

# Schwager Davis, Inc. - Off the Beaten Path

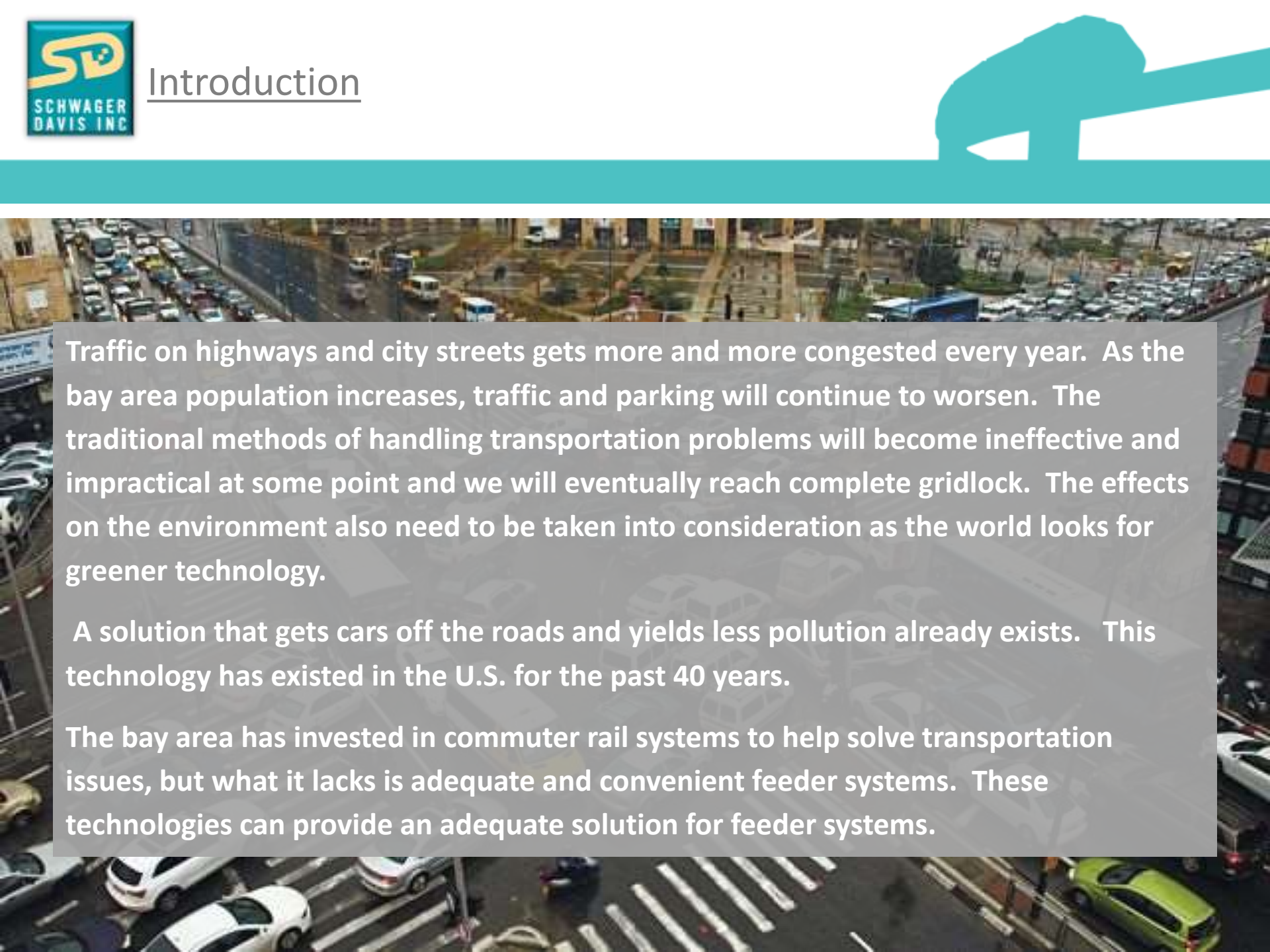
Presented to : Podcar City 9

Date: November 5<sup>th</sup>, 2015

Presented by: Guido Schwager, P.E. & Lee Larsen



## Introduction

An aerial photograph showing a dense urban environment with heavy traffic on a multi-lane highway and surrounding city streets. Numerous cars are visible, along with parking lots filled with vehicles. The scene illustrates the congestion mentioned in the text.

