THE DISRUPTIVE BUSINESS MODELS IN SPATIAL ANALYTICS

Driven by Big Data & IoT

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AGENDA

- Location Intelligence – the new frontiers
- 5 Disruptive Forces
- Disruptive Business Models
- CYIENT - Leading the journey
Location Intelligence – the new frontiers

About 80% of corporate data has spatial significance

BI provides WHAT, WHEN & WHO...
Spatial provides WHERE and makes better sense of HOW & WHY

RELEVANCE
RESPONSE
REVENUE
RESULTS
Extending the gamut of Location

Every “thing” of economic value is spatially relevant...

SOCOCO

Socialise  Localise  Commercialise
5 DISRUPTIVE TRENDS

The New Opportunities
5 Disruptive trends

- Sharing Economy
- Location Intelligence
- Mobile
- IoT
- Big Data
- Autonomous Agents
1. Widespread adoption of smartphones

- Location is ubiquitous with cell triangulation
- Consumers opting to share their location voluntarily
- >74% of consumers with smartphones use location based services**
- App proliferation

Global Smartphone traffic to increase by 8X by 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Smartphone subscriptions</th>
<th>Monthly traffic Per active subscription*</th>
<th>Total monthly Smartphone traffic</th>
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</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.7 B</td>
<td>900 MB</td>
<td>2.1 EB</td>
</tr>
<tr>
<td>2020</td>
<td>6.1 B</td>
<td>3.5 GB</td>
<td>17 EB</td>
</tr>
</tbody>
</table>

Source:
* Ericsson
**Pew Research Internet project, 9/2013
2. Ability to connect things affordably

Most of the IoT applications have spatial significance

- Vehicles, cell phones, assets and even pets

Location and Time play pivotal role in building spatial intelligence

- Show me vehicles passed by location X in the past hour
- Where has my car been over the last few hours
3. Ability to process big data in real-time and offline

Location intelligence is underutilized in most BI applications

If there is location, there is location intelligence, almost instantly.

- 28 to 32 year old, middle class single male.
- Spends lunch hours at the gym.
- Frequents nightlife hotspots on Fridays.
- Visits mountains on weekends.
- Air travel 20% of the time.
- Outdoor, active lifestyle pursuits & interests.

Human ➔ Smartphone ➔ Location ➔ Relevant data ➔ Context ➔ Analytics ➔ Applications
3. Ability to process big data in real-time and offline

Common capabilities of Machine Learning
- Speech recognition
- Natural language processing
- Face detection
- Medical diagnosis
- Customer profiling
- Fraud detection
- Spam detection
- Shape detection
Autonomous agents and things sense their environment and produce rich data. They get richer context with location intelligence when they interact with their environment.
5. Sharing Economy

Communication

Web 2.0

Social Media & Sharing Economy

Internet

Web Services

Location Intelligence
DISRUPTIVE BUSINESS MODELS

Where is the Money?
The Disruptive Business Models

Accumulate context to create untapped business value

1. **Tap Multiple Forces**
   - Resolve data sources across multiple disruptive forces
   - Integrate new forces with existing ones

2. **Accumulate Context**
   - Spatial Reasoning
   - Temporal Reasoning
   - Nodal Reasoning

3. **Determine Relevance**
   - Create possibilities
   - Predict Outcomes
   - Alert opportunities

4. **Create Business Value**

Locations: Mobile, IoT, Big Data, Autonomous Agents, Sharing Economy
Observation space for Location Intelligence

Lack of robust revenue model is the primary reason for failure of most of the LBS providers.

The money is with:
- Rich spatial data
- Attractive platform for advertisers
- Compelling applications
- Cross functional applicability
Leading the journey of Spatial Analytics
1Mn+ sq kms of high resolution satellite imagery processed

Over 85Mn hours of geospatial data processing

1Mn sq. km. terrain modeled for 3D applications

3D modelling & texturing of 200,000+ buildings

Annually refreshed 58Mn road network elements

Captured 10Mn historical land use features

Generated 3D database for 200+ airports
THANK YOU

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