



Columbia Transit

Baseline Situation, FY 2011

Columbia, Missouri

April 19, 2012

Eva Yang

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Under the guidance of:
Carlos Alvarado

- Overview
- Solutions
- Four levers of profit
- Key findings
- Possible Solutions
 - Core
 - Further Research
 - Nice to have
- Impact
- Areas of Further Research

Data sources:

- Fiscal Year 2010 or 2011 where available
- National Transit Database
- City of Columbia FY 2012 Budget
- Official data from City of Columbia
- Route Sum Data 2011

City Population – 108,000

Area – 5 square miles

MU Population – 33,000

Service

Total rides in FY 2011 – 2.1 million

Buses

Buses – 41

Distance traveled* FY 2011 – 843,888 miles

Daily distance – 2310 miles

Daily Service

11 city fixed routes: 16 loops (M-W)

18 loops (Th,F) 8 loops (Sat)

Black & gold routes: 22 loops day (M-F)

*revenue miles

**Source: Route Sum report

Finances, FY 2011

Costs -

Variable - \$3.8 m

Fixed - \$1.4 m

Total Costs - **\$5.3 m**

Revenues -

Variable - \$1.6 m

Fixed - \$2.3 m

Total Revenue - **\$3.9 m**

Deficit - \$1.4 million

Per Revenue Mile*

Income - \$4.60

Expense - \$6.30

Deficit - \$1.70

Revenue mile – distance traveled during operation

Core

- Charge \$50 student fee per year
- Renegotiate University Shuttle Contract
- Renegotiate Black and Gold Contracts

Potential Impact – Adds \$2.2 million per year

Further Research

- Reduce Cost of “Materials”
- Cut routes
 - Low performing 105 and 106
 - Pare routes 103 NE, 103 Mall route and 102 Blue North

Potential Impact – Saves \$1.1 million per year

Nice to have

- Increase city contribution to transit

Potential Impact – Generates \$0.7 million per year

Combined Impact – Positive cash flow \$4.0 million per year

Profitability depends on four key elements and we examined each in turn

Fixed Costs

Includes employee compensation, administrative expenses, utilities

Variable Costs

Includes fuel, bus maintenance, service costs, materials

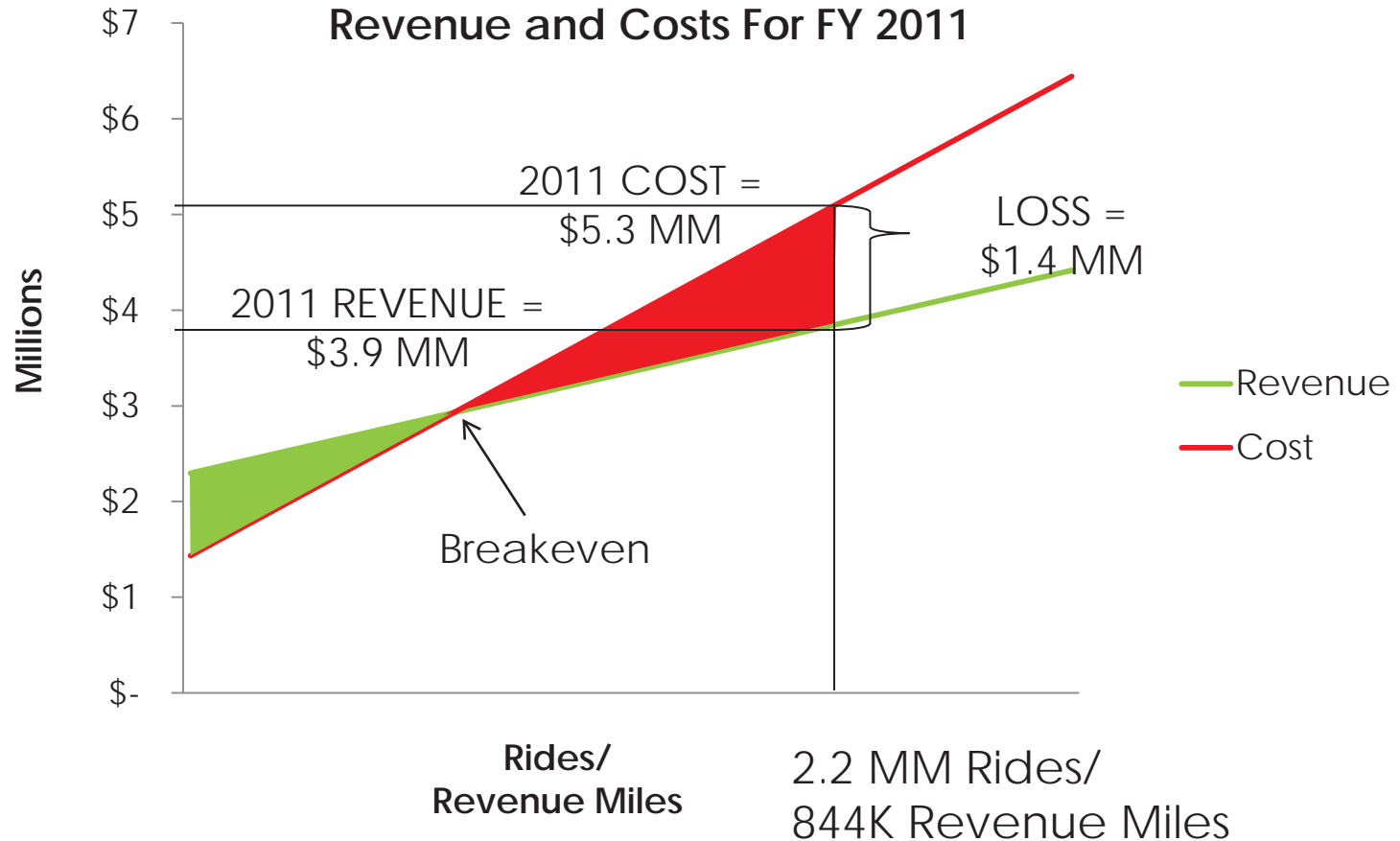
Fixed Revenue

Includes federal and state grants, advertising, revenue from sales tax

Variable Revenue

Includes revenue from sale of passes, fares, apartment contracts and university contract.

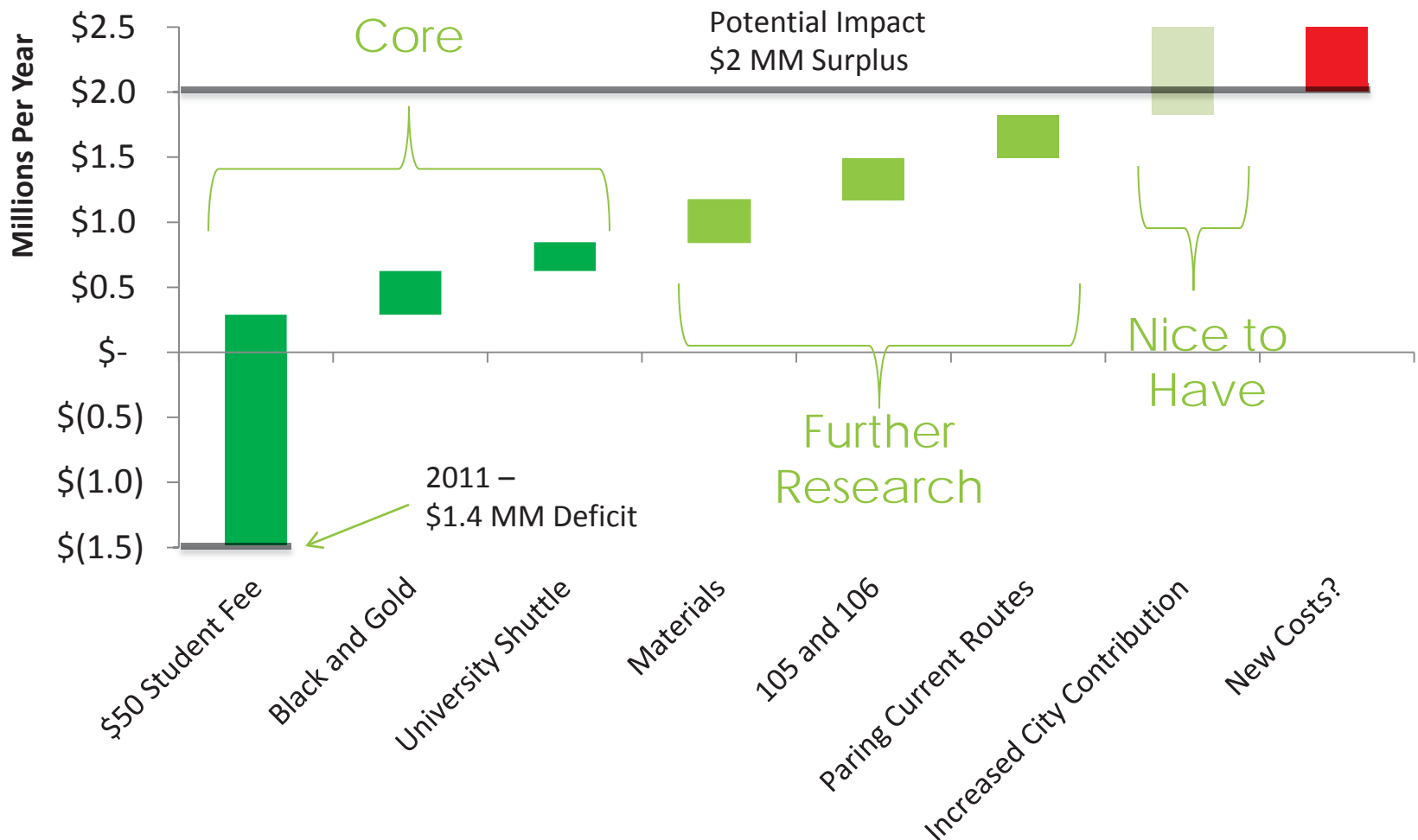
The system's cost slope is steeper than its revenue slope
which drives the deficit