Traffic on highways and city streets gets more and more congested every year. As the bay area population increases, traffic and parking will continue to worsen. The traditional methods of handling transportation problems will become ineffective and impractical at some point and we will eventually reach complete gridlock. The effects on the environment also need to be taken into consideration as the world looks for greener technology.

A solution that gets cars off the roads and yields less pollution already exists. This technology has existed in the U.S. for the past 40 years.

The bay area has invested in commuter rail systems to help solve transportation issues, but what it lacks is adequate and convenient feeder systems. These technologies can provide an adequate solution for feeder systems.



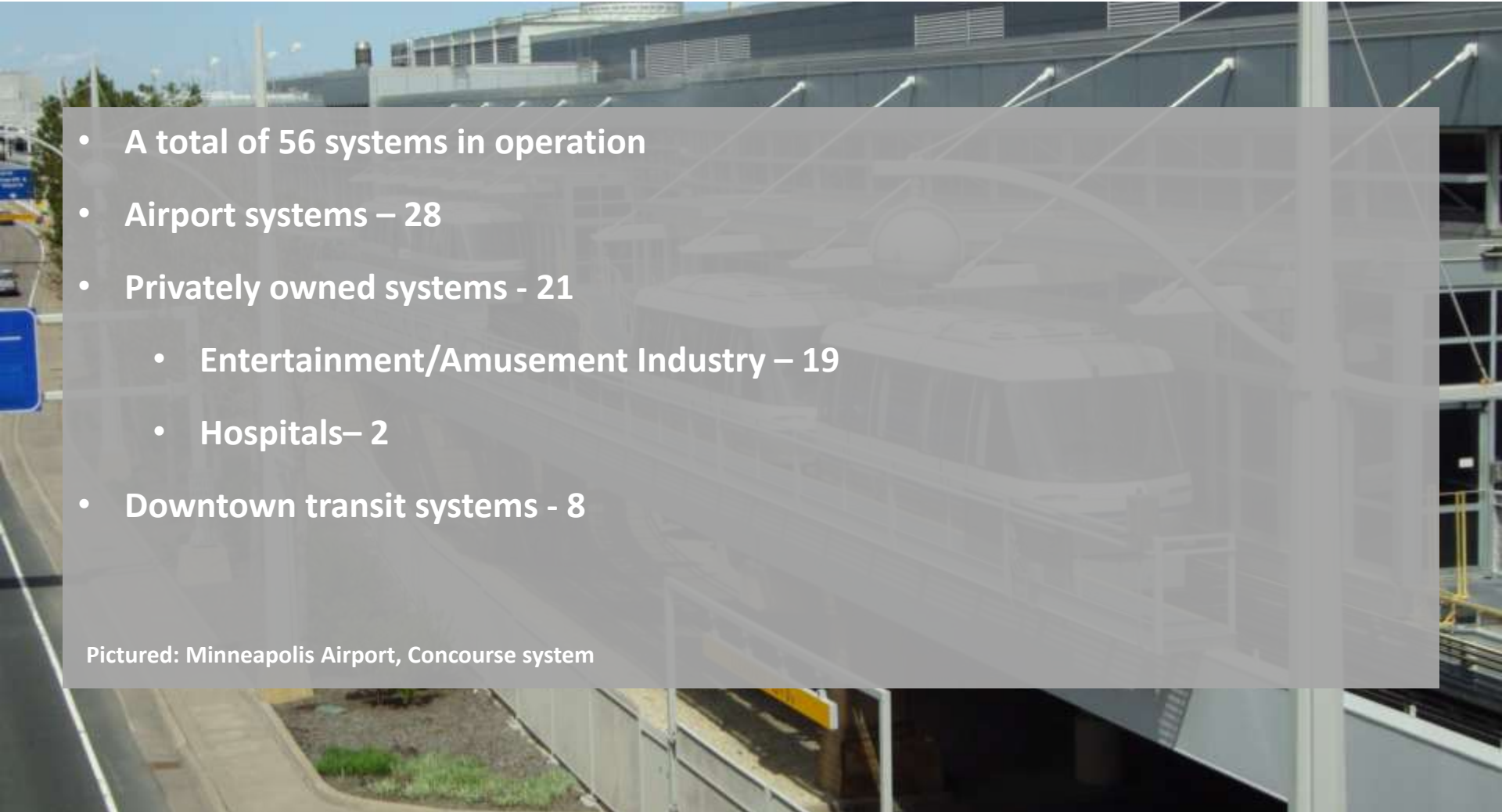


## Existing People Mover Systems in the U.S.



- A total of 56 systems in operation
- Airport systems – 28
- Privately owned systems - 21
  - Entertainment/Amusement Industry – 19
  - Hospitals– 2
- Downtown transit systems - 8

Pictured: Minneapolis Airport, Concourse system





## Airport Systems

- Largest market for people movers in the U.S.
- 1971 Tampa International Airport opens 1<sup>st</sup> airport Automated People Mover (APM)
- Most major U.S. Airports
  - Atlanta, GA (2 systems)
  - Cincinnati, OH
  - Dallas/Fort Worth, TX (2 systems)
  - Denver, CO
  - Detroit, MI
  - Houston, TX (2 systems)
  - Las Vegas, NV (3 systems)
  - Los Angeles, CA (proposal stage)
  - Miami, FL (3 systems)
  - Minneapolis, MN (2 systems)
  - New York City, NY (JFK)
  - Newark, NJ
  - Oakland, CA
  - Phoenix, AZ
  - Pittsburgh, PA
  - Sacramento, CA
  - San Francisco, CA
  - Tampa, FL
  - Washington, D.C



