Antithesis or Synthesis (An Evidence-based CompStat?)

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Transport for London

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Overview

- Background / context
- Evolution (not revolution)
- Evidence-based CompStat
- Does it work?
- Questions
The London context

- Transport for London
- Demographics
- Transit system
- Policing agencies
The policing context

- Safer Transport Command
- British Transport Police
- Neighborhood Policing
- 2,500 officers
Conventional policing

- Conventional policing
  - Random patrol
  - Rapid response
  - Reactive investigation
- Increases in crime
- Arrests alone are not always the answer
- Broken Windows (Kelling and Wilson 1982)
- Coherent transport policing 2002
Transport for London’s approach (P’s and E’s)

- Prevention
- Problem-solving
- Partnership
- Performance

- Enforcement
- Environment
- Education/Engagement
- Evaluation
Transport crime on TfL networks

Broken Windows

CompStat

Problem-solving

Crimes per million journeys

Total Crime

Transport Crime Crime Rate


Crimes per million journeys
Crime Triangle (and the E’s!!)
CompStat and Problem-solving

1. Scanning
2. Assessment
3. Analysis
4. Response

The process is cyclical, moving from Scanning to Assessment to Analysis to Response, and then back to Scanning.
CompStat and Problem-solving

- Scanning
  - Accurate and timely intelligence
- Analysis
  - Effective tactics
- Response
  - Rapid deployment
- Assessment
  - Relentless follow-up and assessment
Problem-solving City Wide
## Local Problem-solving

### STT – Hackney Borough Priorities

**P1:** After school ASB and serious youth disorder, intimidating other bus passengers and TFL staff – borough wide.

**P2:** Pickpocketing offences on buses, focusing on route 149 between Shoreditch and Tottenham.

**P3:** ASB in and around the Dalston Hub Area and serious youth disorder around the Dalston Transport Hub.

### STT – Kingston Borough Priorities

**Proposed Priority 1:** Cycle theft in Kingston town centre.

**Proposed Priority 2:** Crime and ASB at transport hubs, Eden Street and Cromwell Road.

**Proposed Priority 3:** Safer Kingston for Young People (SKYP)

### Newham STT

#### Proposed Priority 2 – High Street North and Romford Road
**Theft and pick pocketing**

**What is the problem?**

Theft and pick pocketing affecting routes 25, 147 and 104 on the Romford Road corridor. Theft and handling in Newham has increased 23% (+37) for bus-related initial allegations of crime, and 35% (+15) for BTP crime. The primary hotspot (carried over from the previous reporting period) is the Romford Road corridor. Dips and theft snatch account for 81% of theft. The majority involve wallets/purses or mobile phones being stolen from pockets and bags. In a minority of thefts, property has been stolen whilst the victim has been sleeping on the bus.

**Who (VIO)?**

Suspects: suspects were mostly either under the age of 18 (36%) or 18-24 (39%); 100% male; 70% IC3 ethnicity appearance, with a further 16% IC4. Victims: Slightly older. Victims mostly aged 34-44 (32%), 45-54 (29%). Conversely to suspects, 25% of victims were over 34, with 11% being aged over 44. 61% male. 39% IC4 ethnicity appearance, followed by IC3 (30%) and IC1 (26%).

**Where (L)?**

Stratford and Forest Gate Stages generate nearly half of thefts in this location. The remainder occur predominantly along Romford Road or Forest Lane.

**When (T)?**

Tuesday (25%) is the peak day followed by Saturday (21%). Primarily committed 11:00 - 14:59, and 16:00 - 18:59. There is a further peak however at 00:00.

