



# **Transforming The CTA**

**President Ron Huberman**

**Chicago Transit Authority**

# **THIS PRESENTATION**

**1**

**THE MONEY**

**2**

**THE CUSTOMER**

**3**

**THE PARTNERSHIPS**

**4**

**THE PLAN**

**5**

**THE FUTURE**



1

# THE MONEY

- **Operating**
- **Pension**
- **Retiree Health Care**
- **Capital**



# **FINANCIAL REFORM**

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- **5 year agreement with 21 unions to stabilize pension, retiree health care and costs**
  - Pension reform – benefits adjustment
  - Retiree Healthcare Trust





# 1

## THE MONEY

✓ **Operating**

✓ **Pension**

✓ **Retiree Health Care**

➤ **Capital**

- Obtain state of good repair
  - \$6.8 Billion
- Maintain state of good repair
- Expand



# TRUE COST OF OPERATING CTA

**Capital  
Depreciation**

**Operating  
Cost**

**Example**

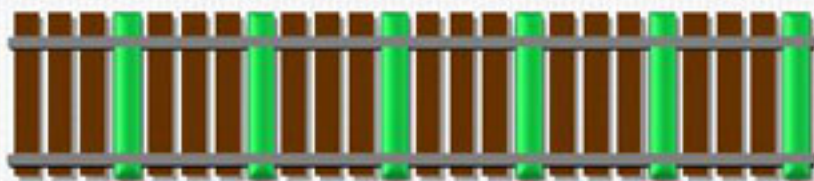
**Daily Bus Miles = 250,000**



# TRUE COST OF OPERATING CTA

## Managing Capital Today

- Bonding
- No fixed capital stream





# CAPITAL DEPRECIATION STRATEGY

- Find ways to begin building in capital maintenance
  - Legislative strategy
  - Additional savings
  - Non-fare box revenue
    - Concessions
    - Transit-Oriented Development
    - Advertising





## 2

# THE CUSTOMER

- Bus Bunching
- Slow Zones
- Cleanliness
- Communications



**Speed  
65 MPH**





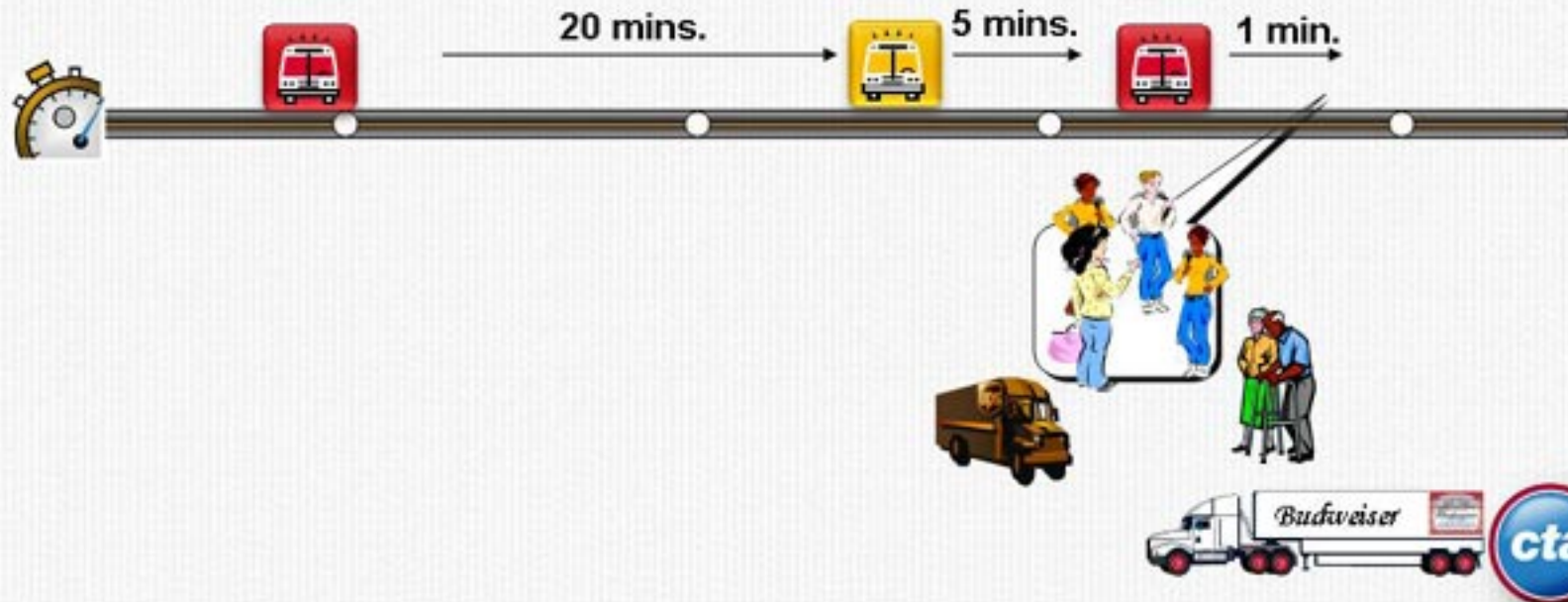
# **ADDRESSING BUS BUNCHING**

# INTERVAL MANAGEMENT

- Ideal: Buses leave garage spaced in even intervals



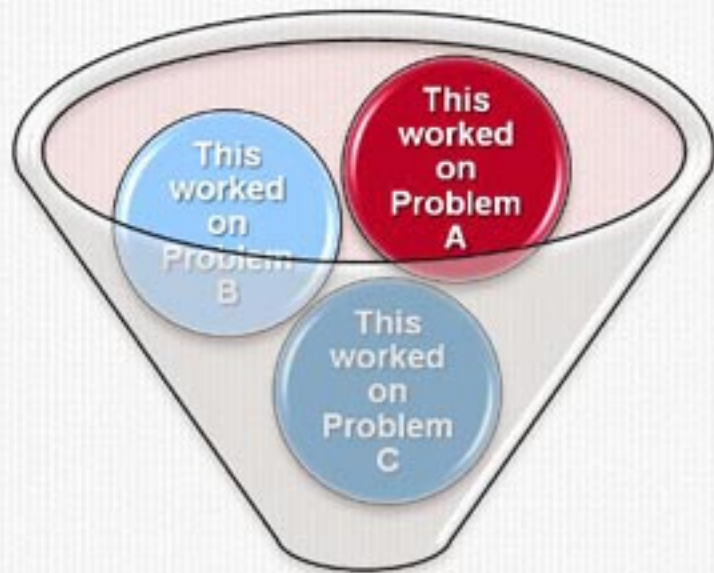
- Bunching Scenario





# CUSTOMIZED STRATEGIES!

- **Bus Operator Behavior**
- **Street Conditions**
- **Schedules**
- **Supervision**