## Privately Owned Systems - Entertainment

- 2<sup>nd</sup> Largest market for people movers in the U.S.
  - Aria Express – Las Vegas, NV
  - Bronx Zoo – Bronx, NY
  - Buffalo Bills – Primm, NV
  - Circus Circus Casino – Reno, NV
  - Circus Circus Casino – Las Vegas, NV
  - Dallas Zoo – Dallas, TX
  - Getty Center – Los Angeles, CA
  - Hershey Park – Hershey, Pa
  - Hilton Waikoloa – Waikoloa, HI (pic)
  - Mandalay Bay – Las Vegas, NV

- Mud Island – Memphis, TN
- Miami Zoo - Miami, FL
- Mirage/Treasure Island - Las Vegas, NV
- Pearlridge Monorail – Aiea, HI
- Gateway Arch Tram – St. Louis, MO
- Whiskey Pete's – Primm, NV





## Privately Owned Systems - Hospitals

- Many Hospitals have sprawling campuses and parking issues
- An APM provides a solution to eliminate duplicate services and provide transportation for doctors, patients, and other employees
- Two hospitals operate APM systems in the U.S.
  - Huntsville Hospital – Huntsville, AL
  - Indiana University Health (IUH) – Indianapolis, IN (Constructed by SDI)
- Both systems average a daily passenger count of 2,200 people/day
- Both systems are a vital mode of transportation for the hospitals

Pictured: Indiana University Health APM - Indianapolis, IN





# Indiana University Health People Mover

- The IUH APM system was constructed in 2 years
- 1.4 miles of elevated dual lane guideway that crosses public and private property
- Private/Public partnership – The local authority was onboard to get the system up and running
- 2 Train fleet
- The system currently has a combined operating mileage of 1,352,600 miles with not a single injury
- Secondary benefits –
  - Allowed translogic tubing system to transport lab samples
  - Increased the surrounding area's real estate values