**Measures**

Aim to return to sustained reduction levels of 16% as achieved in

### Summary of response to problem (updates in blue)

<table>
<thead>
<tr>
<th>Victim</th>
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</thead>
<tbody>
<tr>
<td>Street briefings, presentations to elderly and general public on crime prevention</td>
</tr>
<tr>
<td>Victim Reassurance Visits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Offender</th>
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<tbody>
<tr>
<td>Analysis of recent ASBO obtained against prolific pickpocket has shown success. Further prolific offender identified now gathering evidence for ASBO. Intention to send ABC letters to victim to all active pickpockets operating in IF</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Location</th>
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<tbody>
<tr>
<td>分析公交偷窃的最近ASBO已显示成功。进一步的著名犯人已识别，现正收集证据以进行ASBO。计划向所有活跃的偷窃者发送ABC信件。</td>
</tr>
<tr>
<td>• HVP of routes, Op Pincer II (Newham STT led initiative) covering peak periods</td>
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<tr>
<td>• Plain clothes patrols</td>
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<tr>
<td>• Bluetooth device utilised delivering crime prevention messages</td>
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<tr>
<td>• Crime prevention briefing on buses</td>
</tr>
<tr>
<td>• Borough Officers utilised to patrol priority routes</td>
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</table>

<table>
<thead>
<tr>
<th>Engagement and other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluetooth device utilised delivering crime prevention messages</td>
</tr>
<tr>
<td>Victim Reassurance Visits, Street Briefings</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Assessment</th>
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<tbody>
<tr>
<td>New measures implemented, results will be measured over current JTAG period</td>
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</table>

<table>
<thead>
<tr>
<th>Results based on measures</th>
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</thead>
</table>
The Problem

- Offender: Young people under 16
- Victim: Young people, bus infrastructure, and other passengers

Anti-social Behavior
Criminal damage
Fear of crime

Buses (predominantly outer London)
Location
Neighborhood Policing
Hotspots (Operation Tyrol)
| Oct-11 | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:00 | 08:00 | 09:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Monday| 8     | 13    | 4     | 4     | 6     | 1     | 2     | 11    | 18    | 22    | 7     | 9     | 7     | 9     | 13    | 27    | 26    | 25    | 16    | 18    | 16    | 14    | 13    | 9     |
| Tuesday| 9     | 5     | 2     | 2     | 0     | 5     | 3     | 3     | 10    | 9     | 9     | 8     | 13    | 7     | 18    | 41    | 33    | 18    | 9     | 14    | 11    | 12    | 8     | 3     |
| Wednesday| 3    | 5     | 2     | 1     | 4     | 1     | 2     | 5     | 11    | 7     | 12    | 7     | 12    | 10    | 11    | 26    | 19    | 20    | 11    | 8     | 16    | 9     | 10    | 11    |
| Thursday| 6     | 7     | 6     | 4     | 5     | 3     | 2     | 2     | 16    | 6     | 6     | 4     | 10    | 16    | 11    | 32    | 28    | 14    | 21    | 16    | 15    | 4     | 5     | 7     |
| Friday  | 6     | 2     | 10    | 5     | 3     | 0     | 2     | 1     | 10    | 12    | 13    | 10    | 9     | 12    | 12    | 24    | 23    | 19    | 22    | 19    | 13    | 17    | 16    | 24    |
| Saturday| 23    | 20    | 21    | 31    | 18    | 11    | 6     | 7     | 3     | 11    | 9     | 9     | 15    | 13    | 24    | 22    | 9     | 13    | 26    | 17    | 16    | 19    | 16    | 15    |
| Sunday  | 25    | 22    | 27    | 29    | 22    | 5     | 10    | 5     | 2     | 3     | 6     | 5     | 7     | 12    | 9     | 15    | 10    | 21    | 23    | 18    | 17    | 6     | 8     | 10    |
Transport crime on TfL networks

- Broken Windows
- CompStat
- Problem-solving
- Neighbourhood Policing
- Hotspots
- Directed Patrol

Total Crime vs. Transport Crime (2004/5 to 2011/12)

Crime Rate (CompStat, Problem-solving, Neighbourhood Policing, Hotspots, Directed Patrol)
Operation Beck (directed patrol)