**The trick is to be flexible!**

**No “one size fits all.”**

# ANALYZING ROUTE BUNCHING

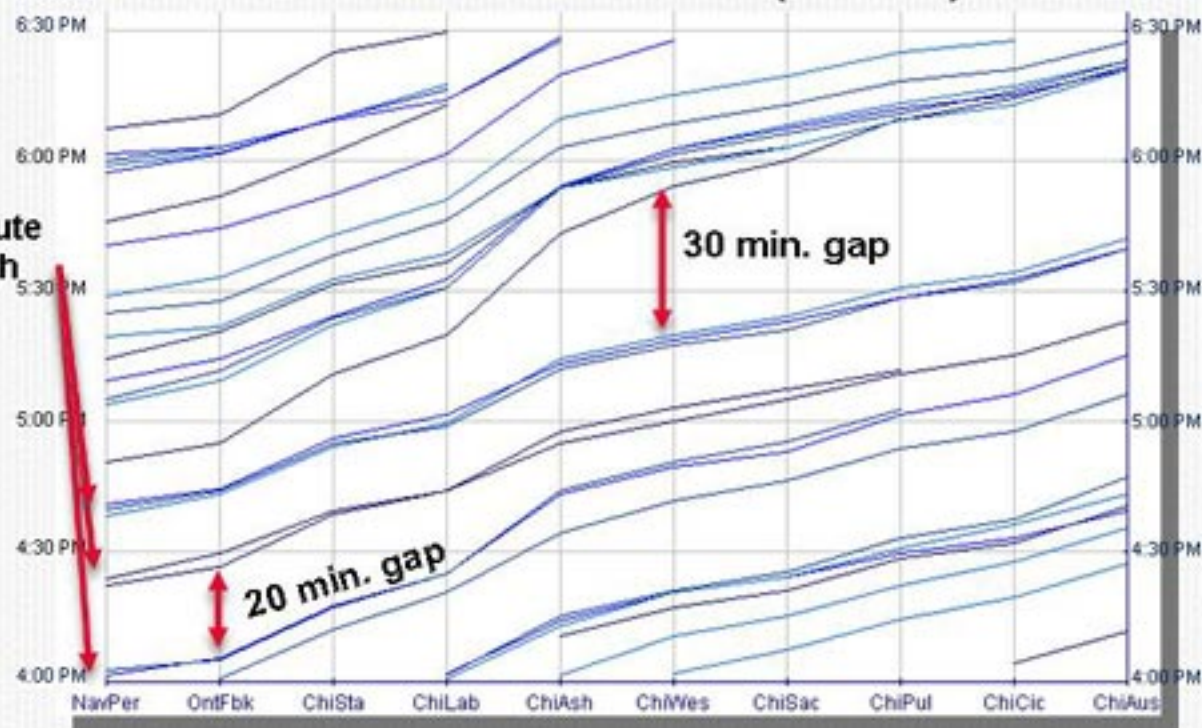
## Westbound PM Rush (8/1/07)

...Eastbound...



The next route begins with bunches

Route ends with bunches and gaps

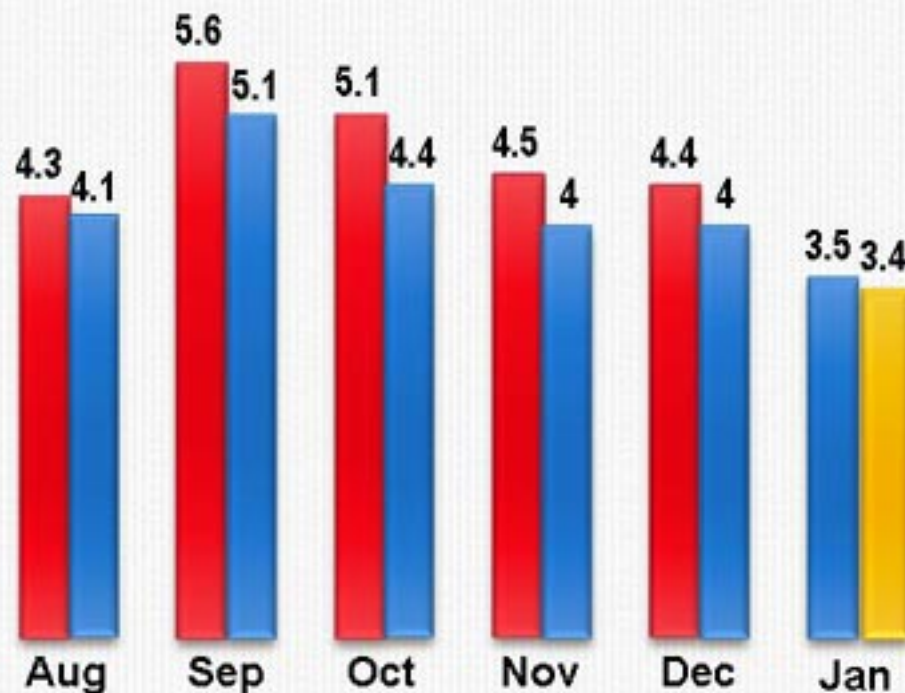


3:30 PM



# % BUNCHED: 15-MONTH TREND

System Wide % Bunched By Month



2006 2007 2008

More Snow Than Normal

3.5"

12.7"