Because of the Slopes of the Cost and Revenue Curves,
Marginal Costs are Higher Than Marginal Revenues

Motor Bus	Per Revenue Mile	Per Passenger Trip
Variable Revenue	\$2.09	\$0.62
Variable Cost	\$4.46	\$1.32
Net Impact	\$2.37	\$0.70
Demand Response	Per Revenue Mile	Per Passenger Trip
Variable Revenue	\$0.79	\$4.18
Variable Cost	\$4.80	\$25.52
Net Impact	\$4.01	\$21.34

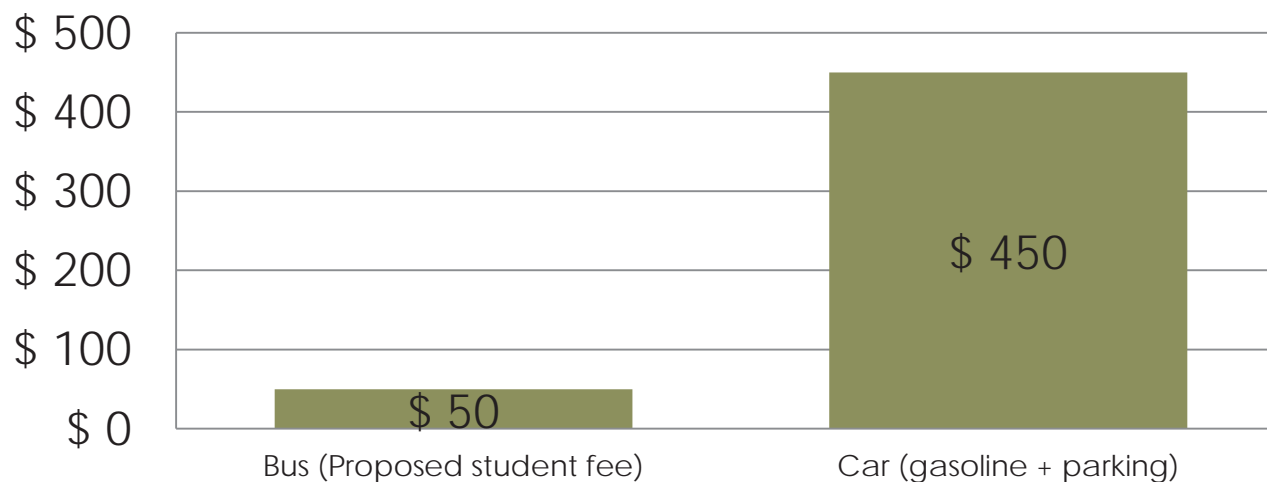
There Are Many Opportunities For Improvement



Charging Columbia Area Students an annual \$50 Student Fee Will Generate \$1.7 Million in New Revenue every year

Student Fee	\$25	\$50	\$75	\$100
MU	\$832,950	\$1,665,900	\$2,498,850	\$3,331,800
Stephens/Columbia	\$50,000	\$100,000	\$150,000	\$200,000
Total Revenue	\$882,950	\$1,765,900	\$2,648,850	\$3,531,800

Annual Cost of Traveling to School



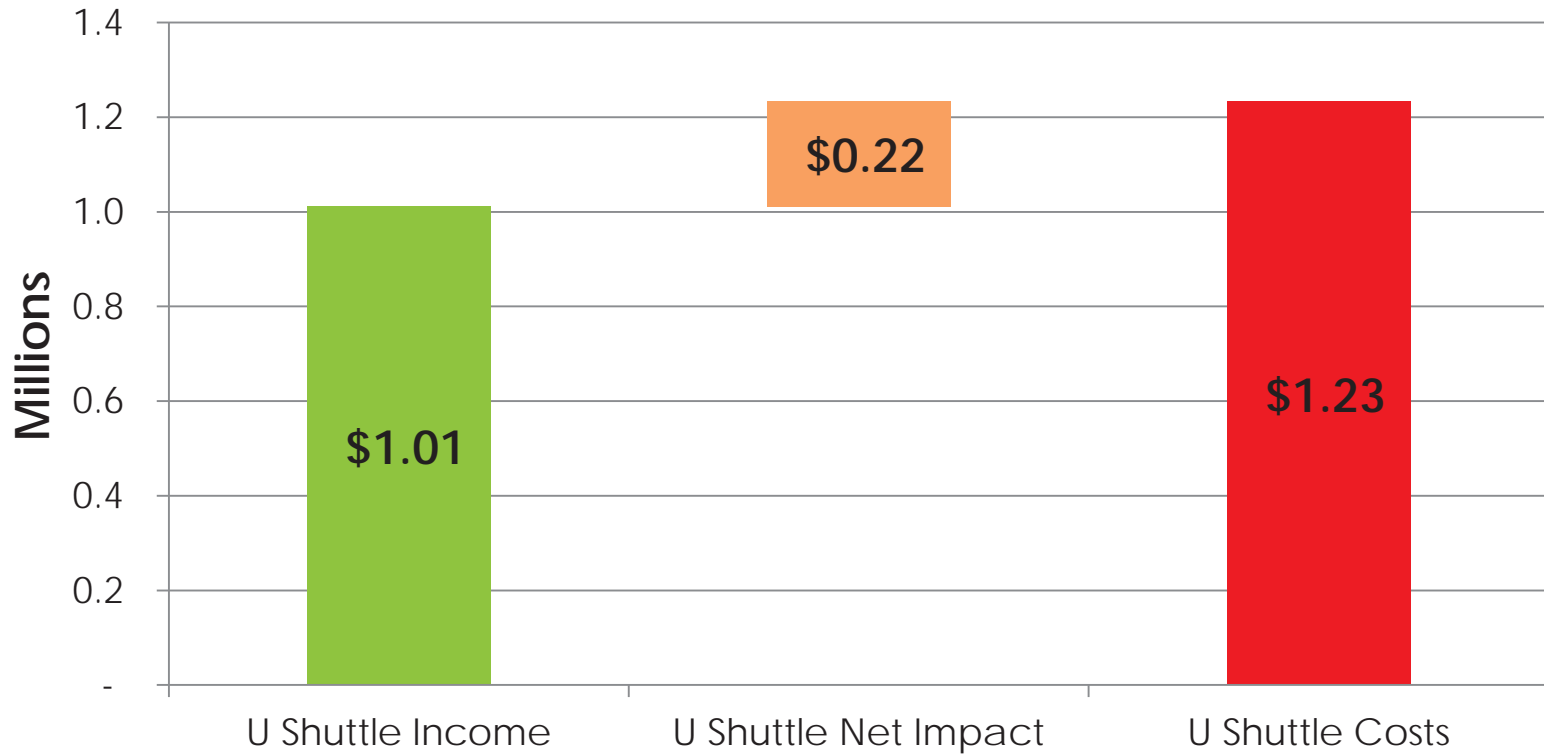
Sources: 2010 and 2011 National Transit Databases,
2012 Budget - City Of Columbia, MU News

