Security on London Underground

HKARMS

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Overview

- London Underground (LUL) has 30+ years of experience

    - Frequent terrorist threats, many real terrorist attacks

    - 275 stations, 253 route miles, 3m passengers carried per day

- Need for balance

- Security measures and approach

- Best use of scarce resources

- The changing threat and future directions

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How Relevant is Experience?

➢ **London Underground - IRA bombs**
  - ▪ Never used suicide bombers
  - ▪ Main threat: Improvised Explosive Devices (IEDs) and Vehicle IEDs

➢ **Second hand experience - changing threats?**
  - ▪ Religious cult - Tokyo
  - ▪ Islamic nationalist - Moscow
  - ▪ Islamic anti-Western - Madrid
  - ▪ Loners - Daegu and HK

  - ▪ Unattended packages
  - ▪ Suicide-if-necessary bombers
  - ▪ Unattended bags with mobile phones
  - ▪ Attackers carrying gas cylinders

➢ **Is the Al-Qaida threat different?**
  - ▪ Suicide bombers *by preference*
  - ▪ Maximum carnage, no discrimination
  - ▪ Ready to innovate,
  - ▪ Uses modern media

➢ **What is the next threat?**

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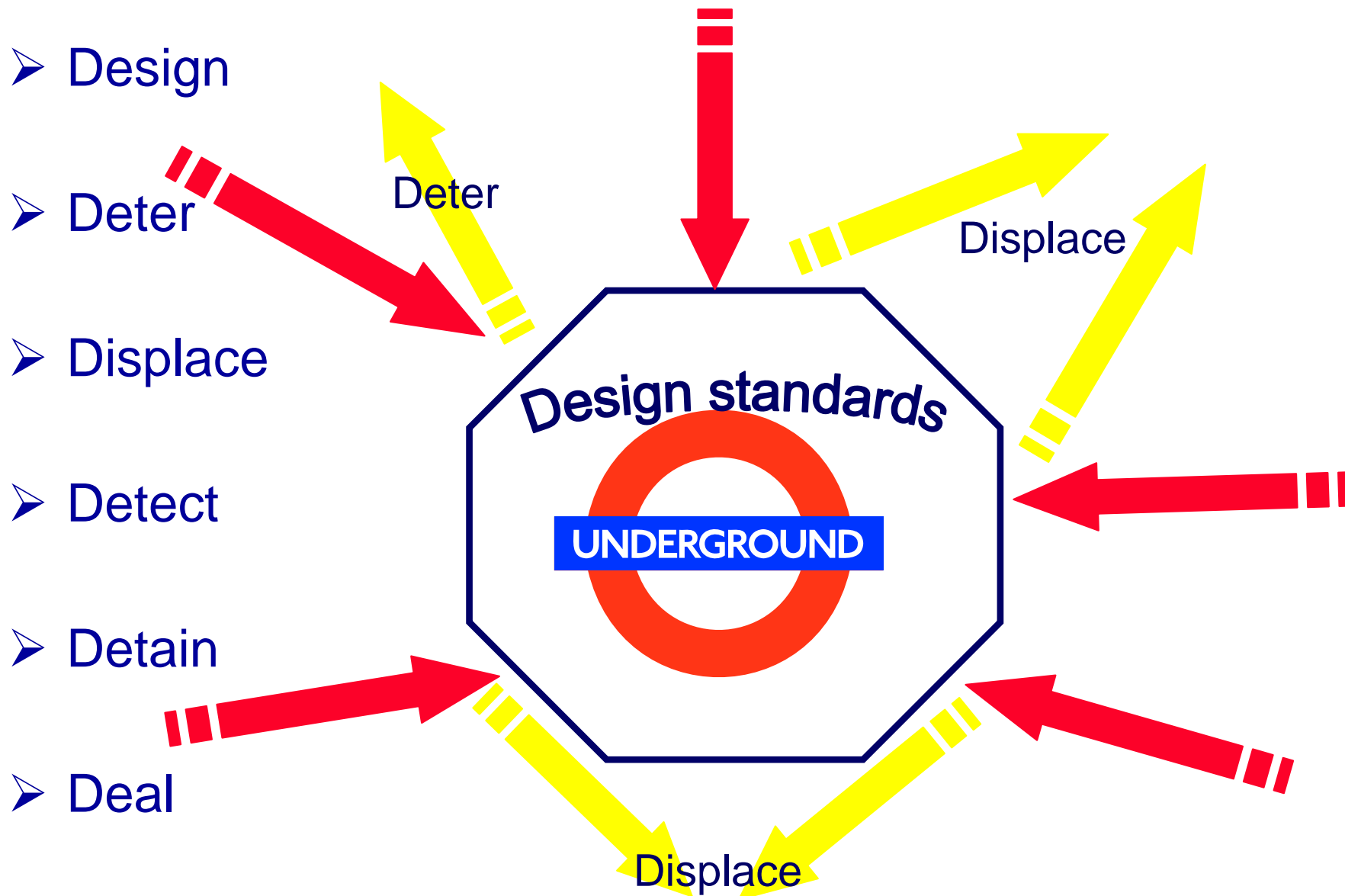**CoMET**