**ELIMINATING SLOW  
ZONES PLUS**

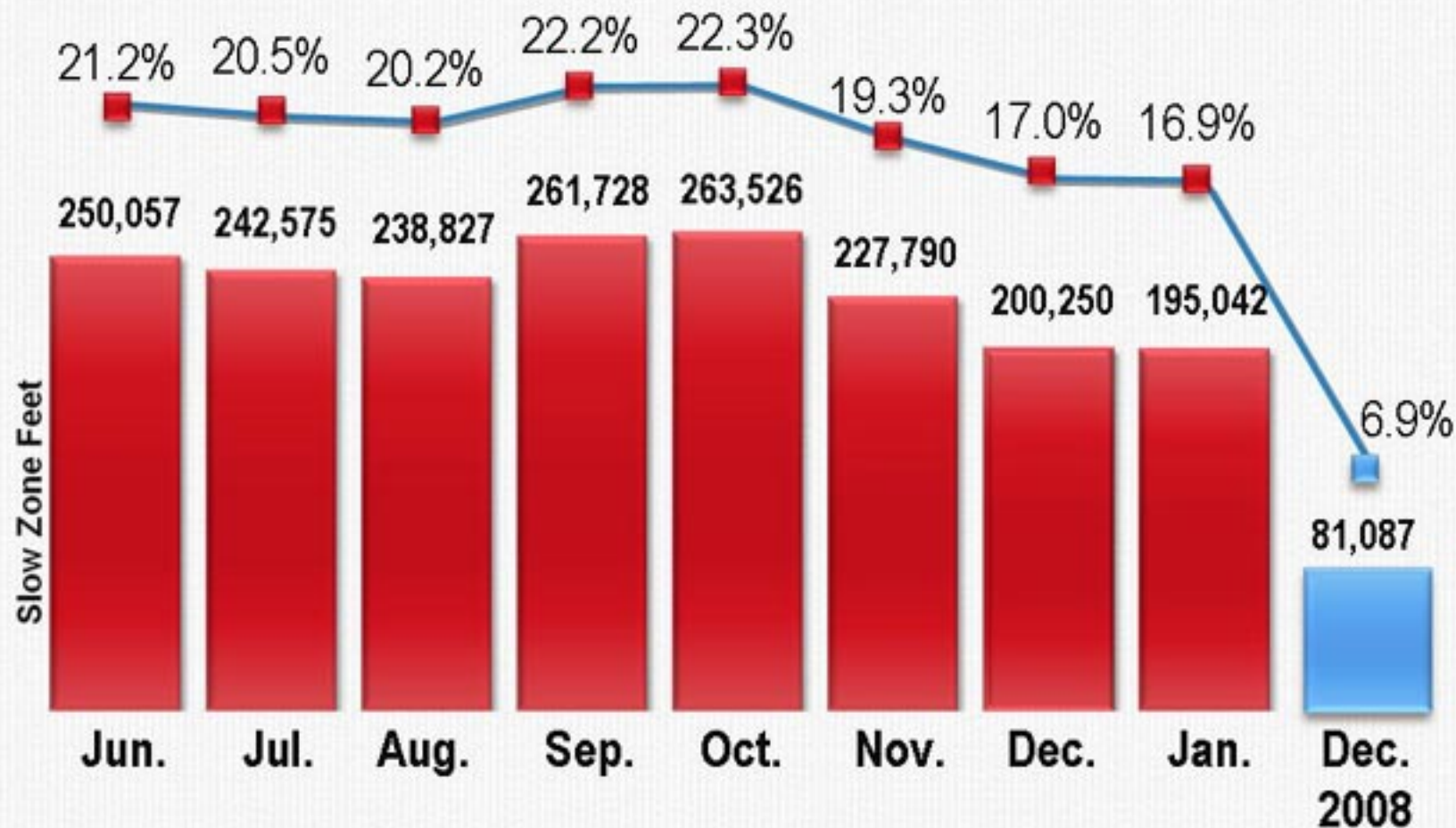
# ELIMINATING SLOW ZONES PLUS

- Modernizing track standards -- increasing speed to 70 MPH
  - New track technology
  - Recycled plastic ties



# WORKING FOR A FASTER RIDE

➤ System slow zone feet eliminated



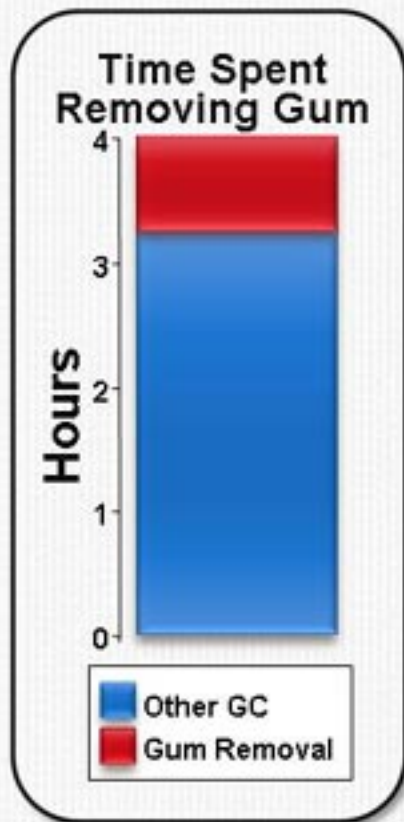




**BUS/RAIL CLEAN**

# BUS CLEAN CHALLENGES

- Increase bus cleanliness with new staffing model, processes, and tools



**Other**



**Floors**



**Seats**

# RAIL “DEEP CLEANS”

- Goal is 21 days between deep cleans

Days Between Deep Cleans







# COMMUNICATION IMPROVEMENT STRATEGIES

**IDEO**

# **NEW COMMUNICATIONS FOCUS**

**GOAL:** Supply clear, straightforward information to customers

- ✓ **At home/work**
- ✓ **Before entering pay area**
- ✓ **On Platform/At bus stop**
- ✓ **During the ride**
- ✓ **In an emergency**

# TRAIN, BUS AND STATION SIGNAGE

- **Redefine current signage**
  - Previously heavily text-based
  - Going to color-coded, simpler
  - Focus on clear information on:
    - Exactly what is happening,
    - How customers' travel is affected
    - Why changes are occurring
- **Mobile signage**
  - Clear information for customers before they enter our stations



**ATTENTION!**



**Nov 30 - Dec 3**  
9 PM Fri through  
3 AM Mon

**BLUE**

**Extended Blue Line Weekend Closure**

**How does this affect my trip?**  
Trains will not operate between Jefferson Park and Cumberland Island stations. Shuttle buses will serve Jefferson Park, Harlem, and Cumberland Island stations.

**Why is the closure being extended?**  
CTA is accelerating construction. Additional station closures allows work to progress faster.

© 2007 CTA

**We Are Upgrading Your Station.**



Reallocating existing CTA resources, we are making these enhancements to Central station to improve your experience:

- Replacing the platform canopy and improving drainage
- Replacing the platform stairs
- Painting
- Installing new lights

Improvements will be completed by December 2007.

**We're working to improve.**

© 2007 CTA



# FOCUS ON PERMANENT SIGNAGE

- Generations of signs with different designs
- 40% of stations have outdated signage
- Finalizing Design Standard Manual to create consistent design for all signage

**Symbols**

Standard Communication Symbols

Example of other symbols used in the CTA for international graphics are shown here. These include the availability of phones, restrooms, accessible parking, and parking. Regulatory symbols such as no smoking, no dogs and no alcohol and no alcohol symbols are also shown.

14

**Layout**

This illustration represents the specific dimensions of the symbols used in P-B. The design of the P-B symbol for the station or rail line of a particular station. Where there are more than one station, the design of the P-B symbol must be shown, no designations are required, just the route color codes. The dimensions would be too small to show.

20

**Sign Types**

P-B-P-T station name/signs

The P-B sign is the primary means of station name identification. This sign displays the name of the station and its street address coordinates. Height for a P-B is usually 10' (3048mm), and length varies depending on the size of the name and mounting space. Length is generally 60' (18288mm), and any station must be in 10' (3048mm) increments. (Using station names for the sign as to the dimensions. Layout and design are explained on page 15.)

Size: P-B: 10' x 60' (3048mm x 18288mm)

Material: Aluminum (LMS) Coated (LMS) Fluorescent (LMS) Fluorescent (LMS) Fluorescent (LMS) Fluorescent (LMS)

Colors: P-B: all background white with no color codes

Dimensions: P-B: 10' x 60' (3048mm x 18288mm)

Specifications: P-B: 10' x 60' (3048mm x 18288mm)

15

# FOCUS ON PERMANENT SIGNAGE

**Old**

**Fullerton** 2400N  
1000W

**New**

**Fullerton** 2400N  
1000W

**Old**

**W**

**Wellington**

Northbound  
to Kimball  
Connects at Belmont for  
Howard, Evanston, Skokie

**A Station**

**New**

**W**  
**Wellington**

to Kimball

to Linden

to Linden

to Kimball





# DIGITAL DISPLAY





# CTA DIGITAL URBAN PANEL DISPLAY



# CTA DIGITAL KING SIZE BUS DISPLAY





3

# THE PARTNERSHIPS

Booz | Allen | Hamilton

IDEO

Huron  
CONSULTING GROUP

katzenbach  
PARTNERS



Deloitte.