Renegotiating the Apartment Contracts to Cover the Costs of the Black and Gold Routes Saves \$335,605

Cost to Run Black Route (2011)	\$156,278
Cost to Run Gold Route (2011)	\$254,327
Total Costs	\$410,605
Revenue From the Two Routes (2011)	\$75,000
FY 2011 Net Impact	\$335,605

Sources: 2011 National Transit Database, 2012 Budget - City Of Columbia, 2010-2011 Apartment Contracts, 2011 Route Sum Data, Google Maps

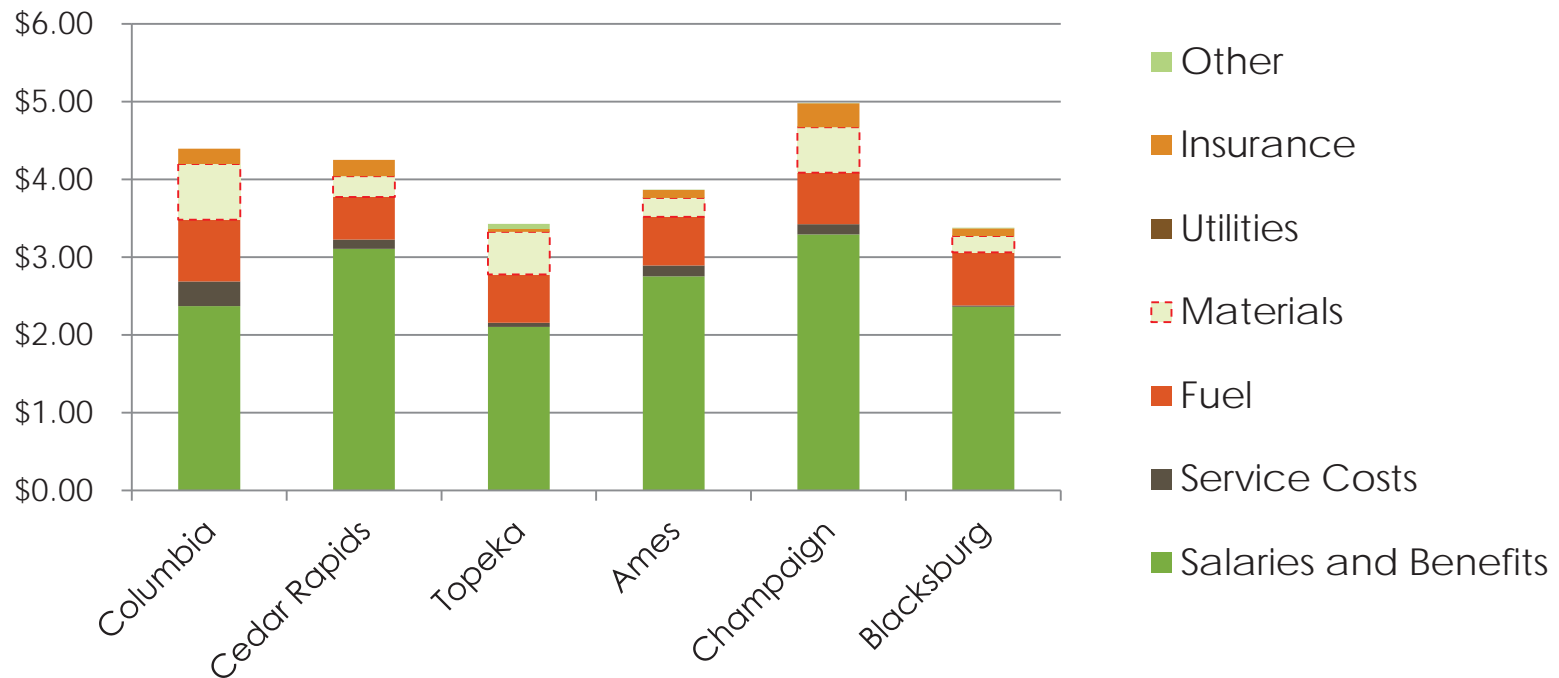
Renegotiating the University Parking Shuttle Contract to Cover Costs Saves \$221,997 Per Year



Sources: 2012 Budget - City Of Columbia

Bringing Materials in Line with Comparable Cities Reduces the Deficit by \$200,540 per year

Allocation of Variable Bus Costs per Revenue Mile



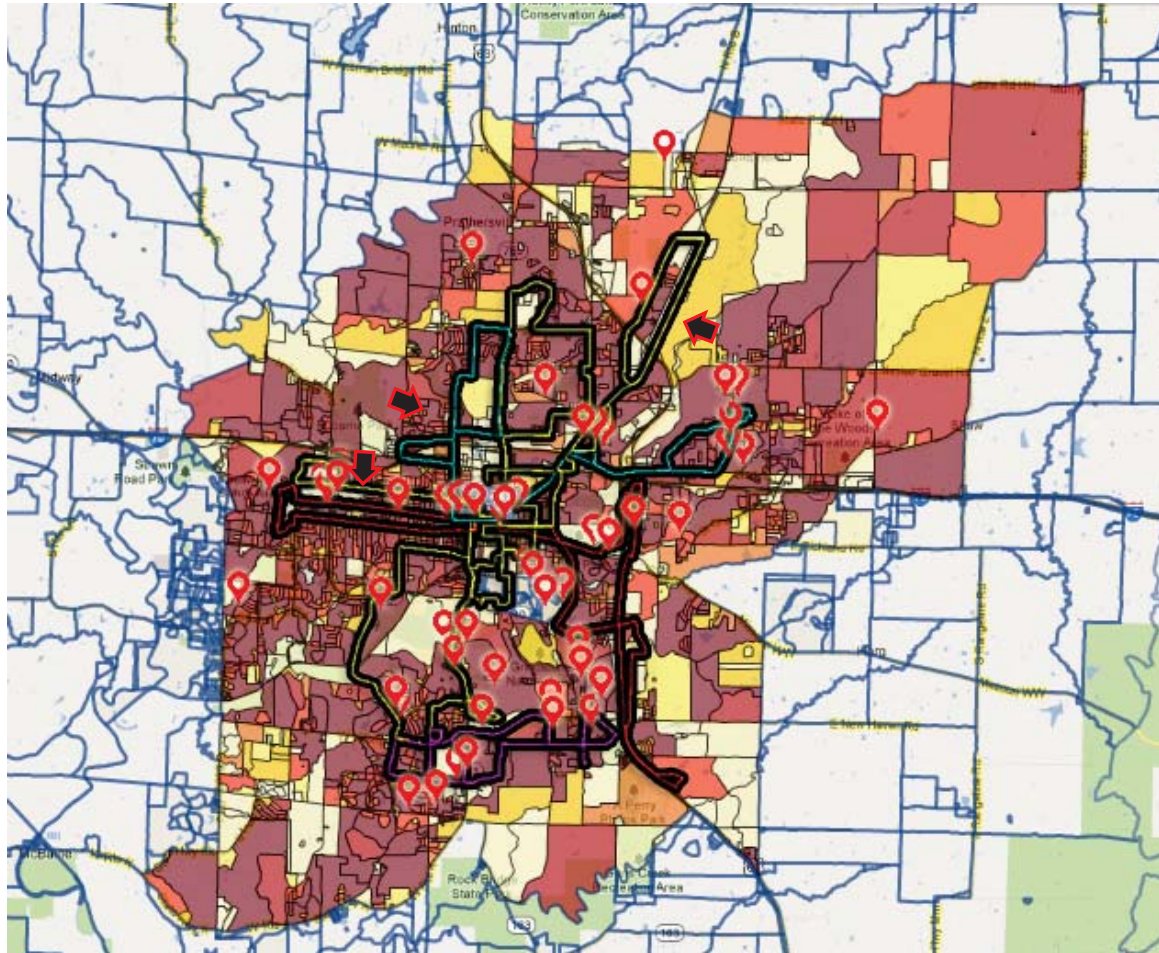
Sources: 2010 and 2011 National Transit Databases, 2012 Budget - City Of Columbia

