

ORACLE®

Construct a Public Security Data Analysis Engine Using an Oracle Big Data Solution

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Agenda



Case Outline

Existing Pain

Oracle Solution

Business Benefits

Q&A

Customer Profile

- A province level Public Security department in Northeastern region of China
- Public security management, security check, crime investigate etc.
- Public Sector/Government

Business Problem

- Hard to do Criminal analysis and prediction without Big data Technology.
- Public Security Big Data apps are strategic IT planning in Public Security Department.

Product Used

- Oracle Database Enterprise Edition 11gR2
- Big Data Spatial and Graph 2.2
- Oracle BIEE 12c and Data Visualization
- Big Data Discovery 1.3.2

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Oracle Solution

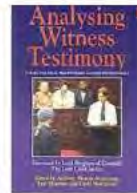
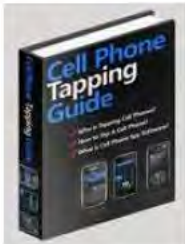
Business Benefits

Q&A

Know what this person is doing?

Who else went to stay the same hotel?

What happened in this place also?



Who is best suited to handle this situation?

Peoples

Missing Persons

Offenders Register

Suspects

Victims

Witnesses

Objects

Evidence

Phone Numbers

Properties

Vehicle Registry

Web-sites

Locations

Company Location

Incident Location

Hotel Location

Suspect Address

Victim Address

Events

Arrests

Traffic Accident

Crimes

Phone Calls

Border Crossings

Case Outline

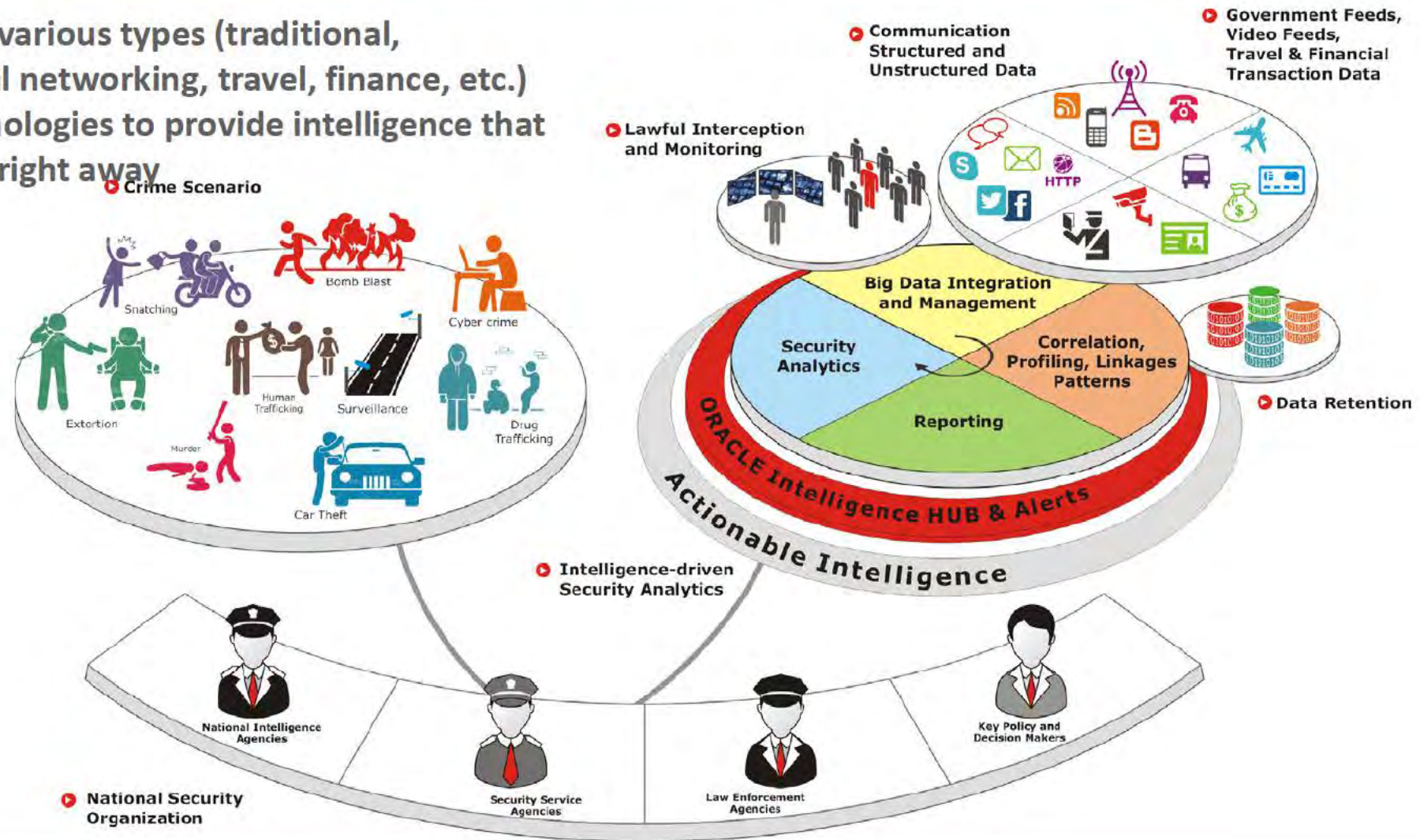
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Combining data of various types (traditional, unstructured, social networking, travel, finance, etc.) with big data technologies to provide intelligence that police can execute right away