EA Civic Consulting Alliance  
*Strategic partners for the public sector*



McKinsey & Company



# CIVIC CONSULTING ALLIANCE

➤ Working with world/class partners

**BOOZ ALLEN:** Performance  
Management Launch

**IDEO:** Customer Communication

**DELOITTE:** Rail of the Future &  
Construction Management

**KATZENBACH:** Bus Cleanliness

**HURON:** Control Center

**MCKINSEY:** Turnaround Plan & Bus  
Maintenance



4

## THE PLAN



***Turnaround***



# TRANSFORMATION GOALS

**1**

**Increase Ridership**

**2**

**Increase Revenue per service mile**

**3**

**Reduce Cost per Average Service Mile**

**4**

**Increase Non Fare Box Revenue**

**5**

**Increase Customer Satisfaction Through Improved Reliability, Courtesy and Cleanliness**

**6**

**Operate the Safest Metropolitan Transit System**

**7**

**Maximize the value of Capital dollars**

**8**

**Secure \$6.8 B. State and Federal Capital**

**9**

**Design and finance World-Class CTA**

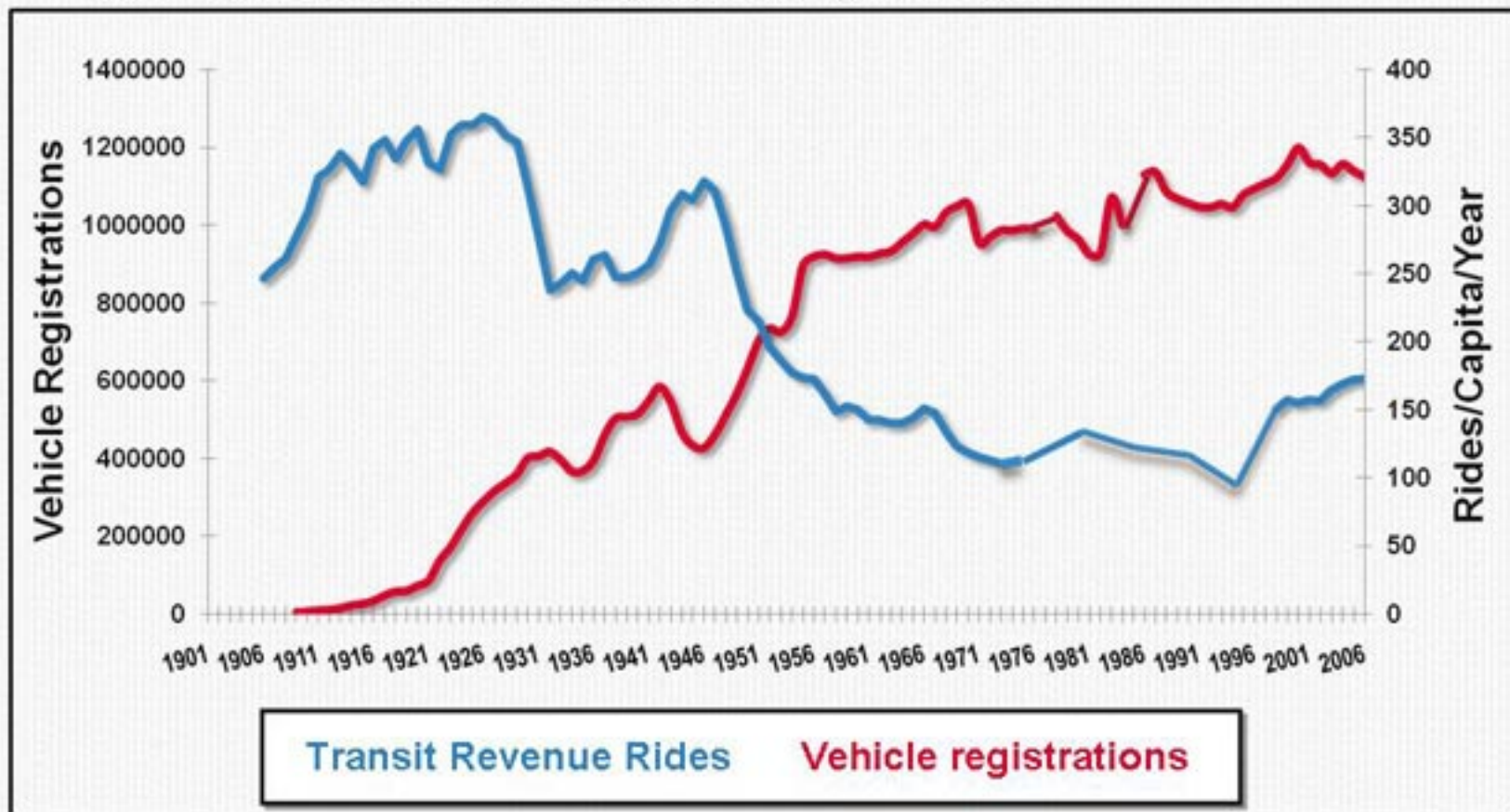




**Increasing Ridership**

# CHICAGO'S RIDERSHIP POTENTIAL

- Chicagoans respond to level/quality of service but we still haven't caught up to our potential



# **ENABLING INITIATIVES**

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- 1. Conduct detailed demand study**
  - Current customers
  - Possible new customers
- 2. Increase Bus/train capacity**
- 3. Bus Rapid Transit Strategy**
- 4. Creative Marketing Strategies**







**2**

**Increase  
Revenue  
Per Service Mile**



**3**

**Decrease  
Cost  
Per Service Mile**



# WHY REVENUE/COST FOCUS?

- A standard measure enables better decision making across routes
- Question: Where should we put our buses and trains?

