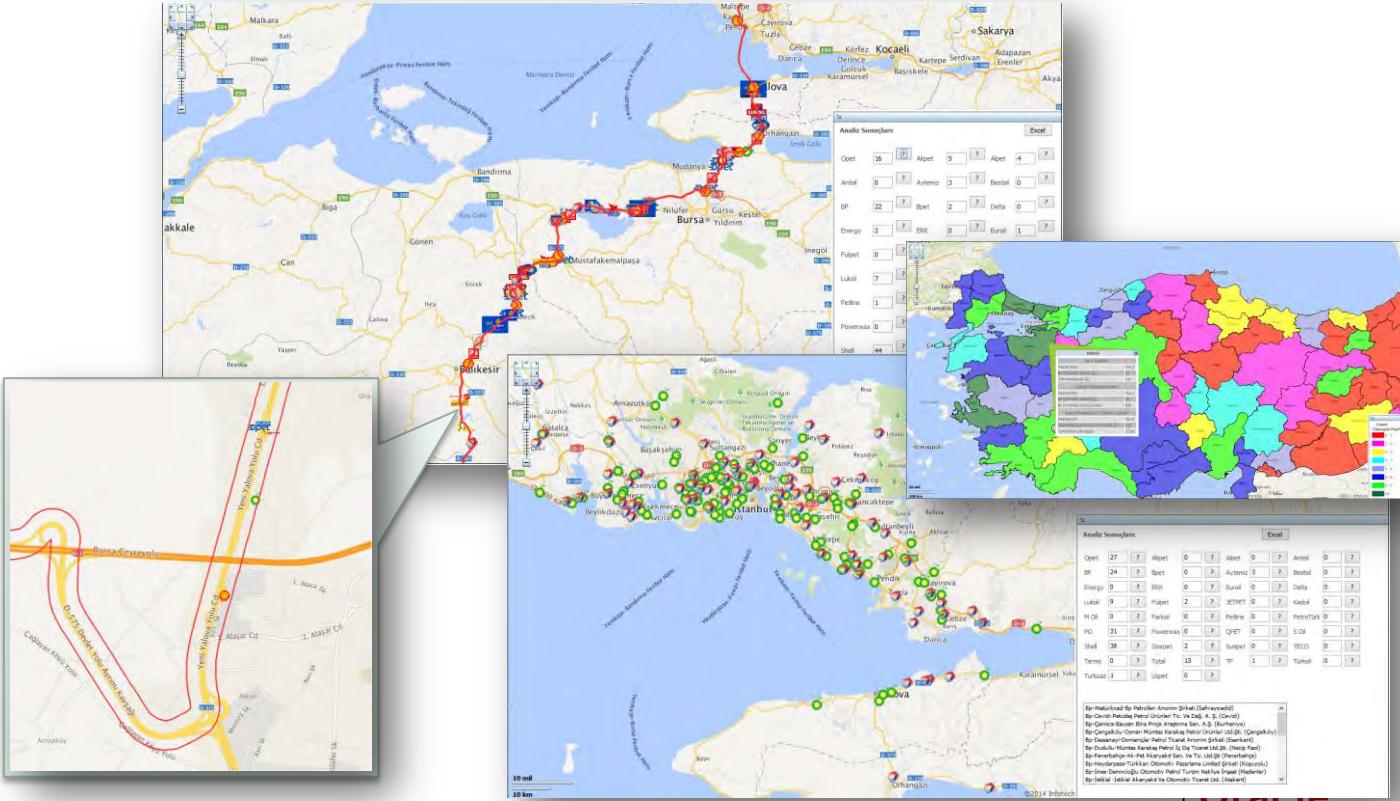


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Spatial  
Summit  
2015

# LocationBox Applications



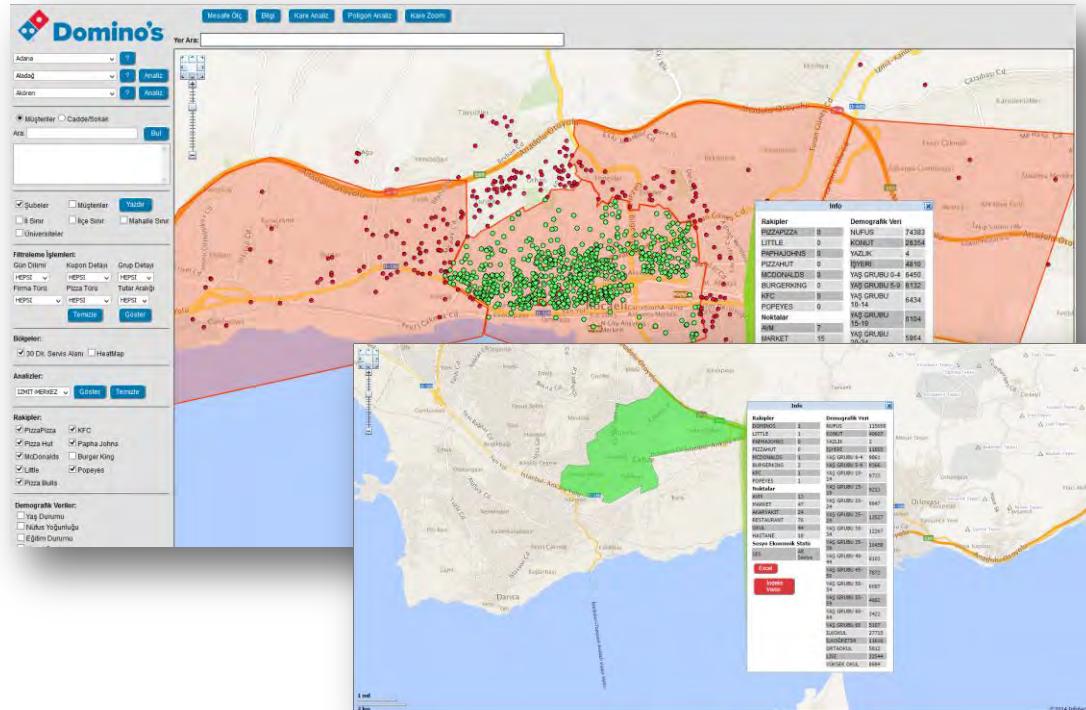
- Site Selection
- Competition Analysis
  - Region based
  - Route based
- Sales Planning