Pictured: Indiana University Health APM - Indianapolis, IN



## Downtown Transit Systems

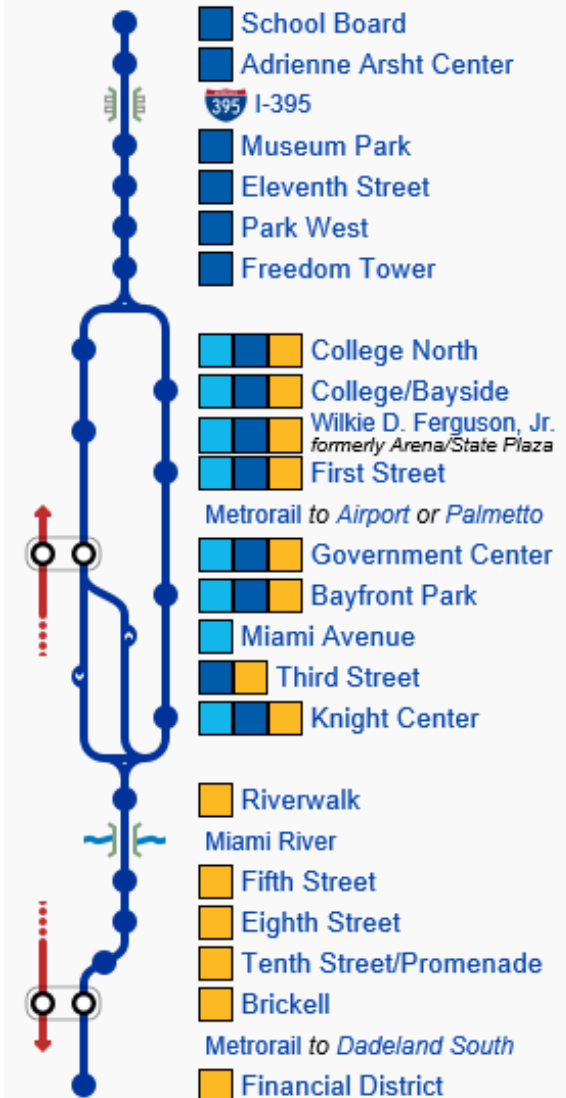
- 1966 Congress created the Urban Mass Transportation Administration (UMTA) to develop new types of transit. UMTA then created the Downtown People Mover Program (DPM)
- Three systems were built as a part of this program:
  - Metromover – Miami, FL
  - Detroit People Mover – Detroit, MI
  - Jacksonville Skyway – Jacksonville, FL
- Both the Metromover and Skyway are a free to ride system, and Detroit People Mover only charges a 0.75¢
- Other transit systems – Capital Subway, Seattle Monorail, Morgantown PRT, Las Colinas APT, Roosevelt Island Tram





# Metromover

- System began service in 1986
- 21 Stations
- 4.4 miles of track
- Fleet of 29 Vehicles
- 105,500 average weekday passengers
- 30,531,100 average annual passengers
- Circulates passengers from the Metrorail to downtown Miami
- Average operating cost \$8,888,794, \$1.02 per ride





## Detroit People Mover



- System began service in 1987
- 13 Stations
- 2.9 miles of track
- Fleet of 12 Vehicles
- 6,000 average weekday passengers
- 2,357,400 annual passengers (2014)
- Circulates passengers in downtown Detroit from the light rail station