Cutting Routes 105 and 106 Saves \$257,765

Route 105 (Purple)	13,446 riders in 2011	\$136,057
Route 106 (Brown)	This is a free downtown route	\$121,619
FY 2011 Net Impact		\$ 257,765

Sources: 2011 National Transit Database, 2012 Budget - City Of Columbia, 2010-2011 Apartment Contracts, 2011 Route Sum Data, Google Maps

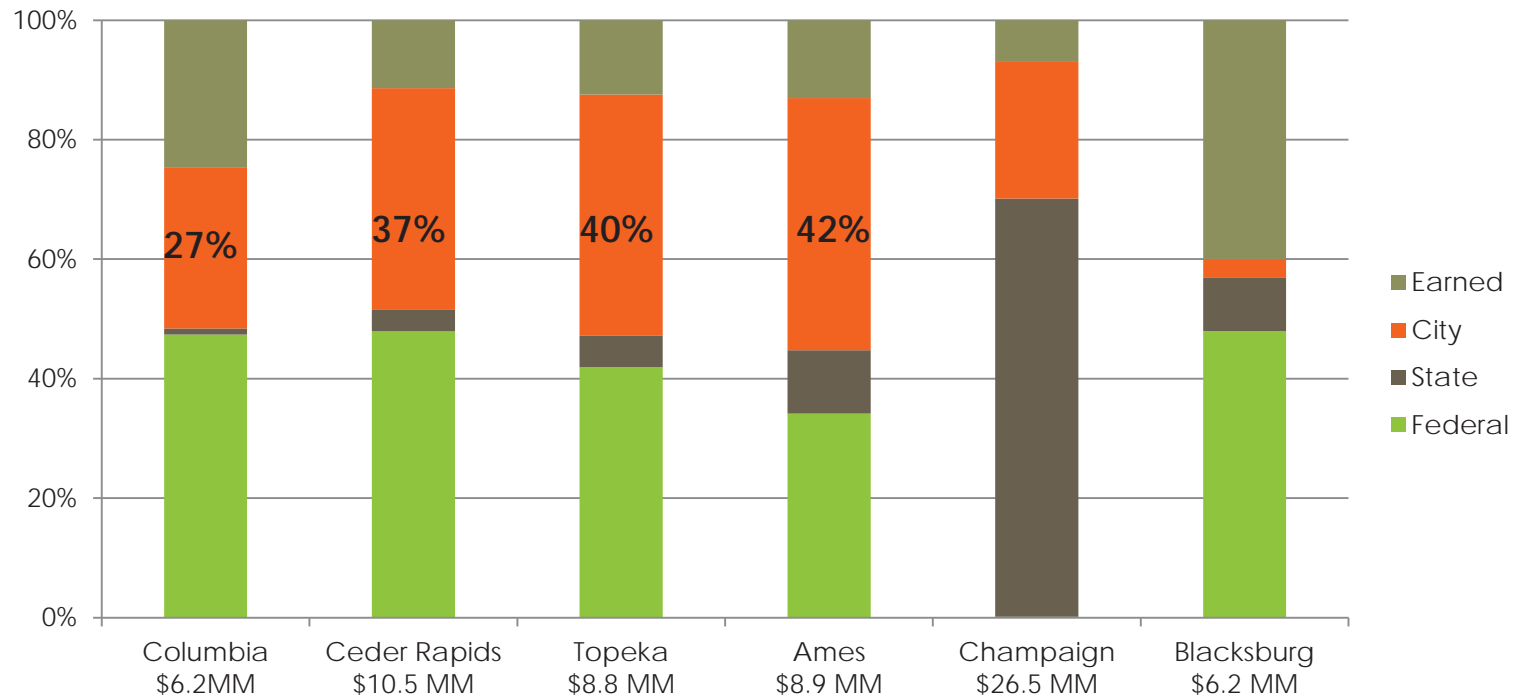
Paring Parts of 103 Green and 102 Blue North Cuts 138,736 Revenue Miles and Saves \$328,804



Sources: 2010 and 2011 National Transit Databases, 2012 Budget - City Of Columbia, Google Maps, 2010 US Census

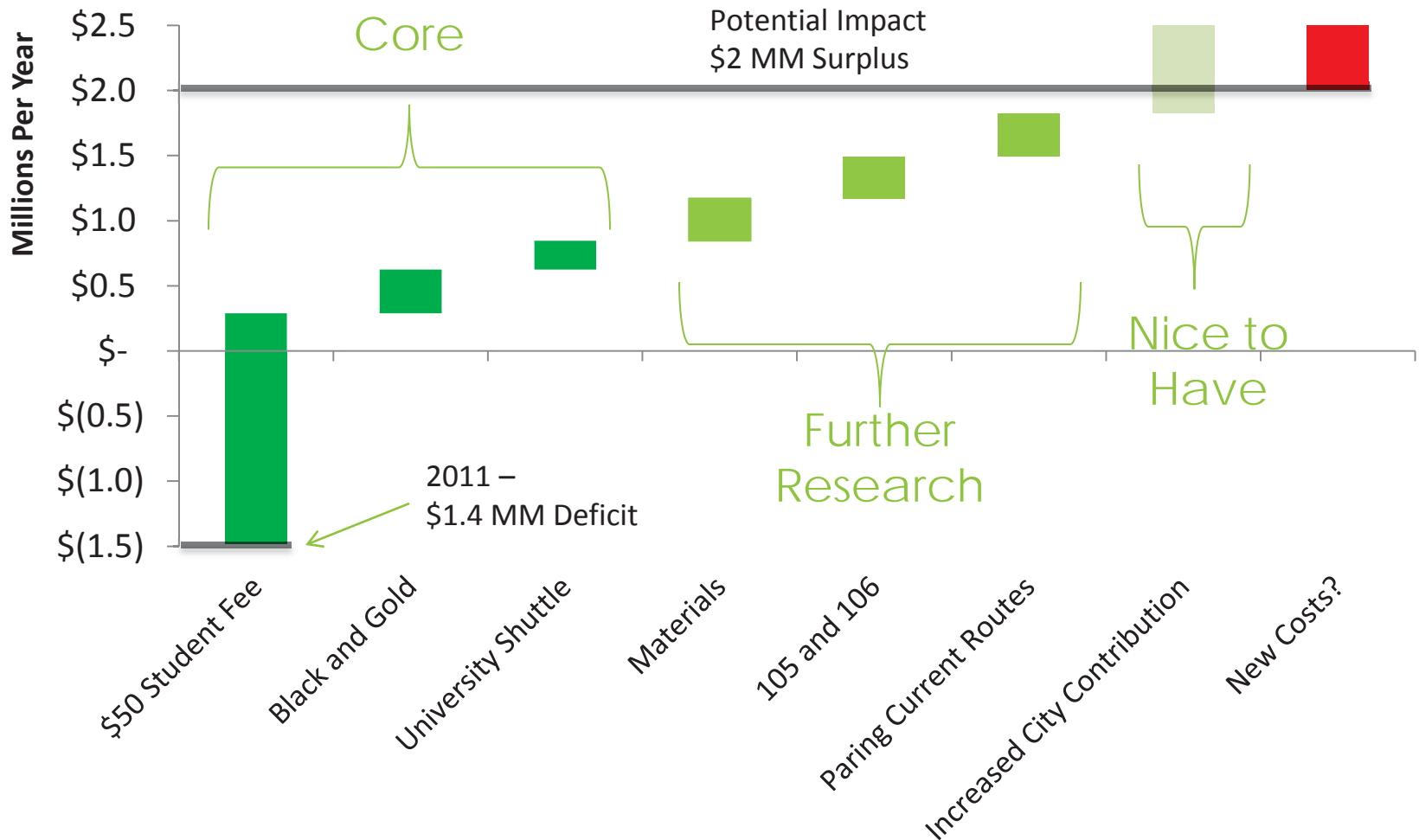
Bringing the City of Columbia's Contribution to Operating Revenue on Par with Comparable Cities Would Increase Revenue by \$682,036

Operating Revenue by Source



Sources: 2011 National Transit Databases

There Are Many Opportunities For Improvement



Areas for Further Research

Student Fees:

- What % of students live off campus?
- What new services need to be offered for students to accept fee?
- What is the cost of this service?
- What kind of education will be required to convince the students to accept new student fees?
- Price elasticity for student fees?

