Australian Public Toilets
Maintenance and Cleaning

Insider’s Perspective
Scott Chapman
WC Innovations
Who we are......

• Established in 1994

• Australian distributor of Exeloo prefabricated public toilets

• Public toilet maintenance and cleaning contractors
  – Melbourne, Adelaide and Perth
  – Exeloos (300 toilet pans across 220 sites)
  – Conventional public toilets (50 toilet pans across 15 sites)

• Manufacturers of eToilet
  – water efficient vacuum toilets for public toilets
  – one litre per flush
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Public toilet maintenance & cleaning

- Routinely maintain and clean ~150 sites per day
- 2 non-routine maintenance callouts per day
- Average occupations per day per toilet = ~70

Scope of work:
- Technical and building maintenance;
- Cleaning
- Provisioning
- Graffiti removal
- Repair of vandalism
Influences on Public Toilets

• Social issues
• Cultural & religious factors
• Architectural & visual aspects
• Planning & urban design
• Environmental aspects
• Medical & health matters
• Government & managerial aspects
• Economic & financial factors
Public Toilets in Australia
Current and Prevalent Issues

• Graffiti and vandalism

• Accessibility

• Public – treatment vs expectations

• Servicing - cost vs quality
The Public
What’s their opinion?

- Opinions are plentiful & diverse

- Pressure on elected officials to keep costs as low as possible – not always in the public’s best interests

- Definitive Study:
  - City of Glen Eira – Public Toilet Strategy 2010
Glen Eira Public Toilet Strategy
Survey Methodology

• Compared 6 toilets in City of Glen Eira
  – 5 conventional public toilets
  – 1 automated public toilet
• Intercept interviews with users
• Street surveys of general public nearby
• Phone survey – 300 Glen Eira residents
Glen Eira Public Toilet Strategy
Survey Findings

• 90% of public use public toilets only if there’s no alternative
• 50% of users like using the facilities
• Only 39% of users and 38% of general public felt cleanliness was ‘excellent’ or ‘good’.
• 33% felt improvements in cleanliness were required
• Important features of public toilets:
  – Soap 76%
  – Hand driers or paper towels 72%
  – Water conservation 71%
• Most concerned about:
  – General cleanliness 83%
  – Safety and security 78%
  – Air quality and ventilation 76%
• 64% of users prefer to use automated public toilets because they perceive them to be safer and cleaner than conventional public toilets
Industry / Insider’s Perspective

• Vandalism, graffiti and mistreatment of public toilets by a minority drive the majority of maintenance & cleaning activity and cost

• Drug related “activity” is prevalent

• Inappropriate behavior (mainly sexual) prevalent

• Inconsistency of service outcomes
# Cost vs Quality

<table>
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<th></th>
<th>Base</th>
<th>Sat</th>
<th>Sun</th>
<th>Pub Hol</th>
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<td>Labour cost per visit</td>
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<td>No sites per day</td>
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<td>Time on site / visit [minutes]</td>
<td>15</td>
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<td><strong>Annual weighted average</strong></td>
<td><strong>$13.98</strong></td>
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Market Forces

• Competition fierce
• Main competitive dimension – price
• Players keep prices low by:
  – Reducing servicing time (and thereby quality)
  – Outsourcing labour to avoid paying award rates
  – Example: Capital City contractor seeking subcontractors to work for < $8.50 per attendance.

• NET AFFECT: QUALITY DROPS
Fair Work Australia

• Cleaning industry ranked third in terms of number of complaints received by FWA

• Audits of 366 cleaning companies nationwide in late 2011 found 37.1% non-compliant

• Of 37.1% found to be non-compliant:
  – 53% had monetary contraventions;
  – 36% had non-monetary contraventions;
  – 11% had both monetary and non-monetary contraventions
Social Issues
Cultural Aspects

• Behavioural Change influenced by:
  – Culture of Origin (38 different Nationalities in Melbourne)
  – Personality
  – Education and Economic status
  – Time of day
  – Comfortable and safe Location
  – Religious constraints (Jewish, Muslims have certain requirements)
Religious Influences
Toilet Behaviour