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Need for Balance

➢ Terrorist threats must be minimised

➢ But mass transport must still be provided

➢ Appropriate measures to meet <u>both</u> objectives

- Trains stopped in tunnels increases the threat

- Buses can be attacked as easily as trains

- Long queues at scanners will create crowds = targets

- "We mustn't let them beat us" - restore service ASAP

- Transfer to private car creates far greater travel risks

➢ Appropriate measures to meet <u>all</u> known threats

- Protocols for every known incident - not just terrorism / security but also fire, crowd control, operating incidents etc.

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Case study - what can be done to protect a metro?

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- Design
- Deter
- Displace
- Detect
- Detain
- Deal

Deter

Displace

Design standards

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Displace

Maximise Passive Barriers, Improve DESIGN for Security

- ➢ Design and harden defences against attack
    - ▪ Tunnels, bridges, fencing, stations
- ➢ Reduce queues, collections of people
    - ▪ Oyster smart card
    - ▪ Multiple places to buy tickets
    - ▪ High throughput ticket barriers
    - ▪ Restrict entry to limit congestion
- ➢ Design out places to hide devices
    - ▪ Clear visibility - sight lines - platforms not easy to conceal devices
    - ▪ Better lighting
    - ▪ CCTV
    - ▪ No litter bins that can hide bombs
    - ▪ No shelves or hiding places e.g. under train seats

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Maximise Vigilance to DETER & DISPLACE

➢ Obvious and less obvious levels of vigilance
  ▪ 6,000 CCTV cameras cover all stations and trains*
    • 12k planned by 2010 + 100% buses (from 85% now, 6-12 per bus)
    • RATP plan 6.5k on metro by 2007 (& 4-6 per bus=18k by 2006)
    • AI spots deviant behaviour, but trained staff do it better
    • Example - two-thirds of suicide attempts on LUL are unsuccessful
    • Qinetiq millimetre wave scanners - £2m per station - too expensive

➢ 681 BTP police + uniformed & plain clothes + ALL staff trained
  ▪ Extra 100 BTP police planned for 2005/6
  ▪ Upgrade of radio communications started 1999, to be completed 2008
  ▪ Buses have 1,100 Metropolitan police in transport command unit

➢ Customer vigilance - posters, displays, PA system
  ▪ Unattended packages, 'Who owns this bag' campaign,
  ▪ Unusual people behaving suspiciously

*In total, London has 0.5m cameras in 2005, compared with 20k in Paris so far. (Bloomberg)

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Coordinated approach with all appropriate partners

- ➢ UK intelligence and other agencies
  - British Transport Police, MI5, Metropolitan Police (SO13)…
  - **Detect** threats
  - **Detain** where possible

