Transit Operations

Performance Indicators

CTA®
Ridership is the Most Important Indicator of Service Quality

- CTA ridership has increased in seven of the past eight years
- 2005 system-wide ridership increased about 4% from 2004 (5% on rail and 3% on bus)
- System ridership levels are highest in 13 years
What do CTA customers care about?

Transit Customers Care Most About Service Reliability
Perceptions of Customer Priorities

How do Customers Perceive Reliability?

- For service periods with headways **10 minutes or less:**
  - Customers expect to board service shortly after arriving at stop/station
  - In these periods, reliability means **HEADWAY CONSISTENCY**

- For service periods with headways **10 minutes or more:**
  - Customers rely on schedules to time their arrival at the stop or station to avoid long wait times
  - In these periods, reliability means **SCHEDULE ADHERENCE**
CTA Service Reliability - Bus

- **All CTA Bus Customers**
  - 76% ride service with headways 10 minutes or less
  - 87% ride service with headways 12 minutes or less

- **Weekday Rush Hour Bus Customers**
  - 62% ride service with headways 7.5 minutes or less
  - 87% ride service with headways 10 minutes or less
  - 95% ride service with headways 12 minutes or less
CTA Service Reliability - Rail

- All CTA Rail Customers
  - 87% ride service with headways 10 minutes or less

- Weekday Rush Hour Rail Customers
  - 69% ride service with headways 5 minutes of less
  - 79% ride service with headways 6 minutes or less
  - 91% ride service with headways 8 minutes or less
Purposes for Monitoring Service

- Provide accurate and timely travel information to customers
- Improve real-time transportation management to monitor service delivery 24 hours
- Improve ongoing service planning and scheduling processes
How Does CTA Monitor Reliability?

**Old System**
- Field supervisors keep manual records to record schedule adherence at a few key stops
- Manual recording is labor-intensive; paper records are difficult to aggregate/analyze at a system level

**New System**
- **Bus service**
  - For the past 16 months, CTA has collected automated departure information for every bus
  - Collected data allows monitoring of schedule adherence based on terminal departures
- **Rail service**
  - Fully-automated data collection will be phased in after installation of new signal systems
  - When system is operational, data will be used to monitor schedule adherence and maintain headway consistency
Challenges to Service Reliability – Bus

Route X49: Western Express – AVAS Travel Time Observations
(September to November 2005)

Southbound
Berwyn to 97th St

Trip Travel Time (minutes)

Hour of Day (24 hour time)

- AM PEAK
- PM PEAK

AVAS Trip Travel Time Observation

15-minute variability
30-minute variability
Challenges to Service Reliability – Bus

- **Beyond CTA Control**
  - Traffic Congestion
  - Road Construction
  - Inclement Weather
  - Traffic Signals
  - Vehicles in Bus Stops

- **Within Limited CTA Control**
  - Fare Collection
  - Customer Boardings
  - Operator Performance
  - Vehicle Maintenance
Based on AVAS data, bus terminal departure performance increased from 74% to 82% between October 2004 and January 2006.
Service Reliability Initiatives - Bus

- **Current**
  - Go Lane
  - New bus procurement
  - Overhaul programs
  - Bus Operator Training
  - MMIS
  - AVM
  - Terminal departure adherence (BLIS)
  - AVL data to support schedule analysis
  - Bus stop enforcement

- **Future**
  - CAD/AVL
  - Bus Time
  - Traffic signal priority
  - Wireless supervisor handheld pilot
  - Headway consistency metrics
Annual mean distance was 4,440 miles in 2004 and 3,995 miles in 2005.
Challenges to Service Reliability - Rail

Major Rail Delays

2004 Delays > 10 Mins by Category
- Track/Signal: 738 (49%)
- Vehicle, Human Error: 555 (37%)
- Outside CTA Control: 213 (14%)

2005 Delays > 10 Mins by Category
- Track/Signal: 441 (26%)
- Vehicle, Human Error: 588 (40%)
- Outside CTA Control: 599 (35%)

14% outside of CTA control
86% within CTA control

35% outside of CTA control
65% within CTA control

Major delays within CTA control were reduced from 86% to 65% between 2004 and 2005
Improve real-time service management as automated data collection is phased in with line reconstruction and signal improvement projects.
Service Reliability Initiatives - Rail

- Review scheduled running times to improve service reliability
- Continue pursuing system “state of good repair” for infrastructure and fleet
  - Continue ongoing signal improvement projects
  - Increase Brown Line capacity and accessibility
  - Upgrade Red Line power and communications
  - New cars and overhauls
- Launch system-monitoring technologies to improve service planning, customer communications, and ops management
Mean Distance between Trains Removed from Service

Annual mean distance was 534,451 miles in 2004 and 410,911 miles in 2005.
Other Measures of Service Quality

- Customer Comments
- Cleanliness
- Safety
2005 customer complaints are down 8%.
Vandalism

Vandalism costs are recovered by CTA’s Law Dept whenever possible

December 2004: 1.5 Occurrences (Per Million Rides)
December 2005: 1.7 Occurrences (Per Million Rides)

Vandalism – Destruction and defacement of CTA buses, rail cars and property (as reported to the Control Center).
Buses are swept and receive exterior washes daily.

December 2004: 1,564 Major Cleans
December 2005: 1,553 Major Cleans

Major Cleans, Bus – Number of major cleans per month. This cleaning is done every 2,000 miles and includes detailed cleaning of the bus interior (ceiling, walls, seats, floors) and exterior (body, wheel wells).
Cleanliness – Rail Cars (Interior)

Miles between Interior Washes

Rail car interiors are swept and spot-cleaned daily

Average mileage between interior washes was 2,305 in 2004 and 2,315 in 2005

Cleanliness - Rail Cars (Interior) – The number of interior cleans that are done per month. This includes washing floors, seats and windows.
Cleanliness – Rail Stations

Rail stations are cleaned throughout the day on rotating schedules.
Rail Accidents Per 100,000 Miles, 1947-2005
We deliver quality, affordable transit services that link people, jobs and communities.