CT's cost variations when compared with other bus systems:

- What drives them?
- Can they be changed?

Route adjustments:

- What is the reason for low ridership on some routes?
- Can the routes be adjusted to increase efficiency?

Para-transit:

- Can para-transit be subcontracted (as other cities do)?

Columbia Transit

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Appendix

City	Population (in '000s)	Total Rides provided in 2010 (in millions)	Rides per capita	Distance travelled : Revenue miles (in 000's)	Revenue earned per mile	Vehicles in Operation	Riders in bus (Passenger miles / miles)	Deficit (in '000s)
Columbia** (MO)	108.5	2.2	20	805	\$1.9	41	7	\$1,400
Cedar Rapids (IA)	126.3	1.2	10	1330	\$0.9	54	6	-
Topeka (KS)	127.5	1.3	10	1417	\$0.8	53	5	\$480
Ames** (IA)	59	5.4	92	1155	\$1.0	67	7	-
Champaign** (IL)	232	10.2	44	3363	\$2.4	103	7	-
Blacksburg (VA)	160	3.3	21	75	\$3.25	11	9	-

Data - Year 2010

**Home to large public universities

Total Cost of driving to school

Academic year of 8 months

Estimated average distance from school – 5 miles

Distance traveled in a day – 10 miles

170 days in academic year = 1700 miles

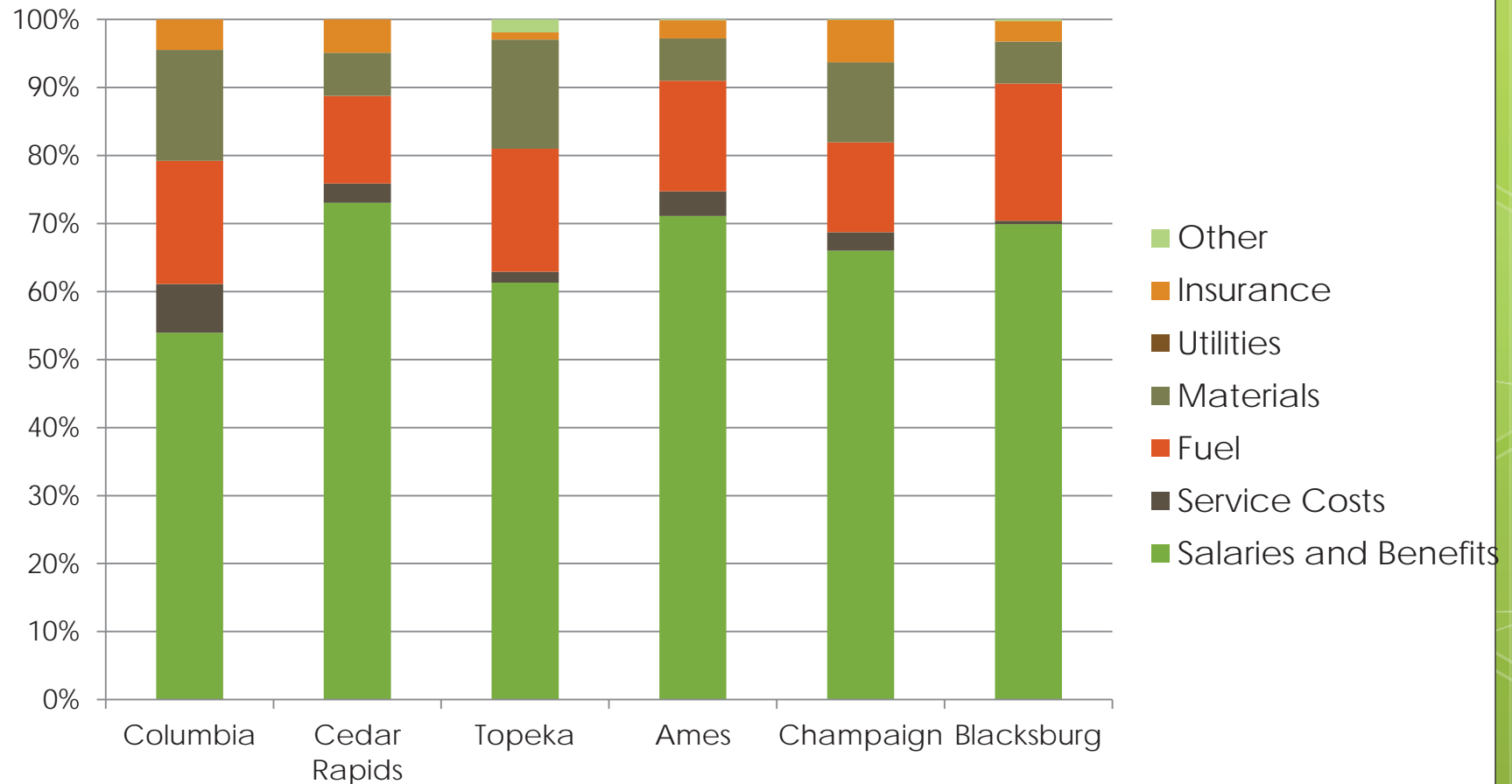
Fixed ownership costs adjusted to reflect only school travel

Vehicle purchase costs – fixed (not include financing)	\$215
Annual finance charges on car loans – fixed	\$30
Annual Insurance payments – fixed	\$75
Car titling and registration – fixed	\$7
Gasoline (at 22 mpg)	\$300
Parking Pass	\$150
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Total	\$777/year
Monthly cost	\$65/month

*This excludes weekends, holidays and summer and winter breaks

Bringing Materials in Line with Comparable Cities Reduces the Deficit by \$200,540 per year

Proportional Allocation of Variable Bus Costs



Sources: 2010 and 2011 National Transit Databases, 2012 Budget - City Of Columbia



Columbia Transit

Recommendations for Increasing Ridership

Columbia, Missouri



November 15, 2012 (rev. Nov 27, 2012)

Seth Kelley

Bolei Ni

Asrar Khan

Under the guidance of:

