Don’t Believe Everything You See On CSI: Beyond Predictive Policing

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Community Policing

“The Police are the Public and the Public are the Police”

Sir Robert Peel
1788 – 1850

Good Relationship & Trust
Prevent Crime & Disorder

Japan “Koban”

Singapore Neighbourhood Police Post

Photos credit: Internet
Fast Forward to 21st Century

Problem-oriented Policing

Intelligence-led Policing

Predictive Policing (PredPol)

Data is important, but...

Modus Operandi Remains the same?

Crowd-Sourcing, People Power!

Photos credit: Internet
UK sex crimes via Facebook, Twitter increased 400% since 2009

Child Exploitation / Pedophilia

Grooming ... Parents!

Cyber Bullying
Radicalization

Recruitment

Lone Wolf

Jihadi Brides
Social Media’s Role in Ya’an Earthquake Aftermath is Revealing

ChinaFile, 22 Apr 2013
“Free this week for a quick gossip/prep before I go and destroy America?”

“3 weeks today, we’re totally in LA pissing people off on Hollywood Blvd and diggin’ Marilyn Monroe up!”
Social-Enabled Policing

Community Policing in the Age of Social Networking

Return On Relationship (ROR)

Boston

- Boston Police looking for video of the finish line
- BPD asking for tips

Photos credit: Internet
Social-Enabled Policing

“The Police are the Public and the Public are the Police” in the Physical & Cyber Worlds

Listen
Analyze
Understand
Communicate

Assure
Act
Engage
Participate
Social-Enabled Policing

Key Considerations

1. Which Social Networks and How?

2. How Can I Meet the People’s Demands?

3. Am I Big Data Ready?
Oracle Social Relationship Management (SRM)

- Millions of platforms, including social networks, blogs, forums, etc.
- Advanced Latent Semantic Analysis
- Response and Engagement
Which Social Networks and How?

Social Relationship Management (SRM) Demo

Photo credit: Internet
2 How Can I Meet the People’s Demands?

Finnish Police

- More than 100 systems
- 93% of IT budget used to maintain them
- Mainly obsolete
### How Can I Meet the People’s Demands?

**Oracle Integrated Policing Platform**

<table>
<thead>
<tr>
<th>Involved parties</th>
<th>Citizens</th>
<th>Legal Representative</th>
<th>Trusted 3rd parties</th>
<th>Police Staff</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Channels</th>
<th>Internet</th>
<th>Phone</th>
<th>eMail</th>
<th>Mobile</th>
<th>Social</th>
<th>Face to Face</th>
<th>Paper</th>
</tr>
</thead>
</table>

#### Policing Operational Capabilities

- Incident Mgt
- Case Mgt
- Relationship
- Lost & Found
- Offender
- Criminal
- Legal Inst.
- Alerts
- Prosecution
- Analysis
- Evidence
- Custody
- Firearms
- Warrants

#### Business Rules
- Operations & Response
- Investigation
- Intelligence
- Property Management
- Suspect & Offender
- Records Management
- Coordination & Liaison

|----------------|-------------|--------|------------|---------------|----------------|------------|

#### Content Management

- Knowledge Base

<table>
<thead>
<tr>
<th>Business Intelligence</th>
<th>Performance Management</th>
<th>Intelligence Analysis</th>
<th>Management Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Management</td>
<td>Database</td>
<td>Master Data</td>
<td>Spatial Data</td>
</tr>
</tbody>
</table>

#### Communication Layer

- Data Exchange
- Service Bus
- Extract, Transform, Load (ETL)
Policing and Crime Investigation

Behind the Scene

Vladimir Videnovic
Business Solutions Director
Big Data and Analytics
3 Big Data Ready?

Photos credit: Internet
Information-Powered Policing and Crime Investigation

Data ➔ Information

Information Environment

Insight ➔ Evidence ➔ Action ➔ Decision ➔ Conclusion
"If you torture the data long enough, it will confess"

Darrell Huff *How to Lie With Statistics*
Modern Information Management Transition

Today

- Conglomerate
- Information Silos
- Ageing technology
- Many different ways
- Lack of IM Skills
- Band-aid approach

Tomorrow

- Community
- Common Framework
- Empowered People
- Information-powered Organisation
- Innovation
- Reusable Design Patterns
Modern Information Management Capability
Promise of Analytics

An Information-Powered Organisation is equipped with *timely insights and knowledge* to continuously optimise the way they

- derive conclusions, decisions and actions
- conduct their business
- streamline their operations
- deliver outcomes
- adapt to new realities
The Hadoop Zoo

ZooKeeper

kafka

KUDU

sqrrl

presto

HUE

Flume

Spark

HBase

OOZIE

Hadoop Map Reduce

AVRO

HDFS

Scala

Sentry

Oracle NOSQL Database

mahout
What if the Crime Investigators Could...

- Visually sift through the clutter?
- Mash up a crazy amount of data sources?
- Get more answers on any device?
- Literally talk to their data?
Big Information Ready!
Information-Powered Policing and Investigation Environment
Crime Analytics Demo
Modern Information Management Platform
No Compromise Platform for the Future

OLD WAY

IT Administrators
Controlled Data Model
Enterprise Data
Reporting & Analysis
Desktop Dashboards
On-premises

NEW WAY

Consumer Experience
Enriched Data Model
Personal data mash ups
Visual Analytics
Mobile and Wearables
Cloud and Hybrid
Argentine

December 2013
US Customs & Border Protection
Automated Targeting System (ATS)

Exadata Observations

- **Installation**
  - installed and ready to load within 7 days
    - But not without some challenges (power, cooling, network, data loading)
- **Performance**
  - Average of 10x faster than big SMP servers for on-line queries
  - Batch queries went from 45 minutes to 35 seconds — 77x faster
  - No major code changes made yet — we expect more improvements
  - Reducing ATS from 120 racks to 12 racks. Reduced power, space, and cost.
  - Freeing up over One Petabyte of expensive SAN storage
- **Patching & Support**
  - There is still some work needed to improve the patching process
  - Great Oracle Support but still have some bugs to work out
- **Exadata is not a magic Bullet but it delivers GREAT value and performance as promised**

National Targeting Center

- ...from 45 minutes to 35 seconds
- Reducing ATS from 120 racks to 12 racks

Source: Internet
Prevention, Detection and Solving of Crime and Disorder

Social Networks

Crowd Sourcing

Social-Enabled Policing

Community

People Power

Predictive

Intelligence-led

Customer Experience

Relationship

Big Data and Analytics
Are You Social-Enabled? Are You Big Data Ready?

Thank You!

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