- ➢ Fire service, hospitals, medical services - **Deal** with the event
  - Potential casualties
  - Released / rejected mental patients
  - Detect any CBR (Chemical, Biological, Radiological) attack
    - Better Tokyo than Matsumoto: information in Tokyo hospitals reduced death ratio to 1:500 contacts: Matsumoto was 1:43

Coordinated approach - content for detect, detain and deal

- ➢ Threat & contingency planning

- ➢ Organisation and protocols

- ➢ CBR detection capability

- ➢ Rescue capability

- ➢ Regular training exercises - table top and live

- ➢ Constant information exchange - and pictures of suspects

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Getting the best use of scarce resources

➢ Prioritise resources with a probabilistic risk-based approach

  ▪ Assign benefits - reduction of expected risk

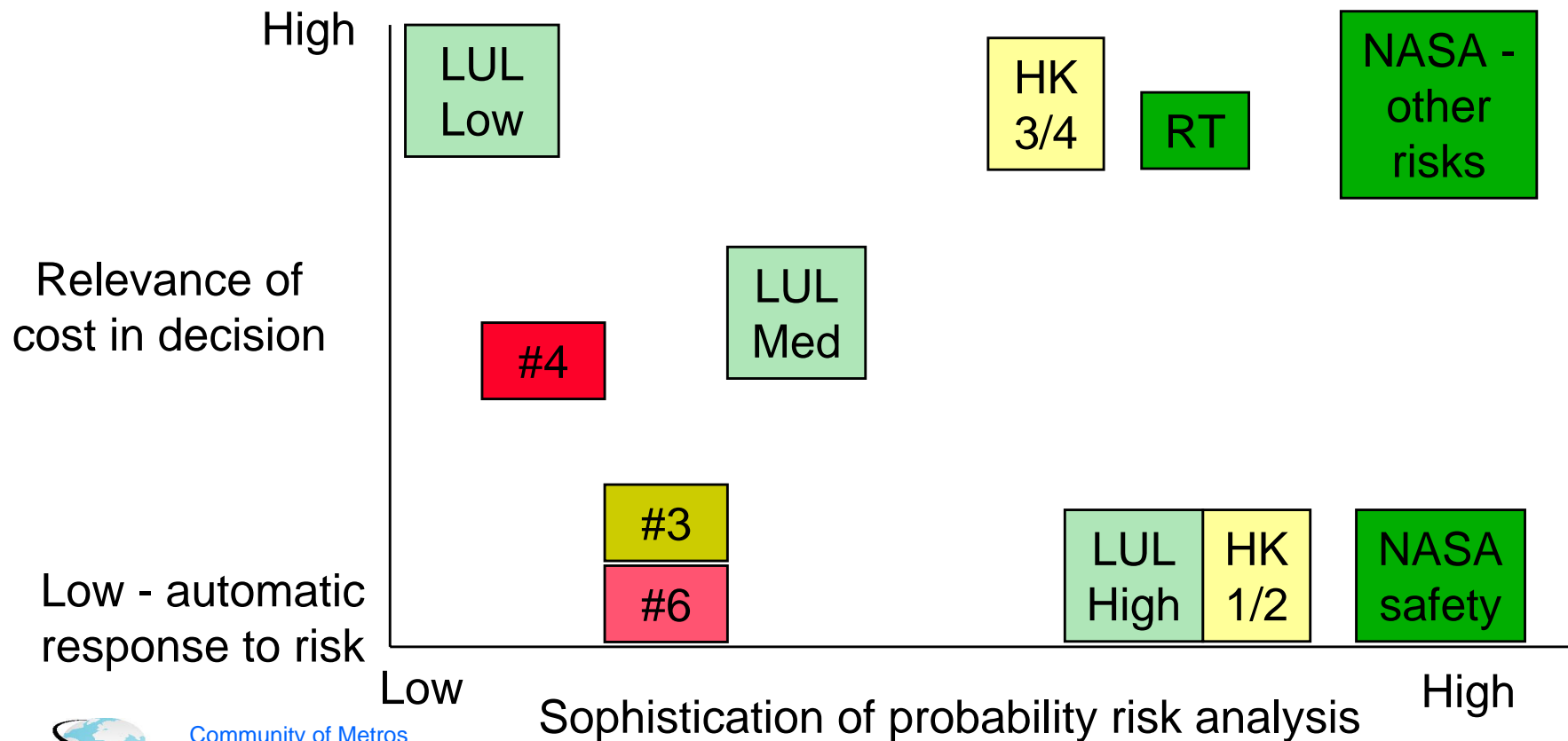 ▪ Reduction of probability of threat OR of vulnerability