Carlos Alvarado

Agenda and data sources

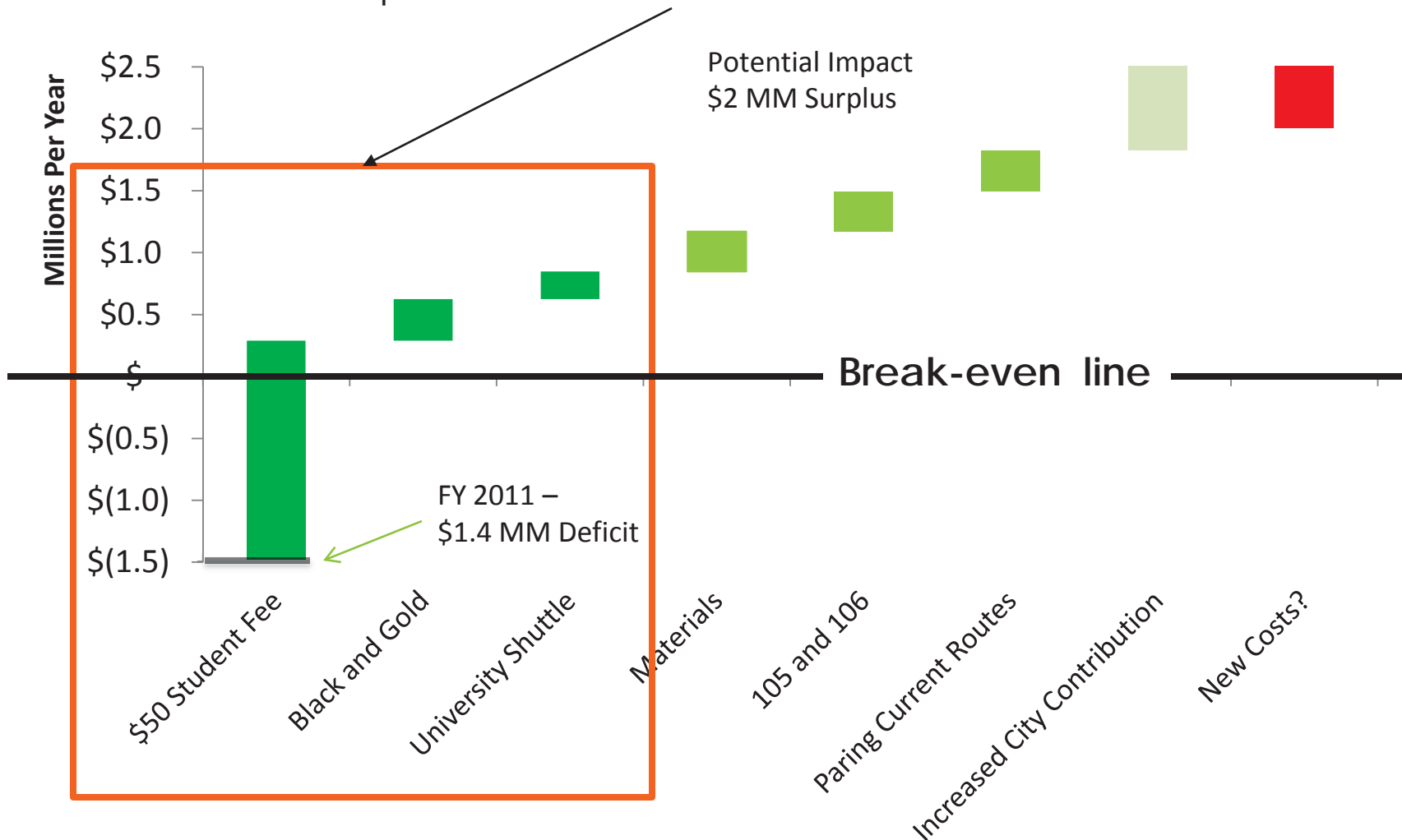
- Previous findings
- Market segmentation
- Marketing objectives and challenges
- Value propositions
- Marketing recommendations
- Next steps

Data sources:

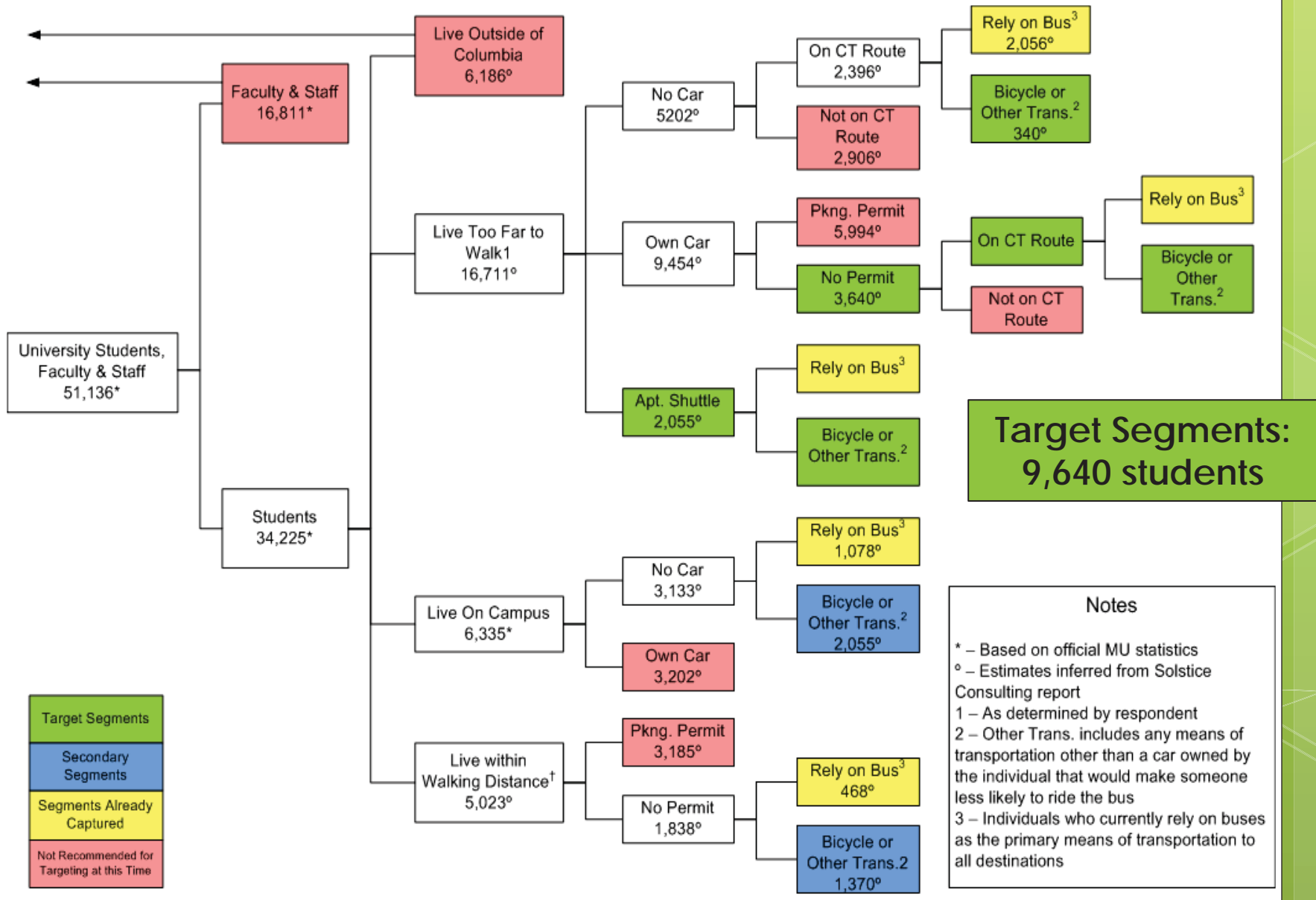
- Solstice Consulting Report
- National Transit Database
- City of Columbia FY 2012 Budget
- Official data from City of Columbia
- Route Sum Data 2011
- *FastCAT* ridership reports

Previous analysis of FY 2011 financials focused on reducing bus operating deficit