TOTAL  
Passenger  
Revenue



TOTAL  
Vehicle  
Miles



**RASM**

TOTAL  
Passenger  
Cost



TOTAL  
Vehicle  
Miles



**CASM**

# FUEL EFFICIENCY

Average Miles Per Gallon



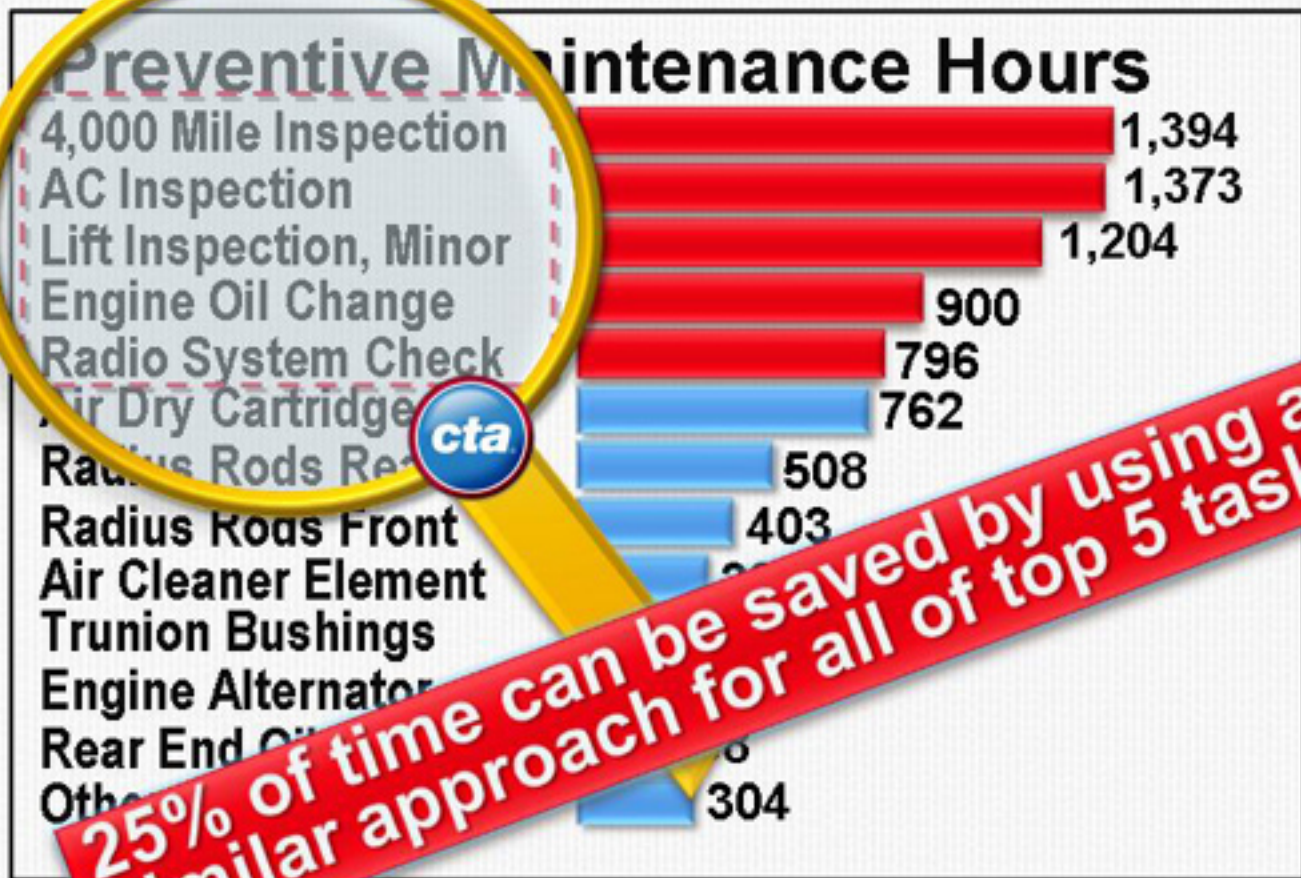




# **BUS LEAN OPERATIONS**

# FOCUS ON EFFICIENCY

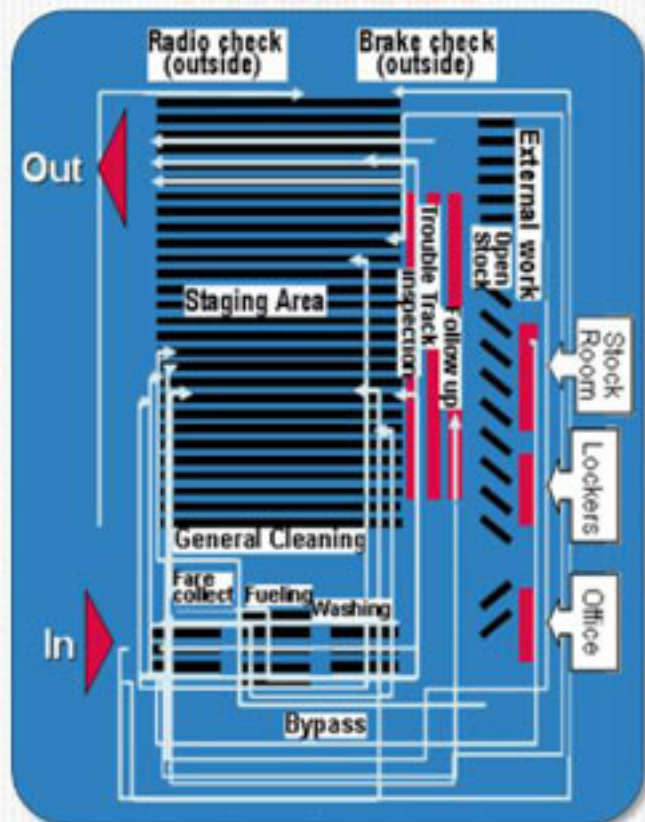
- Top 5 tasks account for 63% of maintenance hrs.