Operation “BECK”
Results from the First Randomised Controlled Trial on Hotspot Policing in England and Wales

Hypothesis
Police patrol in high-volume hotspots of crimes in London Underground Platforms reduce calls-for-service compared to no police patrol at such hotspots

1,150 less calls-for-service (21% overall Post-RA reduction)
Transport crime on TfL networks

- Broken Windows
- CompStat
- Problem-solving
- Neighbourhood Policing
- Hotspots
- Directed Patrol
- Evidence-based

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Crime</th>
<th>Crime Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/5</td>
<td>55,000</td>
<td>20.00</td>
</tr>
<tr>
<td>2005/6</td>
<td>50,000</td>
<td>19.00</td>
</tr>
<tr>
<td>2006/7</td>
<td>45,000</td>
<td>13.00</td>
</tr>
<tr>
<td>2007/8</td>
<td>40,000</td>
<td>13.00</td>
</tr>
<tr>
<td>2008/9</td>
<td>35,000</td>
<td>13.00</td>
</tr>
<tr>
<td>2009/10</td>
<td>30,000</td>
<td>7.00</td>
</tr>
<tr>
<td>2010/11</td>
<td>25,000</td>
<td>7.00</td>
</tr>
<tr>
<td>2011/12</td>
<td>20,000</td>
<td>5.00</td>
</tr>
</tbody>
</table>
“...the basic premise in problem-oriented policing is that the acquisition of knowledge informs practice.”

Herman Goldstein 1979
Evidence-based policing

- Larry Sherman 1998 - Evidence Based Policing
  "police practices should be based on scientific evidence about what works best"


- Evidence Based Crime Prevention (Sherman 2002)

- Fairness and effectiveness in policing – National Research Council (Skogan/Frydl 2004)

- Centre for Evidence Based Crime Policy - George Mason University (2008/9)
Problem-solving and CompStat

Menu of tactical options [based on evidence-based studies]
- What works (directed patrol)
- What might work
- Innovation from ground
- What does not work (justification required)
What works?

What Doesn't Work

- Gun "buyback" programs.
- Community mobilization against crime in high-crime poverty areas.
- Arrests of juveniles for minor offenses.
- Arrests of unemployed suspects for domestic assault.
- Increased arrests or raids on drug market locations.
- Gun sales restrictions.
- Limiting the rights of suspects.
- Increased police presence in high-crime areas.
- Use of less lethal weapons.
- Increased surveillance and technology.
- School resource officers.
- Community policing programs.

What Works?

- For infants: Frequent home visits by nurses and other professionals.
- For preschoolers: Classes with weekly home visits by preschool teachers.
- For delinquent and at-risk preadolescents: Family therapy and parent training.
- For schools:
  — Organizational development for innovation.
  — Communication and reinforcement of clear, consistent norms.
  — Teaching of social competency skills.
  — Coaching of high-risk youth in "thinking skills."
- For older male ex-offenders: Vocational training.
- For rental housing with drug dealing: Nuisance abatement action on landlords.
- For high-crime hot spots: Extra police patrols.
- For high-risk repeat offenders:
  — Monitoring by specialized police units.
  — Incarceration.
- For domestic abusers who are employed: On-scene arrests.
- For convicted offenders: Rehabilitation programs with risk-focused treatments.
- For drug-using offenders in prison: Therapeutic community treatment programs.

Ref: Sherman Evidence Based Policing 1998
FINDINGS
For police stops, each additional minute of police presence increased survival time by 23%. Residual deterrence effects were greatest for police presences of 14-15 minutes; longer presences had diminishing effects.