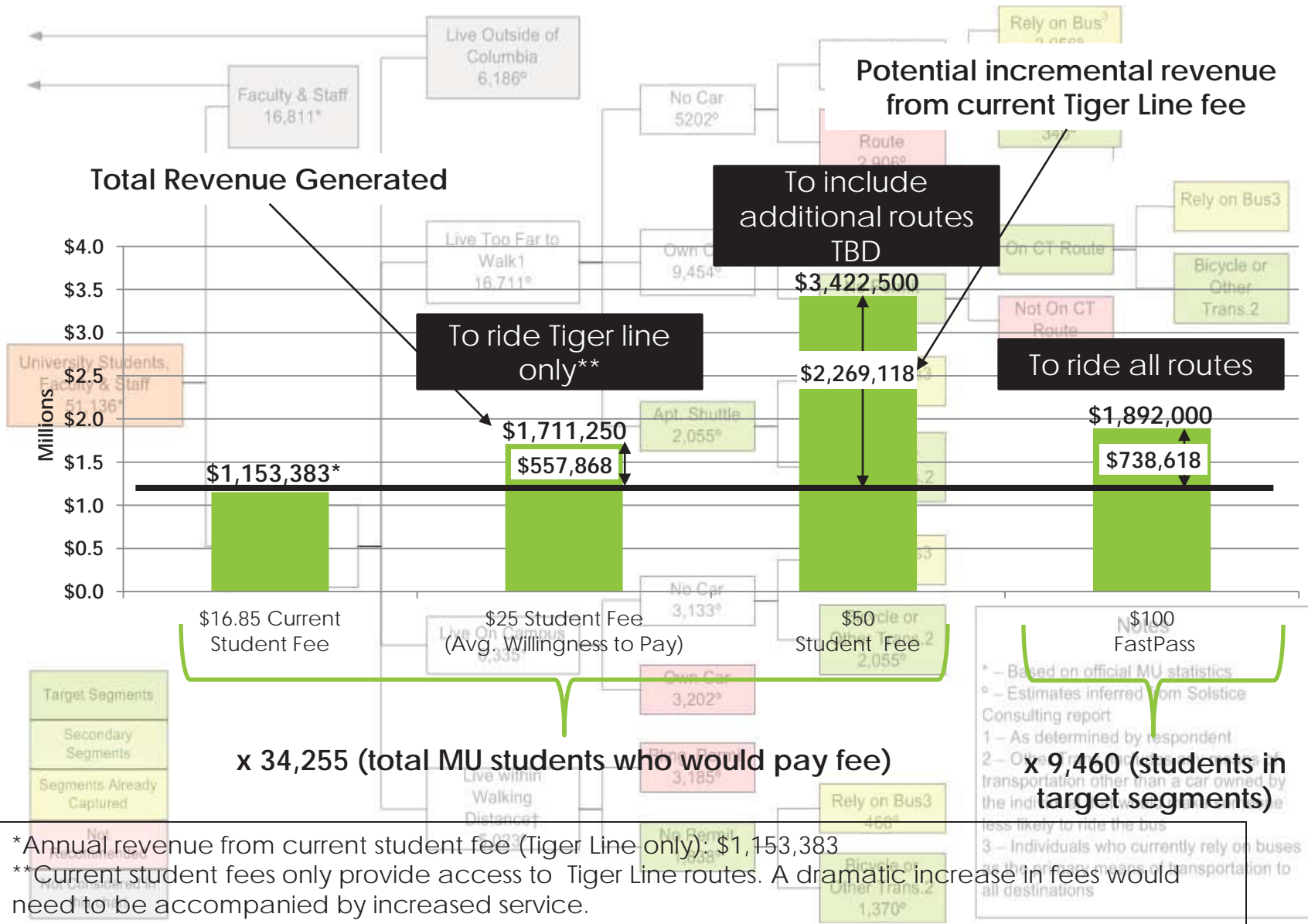
As a follow-on to the operating deficit analysis, this presentation will focus on the potential for revenue tied to students



To determine the feasibility of closing the operating deficit, we segmented MU's population



Methods for incremental **annual** revenue increases based on segmentation of MU students



Objectives

- **Induce Trial** (get people to try it for the first time)
- **Overcome negative perceptions**
- **Attract people to needed information**

Challenges

- **Switching Costs**
- **Lack of interest**
- **Lack of knowledge**
- **Competing services**
- **Identifying resources required to capture market share**

47% of students surveyed have not ridden the bus in the last 12 months.

Different value propositions should be communicated for Black & Gold routes versus *FastCAT*

Black & Gold Routes

○ Time Saving

- People value time more than money
- Just as fast as cars on average
- Transfers are uncommon

○ Cost Effective

- Less expensive than driving
 - ✓ Avg. estimated cost to drive annually: \$500
 - ✓ FASTPass annually: \$200

○ Reliable

- Buses are almost always on schedule

○ Efficient

- Passengers can multitask while riding

○ Social

- Passengers meet each other on the bus

FastCAT

○ Convenient

- Students who live on or near campus are not far from *FastCAT* stops
- Eliminates parking challenges associated with driving downtown

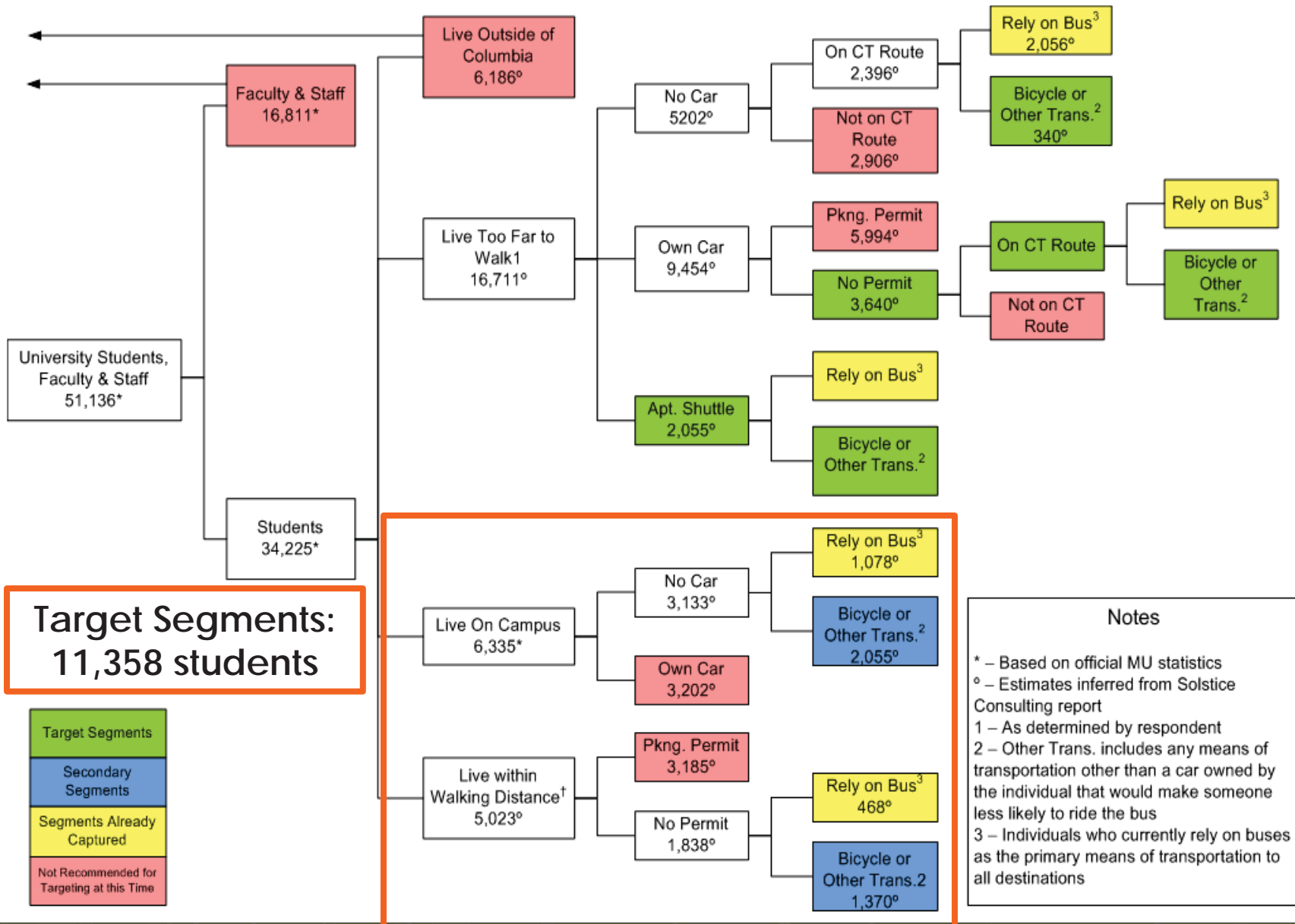
○ Time Saving

- Faster than walking from campus to downtown
- Faster than driving for students who have to walk to cars kept in campus parking structures