# RECONFIGURE WORKFLOW

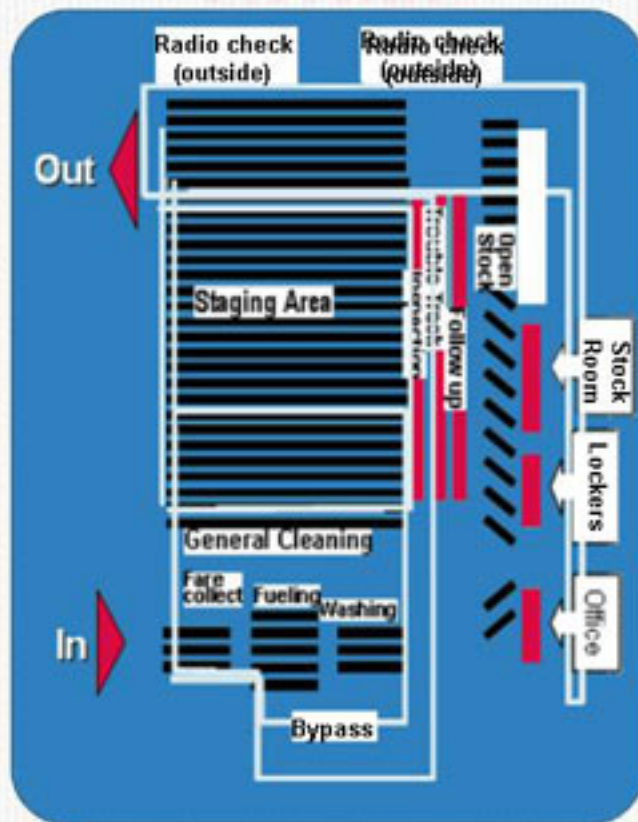
## CURRENT



Steps Eliminated: 4 Trips

Time Saved: 200 Minutes

## FUTURE



-75%

1 Trip

-75%

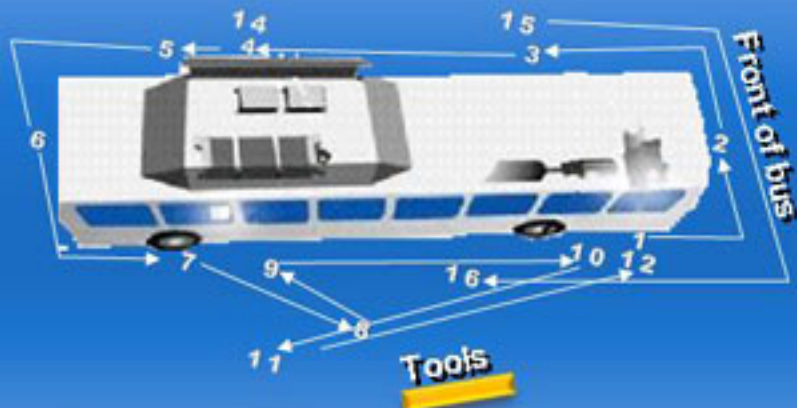
50 Minutes





# 4,000 MILE INSPECTION

Current

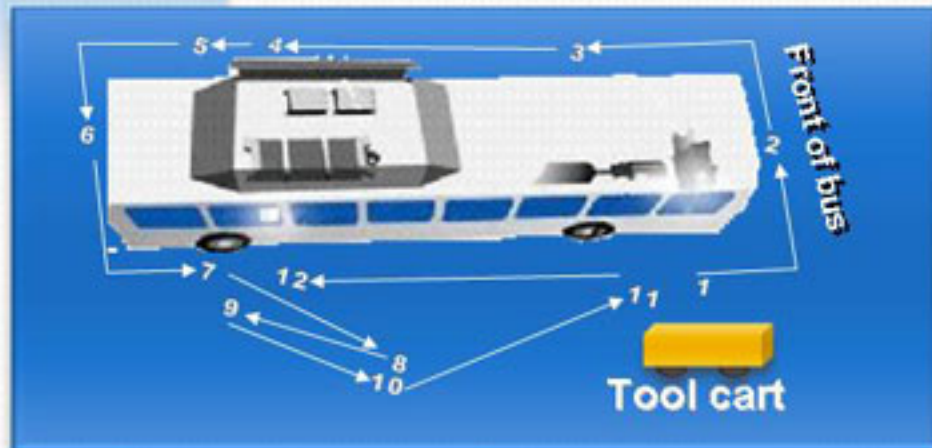


**CURRENT**

3,280 Ft. and 45 Minutes

**FUTURE**

1,500 Ft. and 25 Minutes



# KITTING

Could involve multiple trips to the window

## Task given

Look up part 1

Trip

Look up parts  
2, 3

Trip

Look up part 4

Trip

Back  
order

Move to another  
task until part 4  
is available

Trip

Task complete  
some parts  
changed

**CURRENT**

Process involves 1 trip  
for each task

## Task given

Look up kit A  
includes parts

Trip

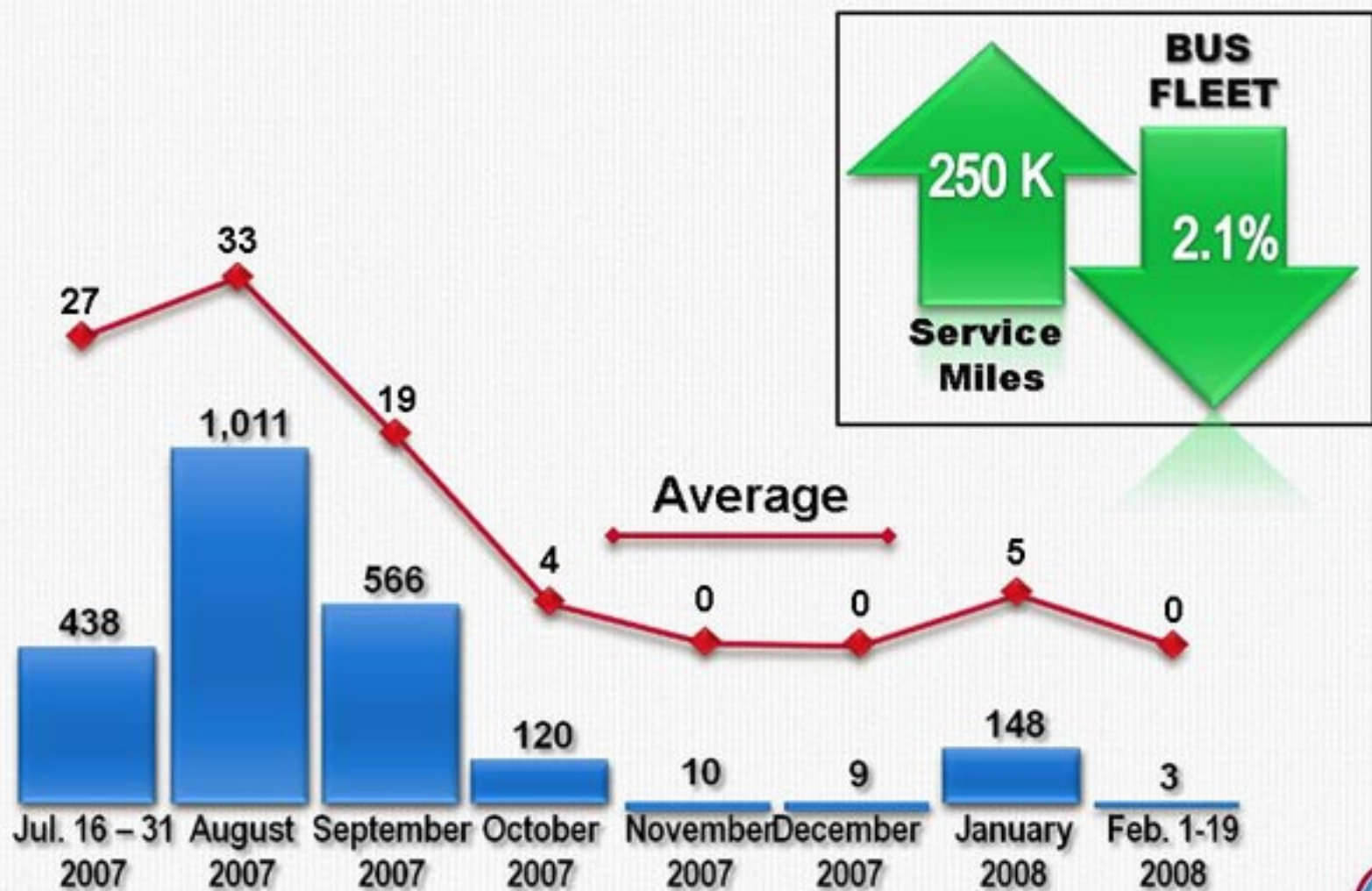
Task Complete  
(all parts  
changed)

**Kit example:**



**FUTURE**

# BUS RUNS HELD IN FOR EQUIPMENT



Source: BusFAST





# OTHER SAVINGS/IMPROVEMENTS

- **Examples**
  - Eliminated 147 administrative positions
  - Eliminated legacy IT systems = \$2.4 million savings annually
  - Adjusted payroll cycles of union and non-union employees, etc.