Impact of Loss	Vulnerability to Threat			
	Very High	High	Moderate	Low
Devastating	🟥	🟥	🟥	
Severe	🟥	🟥		🟩
Noticeable	🟥			🟩
Minor			🟩	🟩

DETERMINE RISK LEVEL FOR EACH THREAT

  ▪ Some measures pay for themselves - both big and small

    • Value of human life

    • Bombs cost LUL £73m in 2005/6 (some estimates £100m)

    • Reduction in delays to service caused by vandalism

    • "2002 household survey: measures to enhance personal security using public transport…DfT est: 11.6% increase in journeys."

➢ Use: choice between alternatives, cost justify approach to lesser threats

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London Underground's approach to safety investment

- London Underground takes a similar approach to HK's MTR & NASA
  - Serious risks / high impact - mitigated without cost constraint
  - Minor risks / low impact - mitigated if improvement justifies cost
- In 2000, MTR and LUL were the safest old and new metros respectively

08.51
Edgware Rd

08.53
Kings Cross

24 dead

7 dead

7 dead

09.47
No. 30 Bus

08.50 Liverpool St

14 dead

DEALING with the attacks

- ➤ Preparation - organisation & procedures:
  - ▪ Security manager on call
  - ▪ Response management & protocols defined
    - ● Precautionary principle - if in doubt, evacuate
  - ▪ Evacuation procedures, training & drills - including chemical

- ➤ Result: whole system evacuated within 55 minutes
  - ▪ 200,000 people, 275 stations, 500 trains, 2,500 staff on duty
  - ▪ First lines within 5 minutes, others progressively
  - ▪ Casualty tents installed within 5-15 minutes
  - ▪ Specialist staff, emergency services on hand

The Threats and Technologies are Constantly Changing

➢ **Continuously review counter-measures**

- From unattended packages to suspect people
- From reaction inside metro to vigilance before entry
- Intelligence to develop proactive approach
- Pilot / watch for new technologies if they achieve clear objectives

➢ **Involve passengers and neighbours of metro**

- Increase and widen scope of vigilance
- Provide more opportunities to report suspicions

➢ **Widen and deepen the view of intelligence services**

- London bombers were "clean skins - not on the radar"
- More penetration needed of potentially threatening groups

The Future?

- Increase in passenger numbers (Madrid, NY: typically 6 months)
- Long term conflict with splinter groups - including of other kinds
  - Al Q'aeda is a virtual organisation - no need for permission to attack
  - Not just Moslem but other extremist cults
- Mentally disturbed and alienated loners (could be aligned to AQ)
- Smaller-scale - danger of intimidation, perception of lack of security
  - Mugging, pickpockets, hooliganism, vandalism, graffiti on trains…
  - Multiple counter-measures
    - Section 30 orders to prevent groups congregating
    - ASBOs (Anti-Social Behaviour Orders)
    - Classical music!
- Aim - actual *and perceived* safety and security for all
  - Assurance of vigilance + good communication
  - SMS, e-mail or voice message updates on terror alerts, major incidents or station closures, updates on police investigations