○ Social

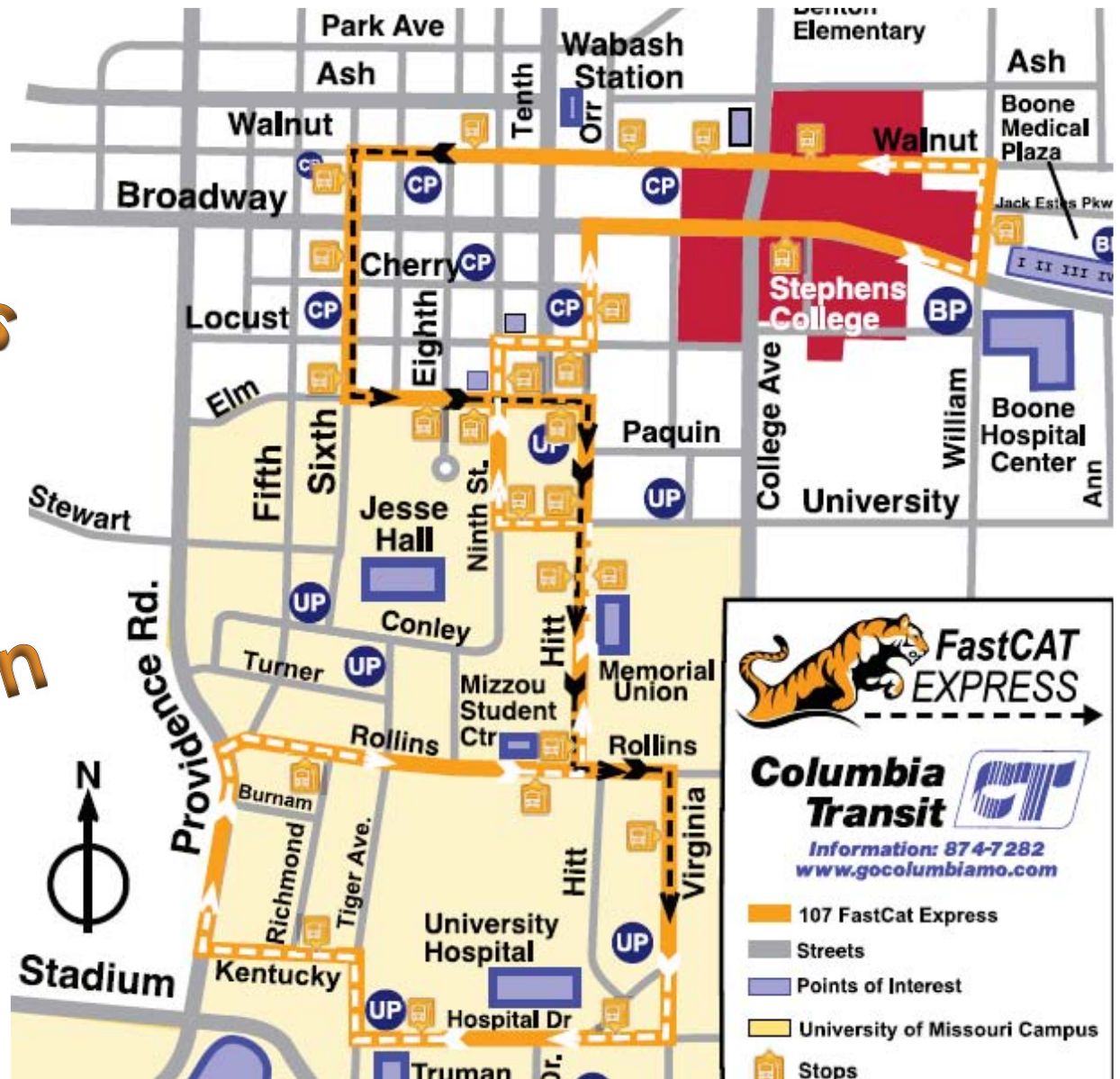
- Students going downtown from campus or Greek houses are more likely to be with friends

FastCAT is not currently serving the segments that might rely most on public transit



FastCAT could be repositioned as a convenient way to get from campus to downtown

Campus
↑
↓
Downtown



Different value propositions should be communicated for Black & Gold routes versus *FastCAT*

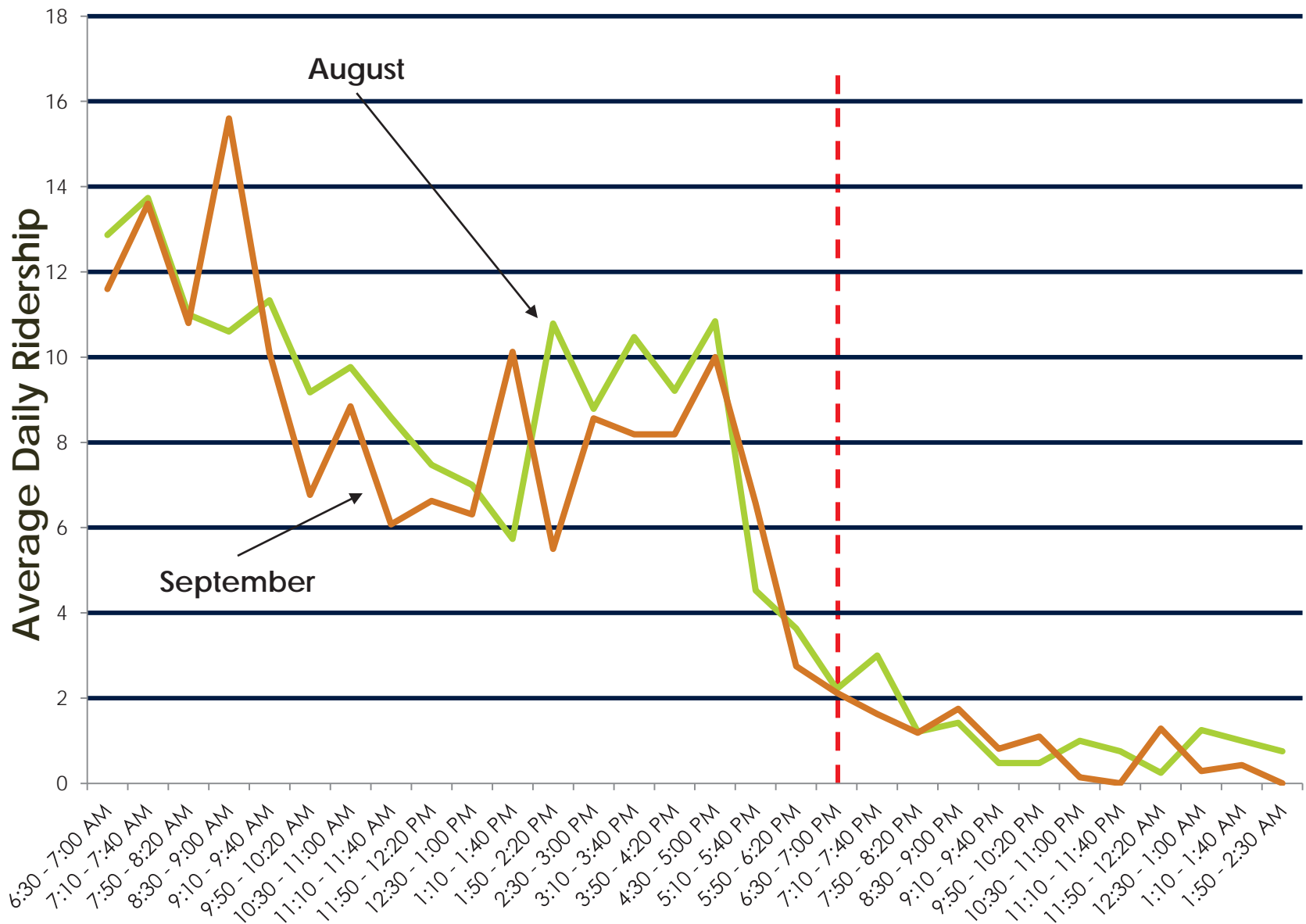
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During Aug & Sep 2012, *FastCAT* ridership drops drastically after 7:00 PM



Potential marketing initiatives to capture Target Segments

- **Offer Free rides**
 - Make it easier to try the bus for the first time
- **Sponsor Mizzou sports or other activities**
 - Messaging needs to be somewhere students will notice it
- **Use *FastCAT* as a gateway for increasing ridership for other routes**
 - Students who regularly use one route are more likely to use others
- **Set Free ride zones and/or times**
 - Short routes and/or high-traffic times
- **Create Bus mock-up on campus**
 - Acclimate students to riding bus and provide possible POS for passes
 - CT videos on screens in Student Center
- **Contact new apartment developers early**
 - Domain, Lofts, The Den, Aspen Heights

Next steps

- **Validate**

- Segmentation through behavioral/attitudinal analysis

- **Implement**

- Develop marketing campaigns designed to capture “Target Segments”
- Determine appropriate marketing channels

- **Update operating deficit financial analysis to include FY 2012 data and recent FastCAT costs**

- **Work with Public Transportation Advisory Commission and Columbia Transit to identify additional business challenges to investigate**