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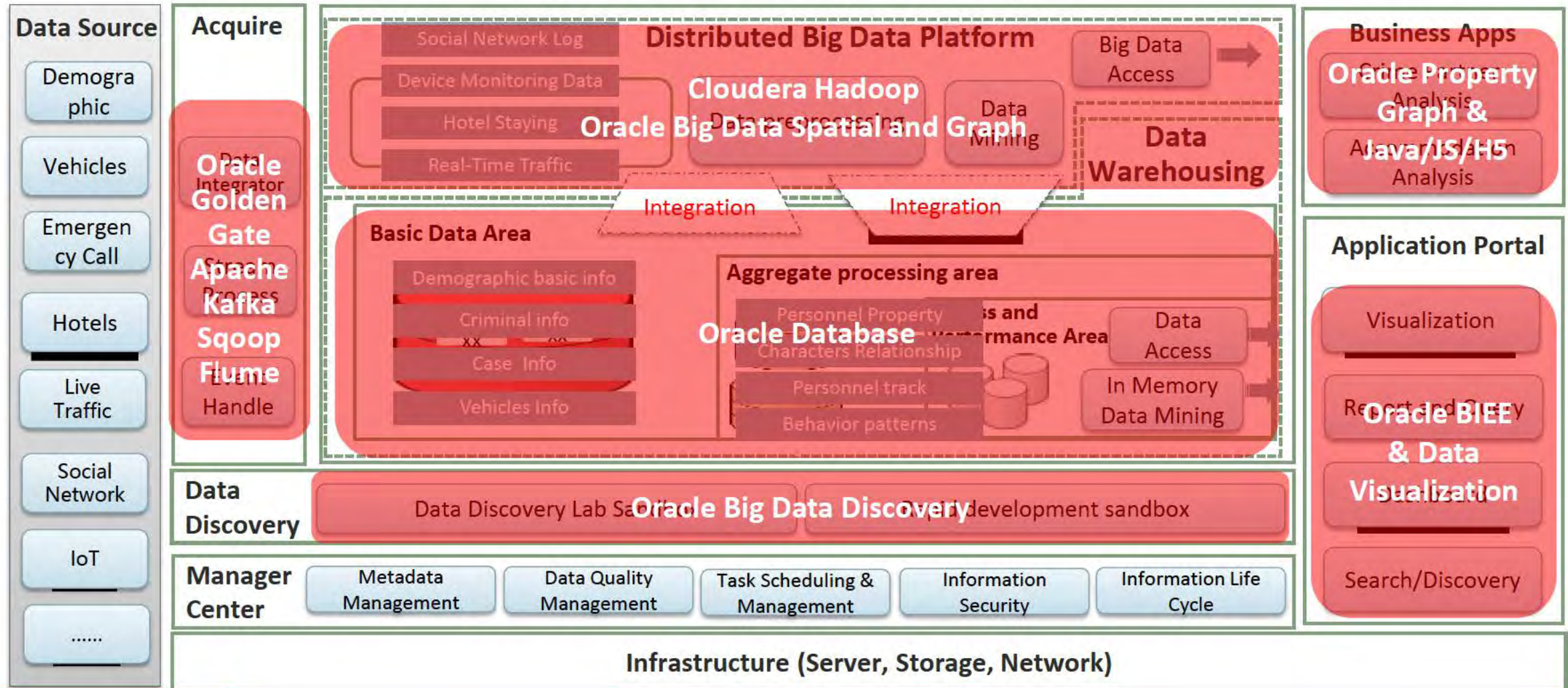
Q&A