**Increase Non-Fare Box  
Revenue**

# ENABLING INITIATIVES

- Concessions
- Transit Oriented Development
- Advertising



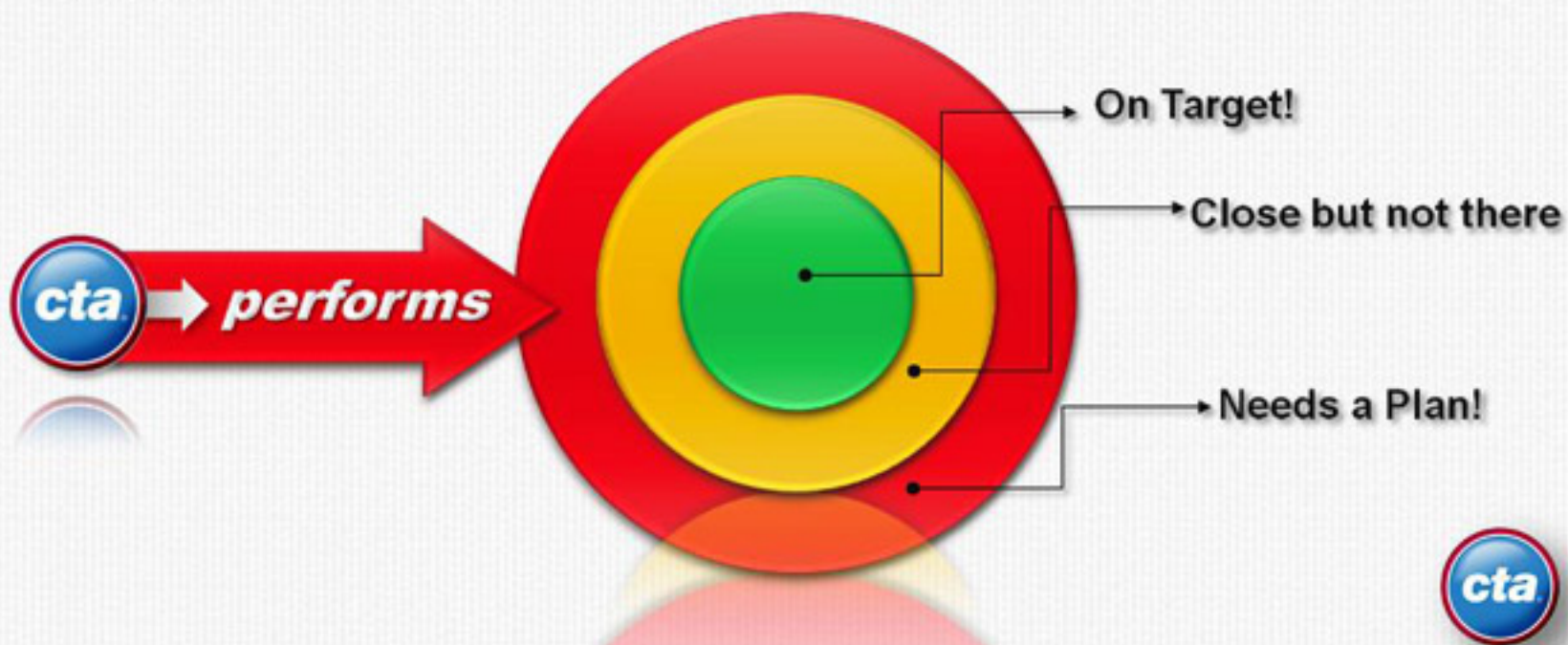




**Increase Customer  
Satisfaction**

# ENABLING INITIATIVES

- Bus Bunching
- Slow Zones
- Increased on-time percentage
- Etc.





**Operate the Safest  
Metropolitan Transit  
System**



# ENABLING INITIATIVES

- DriveCam Pilot
- Creation of Risk Management Team



**Repairs**



**Accidents**



**Claims**

# SIGNAL SYSTEM UPGRADES

- Upgrade computer systems
  - Reduce delays due to signal malfunctions
  - Better diagnostic tools to prevent problems
  - Real-time monitoring of system status
  - Capacity to remotely trouble shoot





# MAINTENANCE MNGT. INFO. SYSTEM

- Database to track real time status
  - Preventative maintenance plan
  - Real time slow zone data
  - Workforce controls
  - Work prioritization
  - Data for future planning
  - GPS tracking of employees







**7**

**Maximize Value  
of Capital  
Dollars**



**8**

**Secure \$6.8  
Billion State and  
Federal Capital**



**Design and Finance a  
World Class CTA**

5

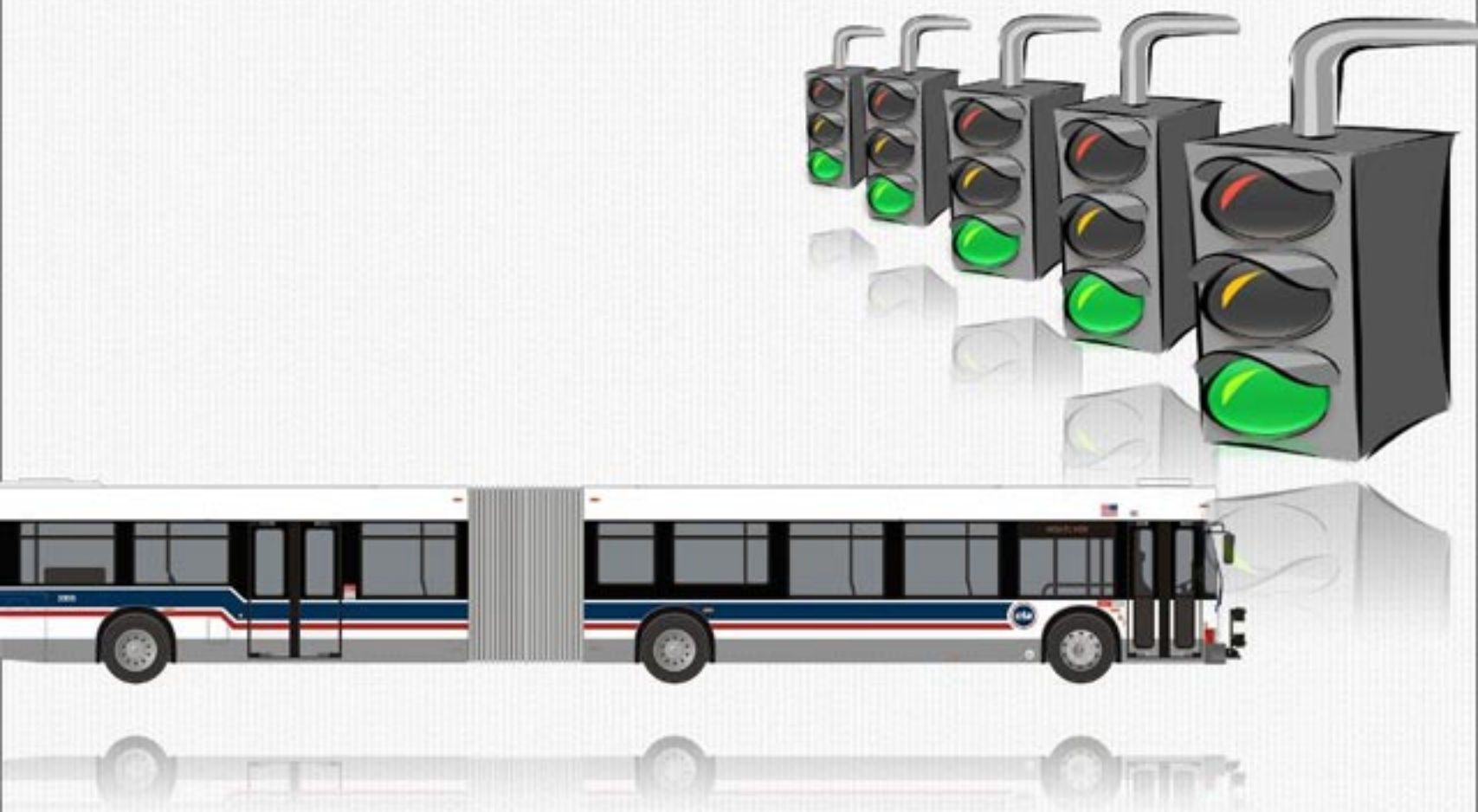
## THE FUTURE





# CUSTOMER CONVENIENCE





***Bus Rapid Transit***

# BUS RAPID TRANSIT

- 60' articulated buses run at street-level in designated lanes
- Provides faster travel time on existing streets
- Distinctive shelters, pre-paid boarding and real-time travel information