- Performance Scoring
- Market Shares
- Map based reporting



# LocationBox Applications



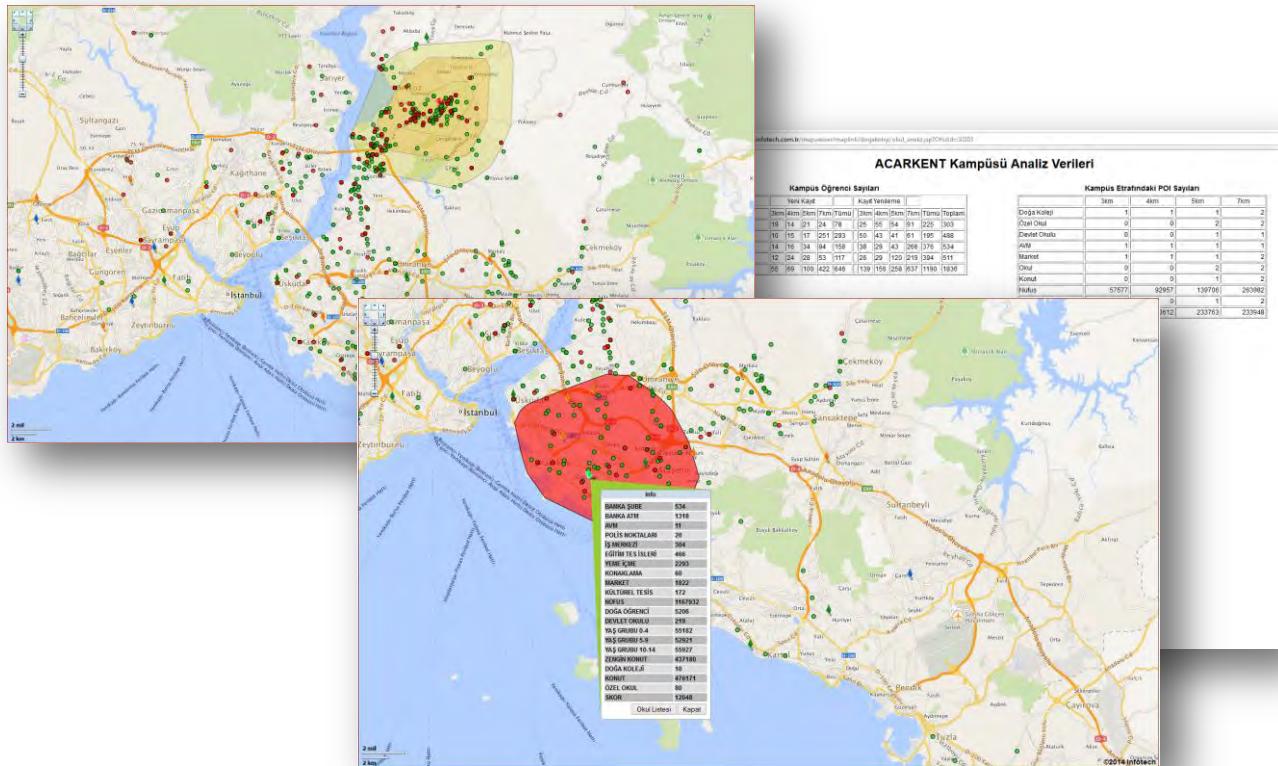
- Restaurant Chain
- Branch, Delivery Locations
- Service Areas
- Violations
- Competition Analysis
- Site Selection
- Potential Analysis
- Polygon Analysis