*M-1 Rail to New Center*

Grand Circus Park

*M-1 Rail to Congress*

Times Square

Michigan Avenue

Fort/Cass

Cobo Center

Joe Louis Arena

Broadway

Cadillac Center

Greektown

Bricktown

Renaissance Center

Millender Center

Financial District





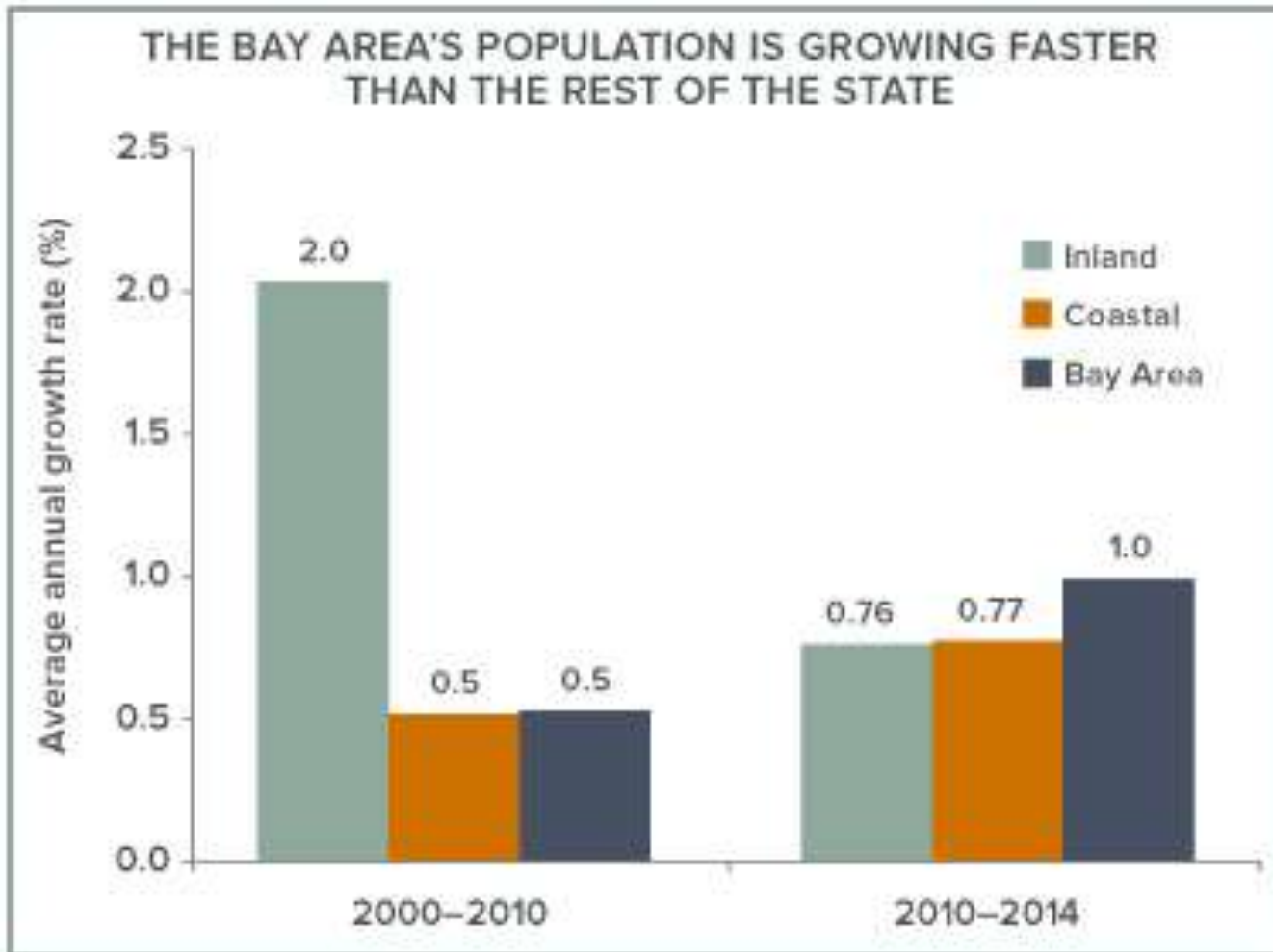
## Jacksonville Skyway

- System began service in 1989
- 8 Stations
- 2.5 miles of track
- Fleet of 10 Vehicles
- 5,000 average daily passengers
- 481,000 passenger per year
- Circulates passengers in downtown Jacksonville





## Bay Area Population Growth





Are we ready for it?