**Problem-solving and CompStat**

Menu of tactical options [based on evidence based studies]
- What works (directed patrol)
- What might work
- Innovation from ground
- What does not work (justification required)

Local context

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Accurate and timely intelligence

1. **Analysis**
2. **Response**
3. **Assessment**
4. **Scanning**

Effective Tactics

Relentless follow up and assessment
Local context

- General Applicability
- Transferability
- Demographics
- Culture
- Physical Environment
- Sustainability
- Displacement
- Understanding the evidence
Problem-solving and CompStat

Menu of tactical options
[based on evidence based studies]
- What works (directed patrol)
- What might work
- Innovation from ground
- What does not work (justification required)

Local context

Outcome focus randomized trials
(Maryland Scale (1 to 5))
Testing Tactics

Random assignment without tears: how to stop worrying and love the Cambridge randomizer
Barak Ariel · Jordi Vila · Lawrence Sherman

EXHIBIT 1: The Maryland Scale of Scientific Methods

<table>
<thead>
<tr>
<th>A. Research Designs</th>
<th>Before-After</th>
<th>Control</th>
<th>Multiple Units</th>
<th>Randomization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>0</td>
<td>0</td>
<td>X</td>
<td>0</td>
</tr>
<tr>
<td>Level 2</td>
<td>X</td>
<td>0</td>
<td>O*</td>
<td>0</td>
</tr>
<tr>
<td>Level 3</td>
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<td>X</td>
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<td>0</td>
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<tr>
<td>Level 4</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>0</td>
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<tr>
<td>Level 5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

B. Threats to Internal Validity

<table>
<thead>
<tr>
<th>Methods Score</th>
<th>Causal Direction</th>
<th>History</th>
<th>Chance Factors</th>
<th>Selection Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Level 2</td>
<td>0</td>
<td>X</td>
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<td>Level 3</td>
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<td>Level 4</td>
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<td>Level 5</td>
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<td>0</td>
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Key:
- X = present
- O = absent
- *Except where a comparison unit is employed without demonstrated comparability.
Problem-solving and CompStat

Menu of tactical options [based on evidence based studies]
- What works (directed patrol)
- What might work
- Innovation from ground
- What does not work (justification required)

Local context

Outcome focus
Randomized trials (Maryland Scale (1 to 5))
Problem-solving and CompStat

Menu of tactical options [based on evidence based studies]
- What works (directed patrol)
- What might work
- Innovation from ground
- What does not work (justification required)

Local context

External Experimentation and Academic Research

Accurate and timely intelligence

Analysis

Response

Assessment

Scanning

Effective Tactics

Outcome focus
Randomized trials (Maryland Scale (1 to 5))

Rapid Deployment
Relentless follow up and assessment
Learning from others
Predictive policing

“Predictive policing refers to any policing strategy or tactic that develops and uses information and advanced analysis to inform forward-thinking crime prevention.” National Institute of Justice

“It is not the strongest of the species who survive, nor the most intelligent; rather it is those most responsive to change.” – Charles Darwin
Does it work?
Youth crime on the bus network

- 71% improvement in rate of crime involving U16 suspect/s between 05/06 (Apr 05-March 06) and 10/11 (Apr 10-March 11)
London wide crime (Metropolitan Police)
Comparative Statistics

MPS wide

Year:
- 2005/6
- 2006/7
- 2007/8
- 2008/9
- 2009/10
- 2010/11
- 2011/12
- 2012/13 (est)

Values:
- 1
- 0.9
- 0.8
- 0.7
- 0.6
- 0.5
- 0.4
- 0.3
- 0.2
- 0.1
- 0.0

Legend:
- MPS wide
UK wide crime
Comparative Statistics

![Graph showing the comparison of UK wide crime rates from 2005/6 to 2012/13 (est). The graph compares the MPS wide and UK wide crime rates, with a downward trend indicating decreasing crime rates over the years.]
Crime on TfL public transport networks

Comparative Statistics

- Transport Crime
- MPS wide
- UK Wide

Year:
- 2005/6
- 2006/7
- 2007/8
- 2008/9
- 2009/10
- 2010/11
- 2011/12
- 2012/13 (est)
Questions

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