# LocationBox Applications

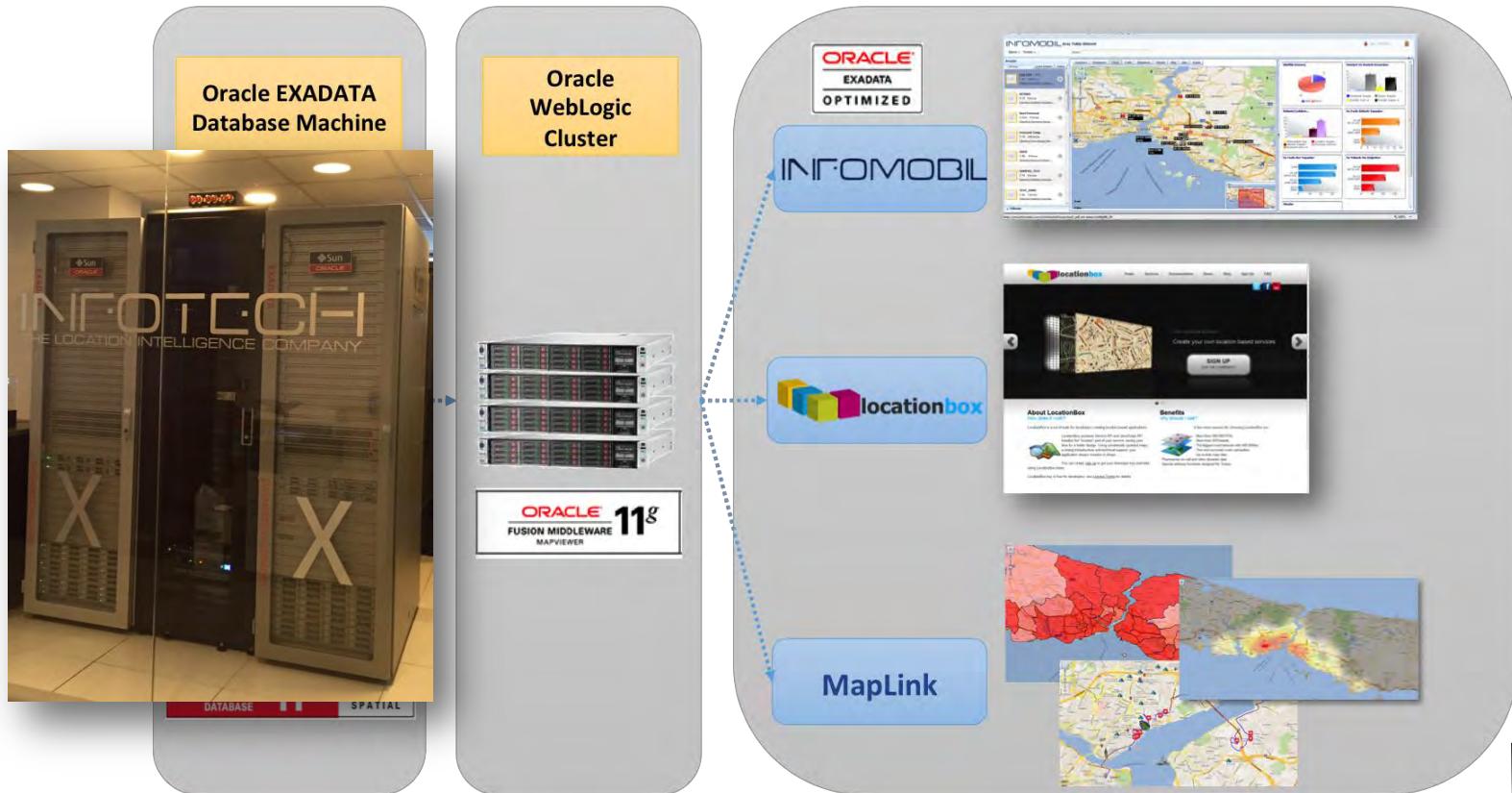


- Private Schools
  - 90 Campuses
  - 55.000 Students
- Site Selection
- Campus, Student Locations
- Service Areas
- Distance Zones
- Potential Analysis
- Reporting by Spatial Analysis



# INFRASTRUCTURE

# Infrastructure



# Why Spatial and MapViewer ?

- Design Philosophy
  - Natively store spatial data in database
  - Analyze and visualize by using SQL
- Standard Components
  - Oracle Database Server & Oracle WebLogic Server
- Performance
  - Fast, Robust
  - High Number of Transactions
- Functional Requirements
  - Capable, Complete
  - Spatial Data Types, Functions & Operators, Data Size, ...
- Non Functional Requirements
  - Administration, Backup, Restore, Disaster Recovery, Scalability, Security, Performance Tuning, ...
- BI Integration



# Why Exadata ?

- Database Consolidation
- Single Platform for Mixed Workloads
  - OLTP & Reporting
- Performance
  - 5.2x faster transaction processing
  - 100x faster reports
- Storage
  - 5x compression
- Easy Scalability
- Easy Manageability
- Fast Spatial Operations







Oracle BIWA  
with  
Oracle Spatial  
Summit 2015  
(Jan 27-Jan 29 2015)

## Oracle Business Intelligence Warehousing and Analytics Summit

Oracle HQ Conference Center  
Redwood City, California