*Artists Sketch of Chicago Transportation Hub*



Built from 100%  
recyclable materials







# **150 HYBRID ARTICULATED BUSES**



**Savings  
Off-Set**

**52.3%**

	Annual Bus Total	Annual Per Bus Cost
Cost to Lease	\$13,200,000	\$ 88,000
Fuel Savings	- \$ 913,000	- \$ 6,100
Labor Savings	- \$ 2,100,000	- \$ 14,000
Maintenance Savings	- \$ 3,900,000	- \$ 26,000
Total Savings	- \$ 6,900,000	- \$ 46,100

- 150 will replace 200 oldest buses (-2.3% decrease in fleet with same revenue)
- Better customer experience

# NEW CTA TRAINS





# **NEW TRAIN FEATURES**

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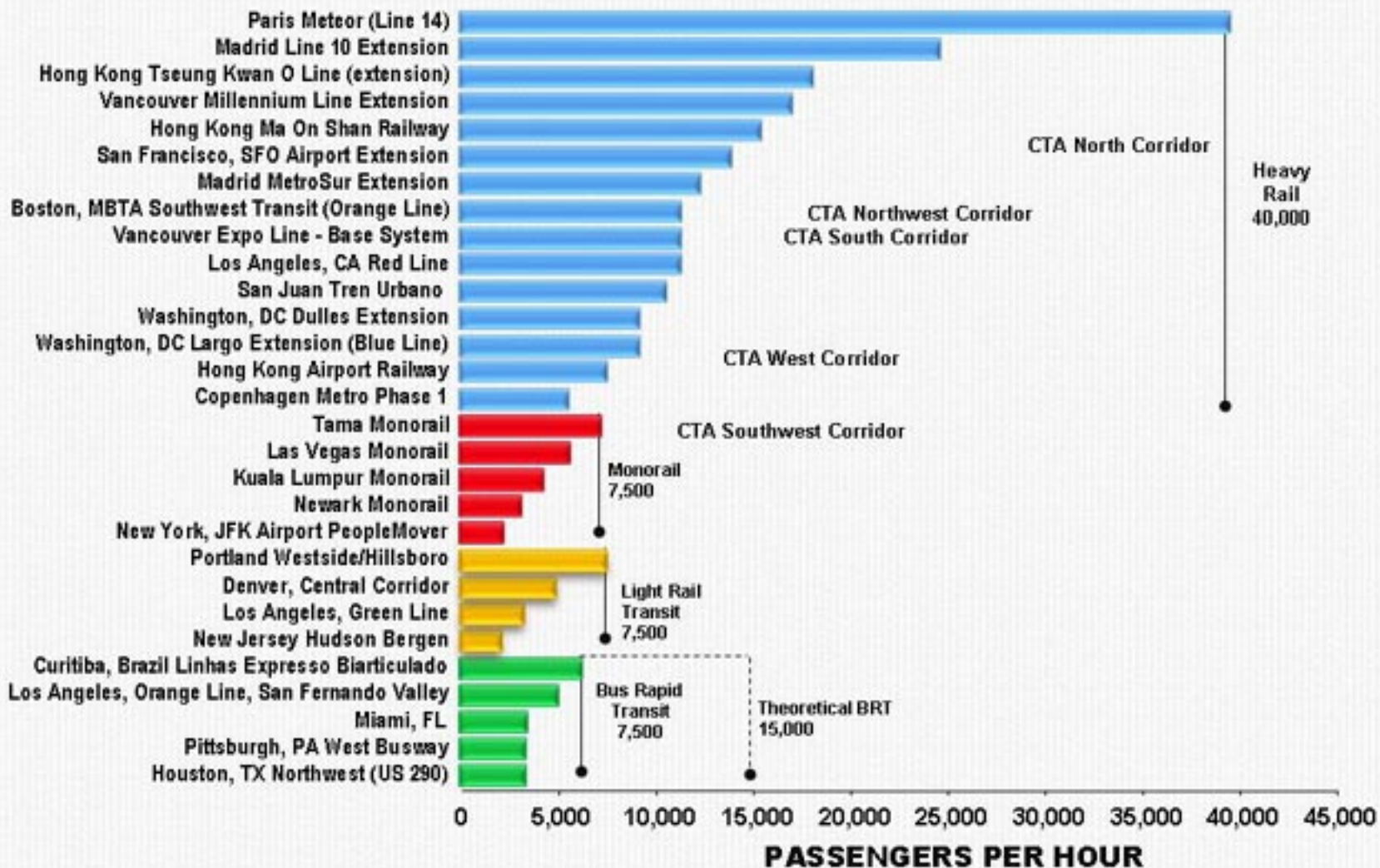
- **406 Rail Cars at \$1.4 Million per car**
- **Total = \$577 Million**
- **Test car delivery – Beginning of 2009**
- **Features of new car**
  - Smoother, quieter ride
  - Fully computerized internet-based controls
  - Reduced Maintenance costs
  - Additional Safety Features



# NEW INTERIOR DESIGN: SCHEME 1



# CTA 2030 CORRIDOR DEMAND





# DELOITTE STUDY

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- **Goal: Set a vision for the “ideal” rail of the future**
  - What are the available, existing technologies?
  - What are their capacities?
  - What are the construction costs of these technologies?



# OPTION: HEAVY RAIL

- High capacity, high speed urban transit solution
- Requires exclusive right-of-way
- Can be elevated, at-grade, or subway
- Most durable and longest life expectancy

- Realistic, appropriate solution.
- Replacing existing system with other option could cost as much \$30 billion.
- Improving some core features can have a substantial impact on the quality of service.

## Example Cities:

- Paris
- Hong Kong
- Madrid
- NYC
- London
- Vancouver



# RAIL OPTION: LIGHT RAIL

- Lower construction costs than heavy rail
- Mid-range capacity and durability
- Runs in shared right-of-way, incl. street level
- Often selected for city-friendly attributes, such as easy boarding from street level

Ideal technology for downtown circulator – Lake shore corridor  
Use of low-floor cars & overhead power lines would require new elevated stations and extension construction on every line  
Running at street level requires extensive acquisition of property and traffic disruption

## Example Cities:

- Portland
- Denver
- Los Angeles





# OPTION: MONORAIL

- Comparable capacity to light rail
- System components may be more costly
- Track/platform costs are reduced due to smaller beam profile
- All systems have Automatic Train Operation (ATO) capability

To handle the cta daily ridership, twice as many lines would need to be implemented

Cost estimates to implement a city-wide monorail could be as much as \$30 billion

## Example Cities:

- Las Vegas
- Tama, Japan
- Osaka, Japan
- Newark AirTrain



# OPTION: “URBAN MAGLEV”

- Runs at 100 m.p.h.
- Designed for shorter station spacing
- Still experimental and relatively untested
- Costs are very difficult to estimate

MagLev averages 150+ MPH. Typically stations must be more than 10 miles apart due to acceleration/ deceleration needs.

## Example Cities:

- Nagoya Japan
- Shanghai, China
- Berlin, Germany













**MORE TO COME.....**







# **Transforming The CTA**



**President Ron Huberman**

**Chicago Transit Authority**