Challenges

Requirements

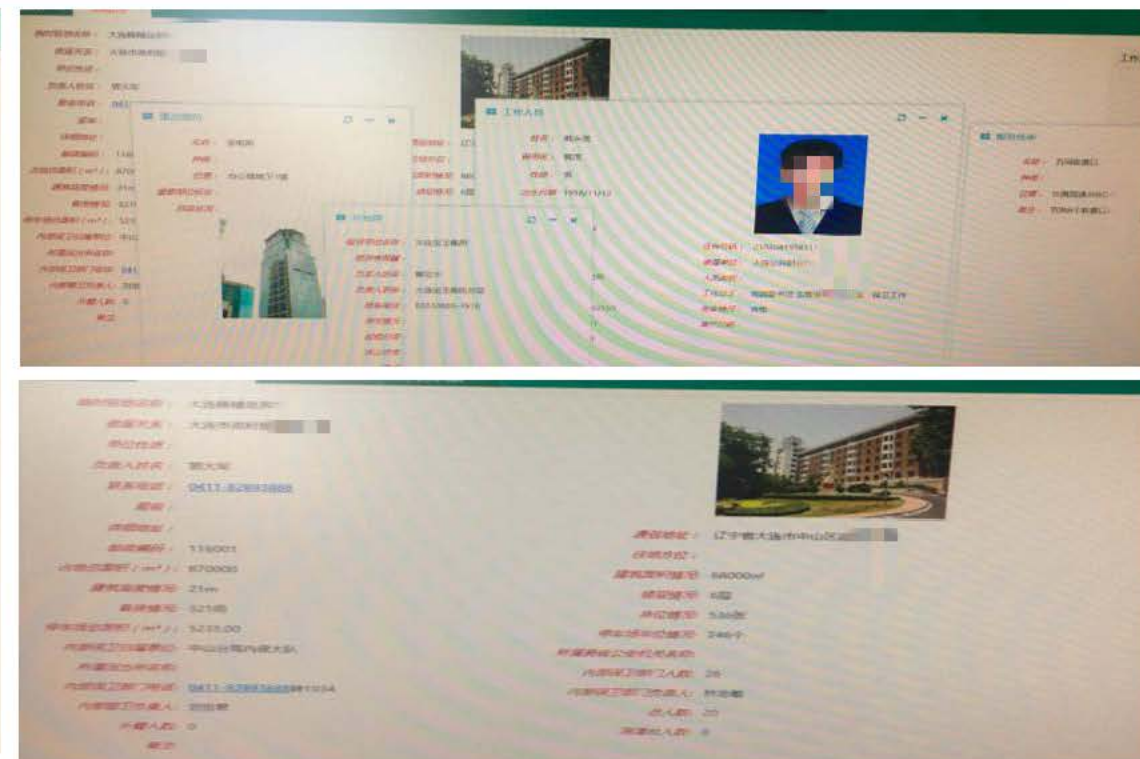
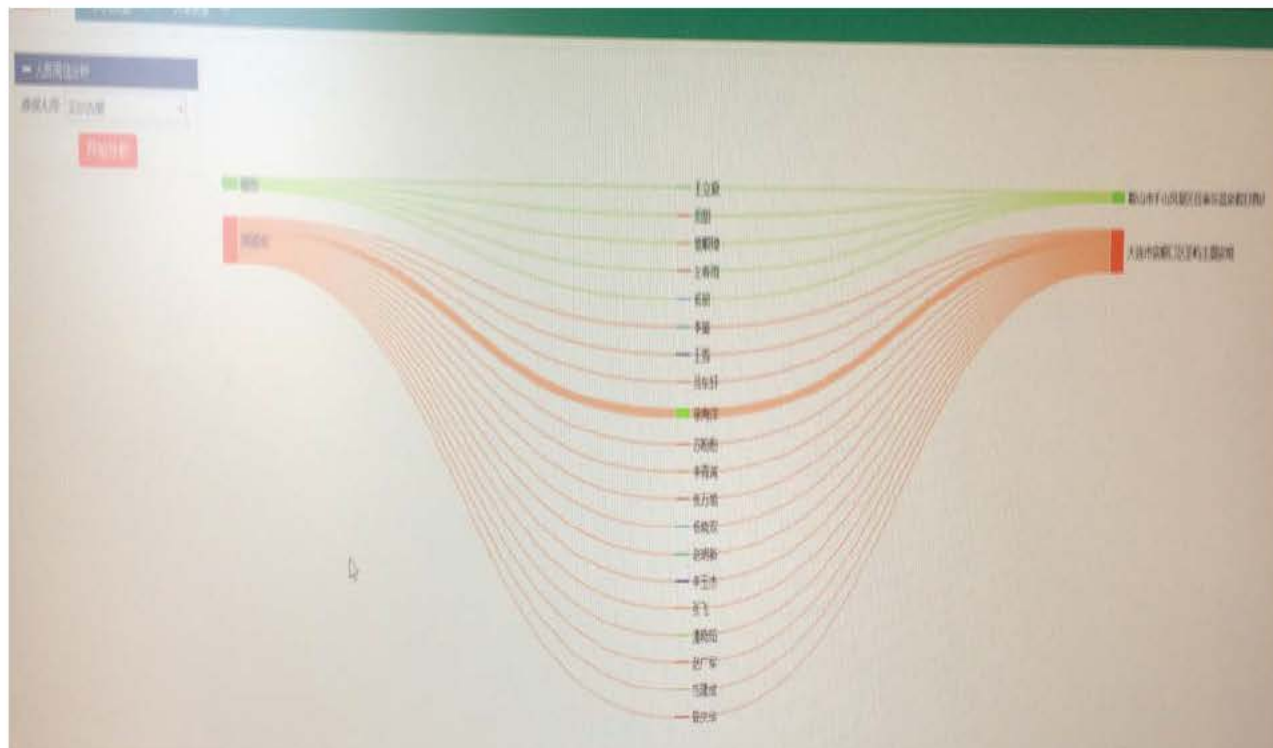
- Public Security dataset incomprehensible without Big Data tools.
- Lack of a communication channel between structured and unstructured Public Security data.
- Very difficult to do Criminal analysis and prediction .
- Complication of BD integration and visualization.
- Crime Partner Analysis.
- Hotel Accommodation Analysis.
- Police Intelligence Analysis.
- Vehicle Analysis.
- Build police operation dashboard and report.