• All toilet behaviour is LEARNT through experience of what is proper and improper
• Possible attitudinal difference in toilet behaviour between higher socio and lower socio economic groups
• Attitudinal difference of between ethnic groups
• Behaviour relates to defiance against society or authority
• Affects of personality, education, socio economic status, time of day and soberness
• Education vital in changing attitudes of user
Behaviour of Users

• More men than women use public toilets
  – City of Melbourne study suggest 10:1 (men:women)
• Women generally take twice as long in the bathroom as men
  – Men: 1 to 2 minutes
  – Women: 2 to 3 minutes
• Fish and chip ratio (Kenny):
  – 70% to 90% urination
  – 10% to 30% defecation
• General consensus: we should offer twice as many places for women as men as evidenced by queuing at major events
Unisex Urinal - Helsinki
Design & Planning

• Architectural appearance & visual aspects
• Vandal resistant building materials
• Bright clean coloured internal smooth surfaces
• Non slip floor surfaces which do not absorb urine and faeces
• Good natural lighting
• Good quality fixtures including a squat type pan (in areas of mixed ethnic groups) to reduce squatting on pedestal pans
• High and low natural ventilation supported by artificial ventilation in hot/humid climates
• Maximum visibility while maintaining privacy
• Unisex use vs gender separated use
• Sustainable
  – Low water use
  – Low carbon footprint
Ventilated Toilet USA
Funding Public Toilet Maintenance

• Municipal revenue (rates & grants)
• Advertising revenue from toilet or other locations
• Partnering toilet with a business (ie Coffee shops as in Perth car parks or a total toiletry shop)
• Leasing/ Rental (Partnering between supplier and councils)
• Shopping Vouchers (local shops hand out vouchers)
• Toilet charge (“pay to pee”)
Two Cubicle Toilet Helsinki
Crime Prevention Through Environmental Design

• Visibility – capable of natural surveillance; view must not be obscured
• Access – entrances clearly visible from street and playgrounds (where applicable)
• Colocation opportunities – taxi ranks, pickup and drop off bays, municipal car parks and bus stops
• Cleaning, maintenance, graffiti and vandalism affects feeling of comfort and safety (as may presence of maintenance staff)
• Light – flood the area with light at night to ensure maximum visibility
• Orientation – orient entrance toward area of most activity
• Landscaping – should not obscure toilet
• Building materials and finish – harden target and make easy to maintain and clean; light coloured surfaces discourage graffiti
• Building design – cubicles should open directly onto public areas
Building Codes

- Disability Discrimination Act 1992
- Disability (Access to Premises – Buildings) Standards 2010
- Building Code of Australia 2011
- AS1428.1 - 2009
Life Cycle Cost Analysis (LCCA)

• Takes into account
  – Up front capital cost; and
    • Building design and construction
    • Electrical and plumbing costs
    • Landscaping
  – Ongoing maintenance, cleaning and servicing costs
    • Cleaning (routine and non-routine)
    • Maintenance (routine and non-routine)
    • Vandalism repairs
    • Graffiti removal
    • Unlocking in morning and locking in evening
Example of LCCA

Nominal 25 Year Cost Comparison

Conventional Public Toilet
Exeloo Saturn 21
Exeloo Jupiter 02

Years from Installation

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Green Public Toilets

• Reduction in water consumption including onsite recycling plant for reusing black/or grey water for pan flushing (Safe available technology surely can overcome built in prejudices)
• Vacuum toilet system
• Waterless urinal, ecological sanitation technologies in Sweden, Germany, Norway including composting & urine separation dehydration chambers
• Reduction in electricity, more natural light, solar panels, wind generators (rural)
Best Practice Maintenance

• Input from maintenance and cleaning staff
• Tracking cleaning quality
• Tracking maintenance quality
• Remote locking/unlocking (labour savings)
• Night shutdown (saves on vandalism costs)
• Reducing toilet operation costs
• Customised cost and management tracking
• Auditing
• Quick response time to graffiti and vandalism
Tracking Usage - Hourly
Tracking Usage - Queuing

Number of People Waiting in Line (Queues) at Marquis Street

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Star Rating System

- Singapore Star rating system
- BTA “Loo of the Year” awards
- Monitoring standards throughout the year
Golden triangle for Well Managed Public Toilets

• Good design and planning

• Public health education of users on personal hygiene and helping to keep toilets clean

• Quality maintenance and cleaning regime supported by monitoring and supervision
Thank You

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