Safe City – The LongGang Story

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Global Public Safety Expert

📅 9 November, 2017
📍 Kuala Lumpur, Malaysia
Overview

<table>
<thead>
<tr>
<th>LongGang District</th>
<th>LongGang Police</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong> 387km²</td>
<td><strong>Departments</strong> 9</td>
</tr>
<tr>
<td><strong>Population</strong> 4.5m</td>
<td><strong>Stations</strong> 25</td>
</tr>
<tr>
<td><strong>GDP USD$6.1b</strong></td>
<td><strong>No of Officers</strong> 2421 (7213)</td>
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</tbody>
</table>

**Crime Cases***: 20,115

**Traffic Challenges**: 500+km road

**Social Challenges**: 450k low-income migrants

**Economic Challenges**: 9700+ factories & enterprises

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* Source: (2017 H1 LongGang Police)
Limited Resources

Officer Per 10k Population

<table>
<thead>
<tr>
<th>Country</th>
<th>Officer Per 10k Population</th>
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</thead>
<tbody>
<tr>
<td>USA</td>
<td>30.01</td>
</tr>
<tr>
<td>UK</td>
<td>34.67</td>
</tr>
<tr>
<td>France</td>
<td>16.45</td>
</tr>
<tr>
<td>Japan</td>
<td>23</td>
</tr>
<tr>
<td>China</td>
<td>14.6</td>
</tr>
<tr>
<td>LongGang</td>
<td>6.2</td>
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</tbody>
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Public Safety Challenges

**Pre-Incident**
- Little data collection & analysis
- No early warning capability
- Labour intensive checks
- Reactive Policing

**During Incident**
- Limited situation awareness
- Outdated communications
- Inefficient resource dispatch
- Weak decision-making

**Post Incident**
- Low case solvency
- Little Leads to work on
- Limited/Poor video surveillance
- Time consuming video analysis

Prevent | Detect | Respond | Recover
Overarching Concept & Principle

- Improve Response Time
- Improve Case Solvency
- Data as Source and Foundation
- Empower Officers Mobile Policing
- Connect All Resources and Assets
- Deep Analysis Enhance Decision-Making

LongGang Police
Safe City Solution Framework

**Data Applications**
- Intelligence Center
- Command Center
- Traffic Police Group
- Video Group

**Platform layer**
- Video Surveillance
- Convergent Communication
- Command and Dispatch
- Data Exchange
- Big Data

**Department**
- Big Data Intelligence Platform

**Data Convergence**
- Government Intranet
- Dedicated Video Network
- Police Intranet
- Fiber/Wireless

**Network layer**

**Data Aggregation**

**Data Collection**
- People
- Vehicles
- Locations
- Roads
- Networks
Data Collection – Cameras

7088 HD + 34000 Legacy Cameras

Important Areas
13000 Cameras

Petrol Station
51 Cameras

Rocks
1200 Cameras

Face Recognition
3200 Cameras

Daily DataCaptures

4,800,000
Road Checkpoint
Plate Readings at Petrol
Stations

140,000
Face Images
Data Collection – Mobility

ID Card Checks
Vehicle Checks
Issue Summons
Access Cameras
Update Reports

7547 encrypted Huawei mobile phones to all officers
• Triple Network Inter-Operability
• 10Gbps Dual Ring Network & Dual Core Architecture
• Point to Point Secure Authentication
• Connect surveillance sites to 25 police stations via fiber
• Peak traffic approx. 46 Gbps
• Supports 42,000 cameras
Data Convergence

Manpower Optimization
6988 Road & 198 Checkpoint Cameras
8 $\rightarrow$ 2 people

Big Data Processing Optimization
Daily Vehicle & Person Checks
5s $\rightarrow$ 50ms

Hardware Optimization
110 Business Software Applications
5 $\rightarrow$ 1

<table>
<thead>
<tr>
<th>VRM 1</th>
<th>VRM 5</th>
<th>VRM 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Group 9</td>
<td>Group 10</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
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</tr>
</tbody>
</table>

500 vCPU

High-performance cloud servers

Data Collection | Data Aggregation | Data Convergence | Data Applications
Data Applications – Resources on a Map
Data Applications – Person Management
Data Applications – Vehicle Management
Key Outcomes Achieved

Source: (2017 H1 LongGang Police)

- **Case Solvency:** 45.1%
- **Theft, Robbery Cases:** 53.2%
Successful Case Reference

15hrs

3 year old child reported missing @ LongGang Guangdong Province
Identify Suspect within 1hr Confirm hotel she stayed at
Suspect’s Identity established through hotel records
Search for Suspect across national databases. Discovered she had bought train tickets
Liaise with local police at destination. Suspect arrested on arrival
Child reunited with family @ ZhengZhou Henan Province

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Thank you.

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