Oracle Public Security Data Analysis Engine



Use Case #1—Crime Partner Analysis

Pick up a suspect, say Mike, according to the relationship between people and their hotel stay, you may find the other suspects. Click to view more information of the suspect and hotel.



Use Case #1—Crime Partner Analysis

Property Graph Technology Implementation Work Flow

1.Design Property
Graph Model

2.Data Clean

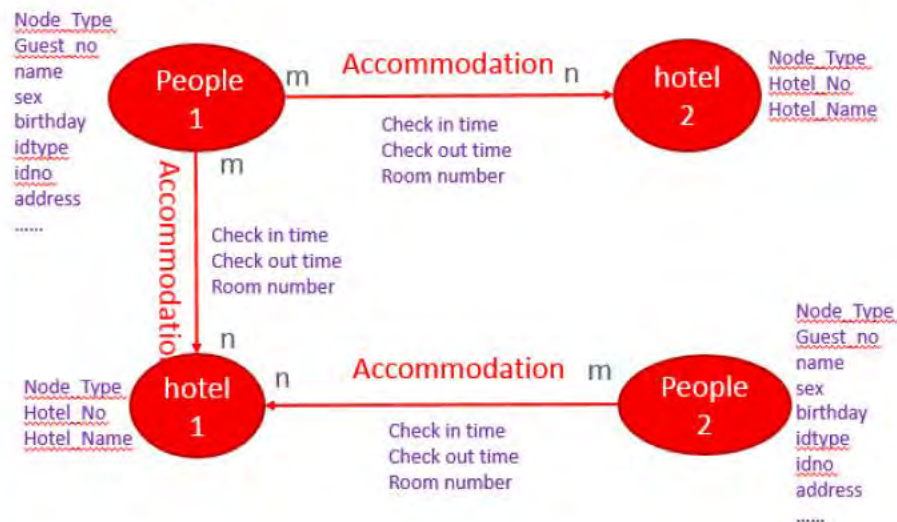
3.Generate OPV
and OPE

4.Load OPV and
OPE to HBASE

5.PGQL

5.PPR

6.Integrate
Java+H5+JS

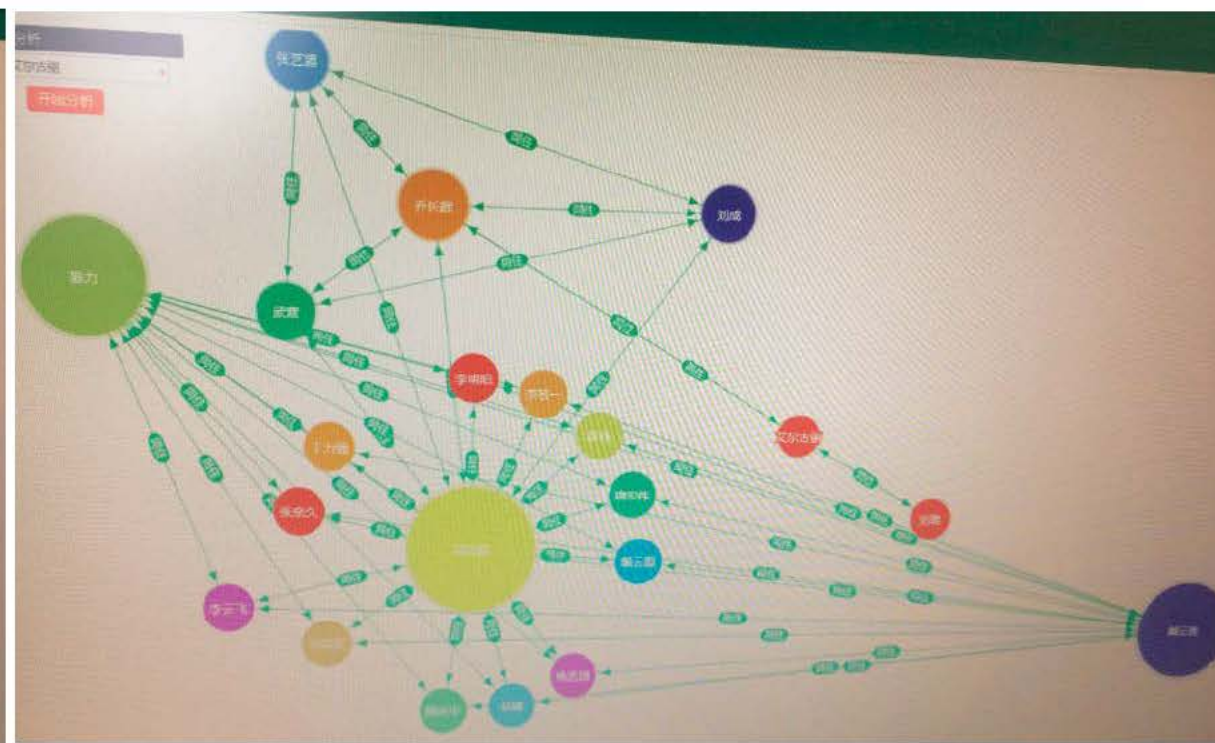
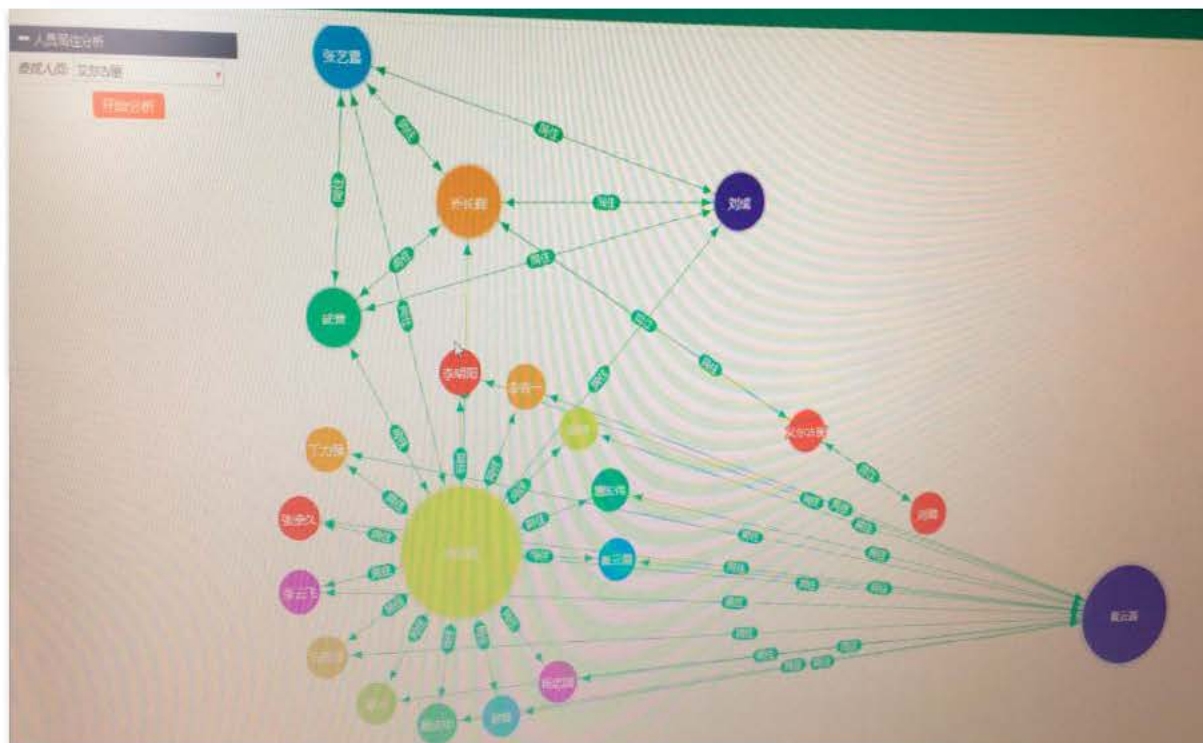


Note : People and hotel is many to many relationship.



Use Case #2—Hotel Accommodation Analysis

Pick up a guest, say Mike, in a certain time period (6 hours or 12 hours) to find out the other guys who stayed in the same hotel as Mike did. And expand this, and so on and so forth.





**Analyze patrol point settings,
Analyze Police deployment
Whether reasonable, and
Optimize patrol route.**

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Key Focus Areas	Benefits
Improved Police working Efficiency	<ul style="list-style-type: none">➤ Reduced Police time to identify potential suspect.➤ Improved Police Intelligence management➤ More easily to trace the key people/objects/events
Powerful Analysis Platform	<ul style="list-style-type: none">➤ Integrated varies data source with varies data formats in one platform.➤ Consolidated BI/Hadoop/Spatial and Graph platform to adopt public security varies analysis scenarios.➤ Provide integrated view for pre-defined dashboard and self-service analysis.➤ Rich data visualization
Why Oracle	<ul style="list-style-type: none">➤ Deep Public Security Industry insight➤ Deep understanding of customer pain point and future blueprints➤ Provide complete end-to-end big data solution



Integrated Cloud

Applications & Platform Services

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