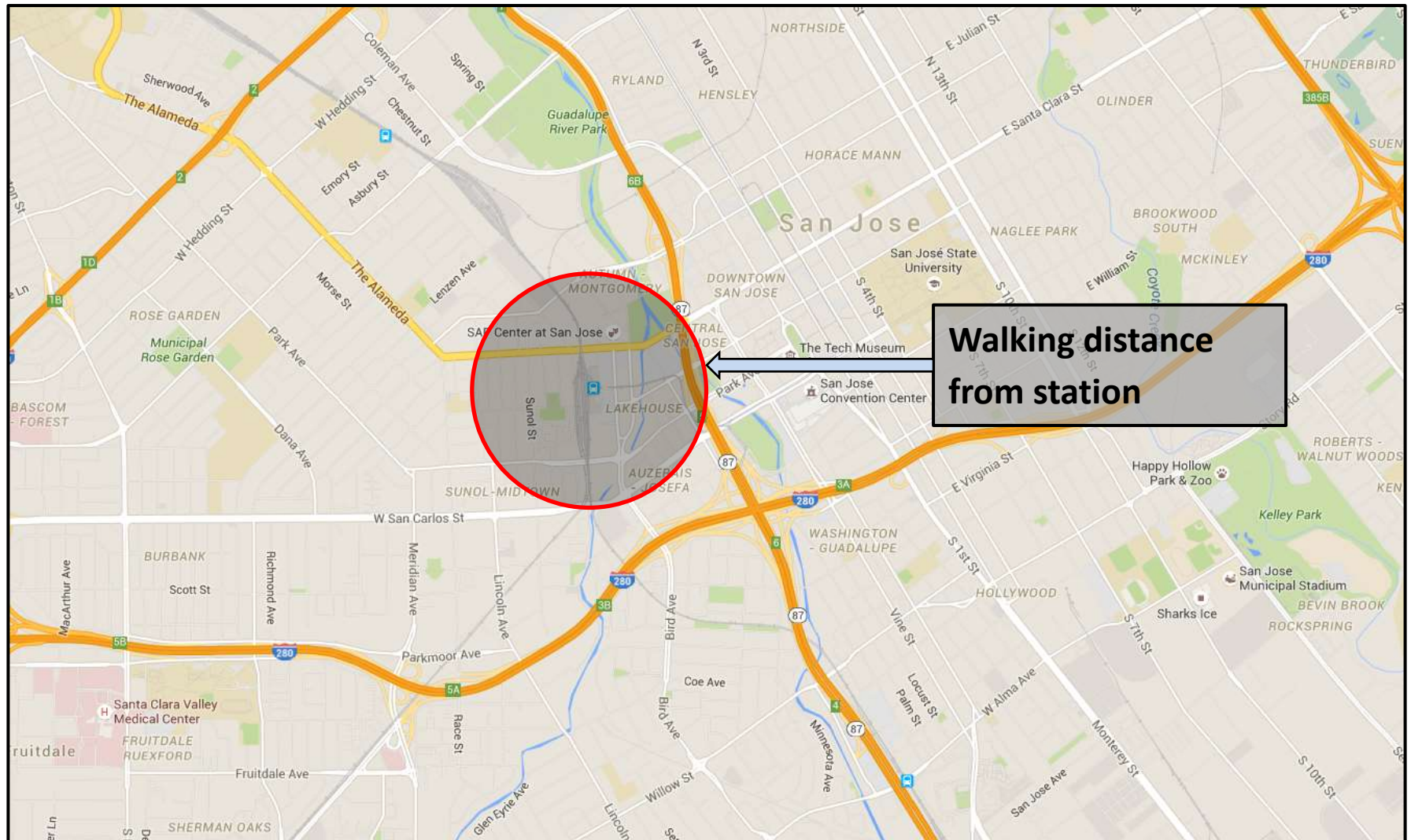


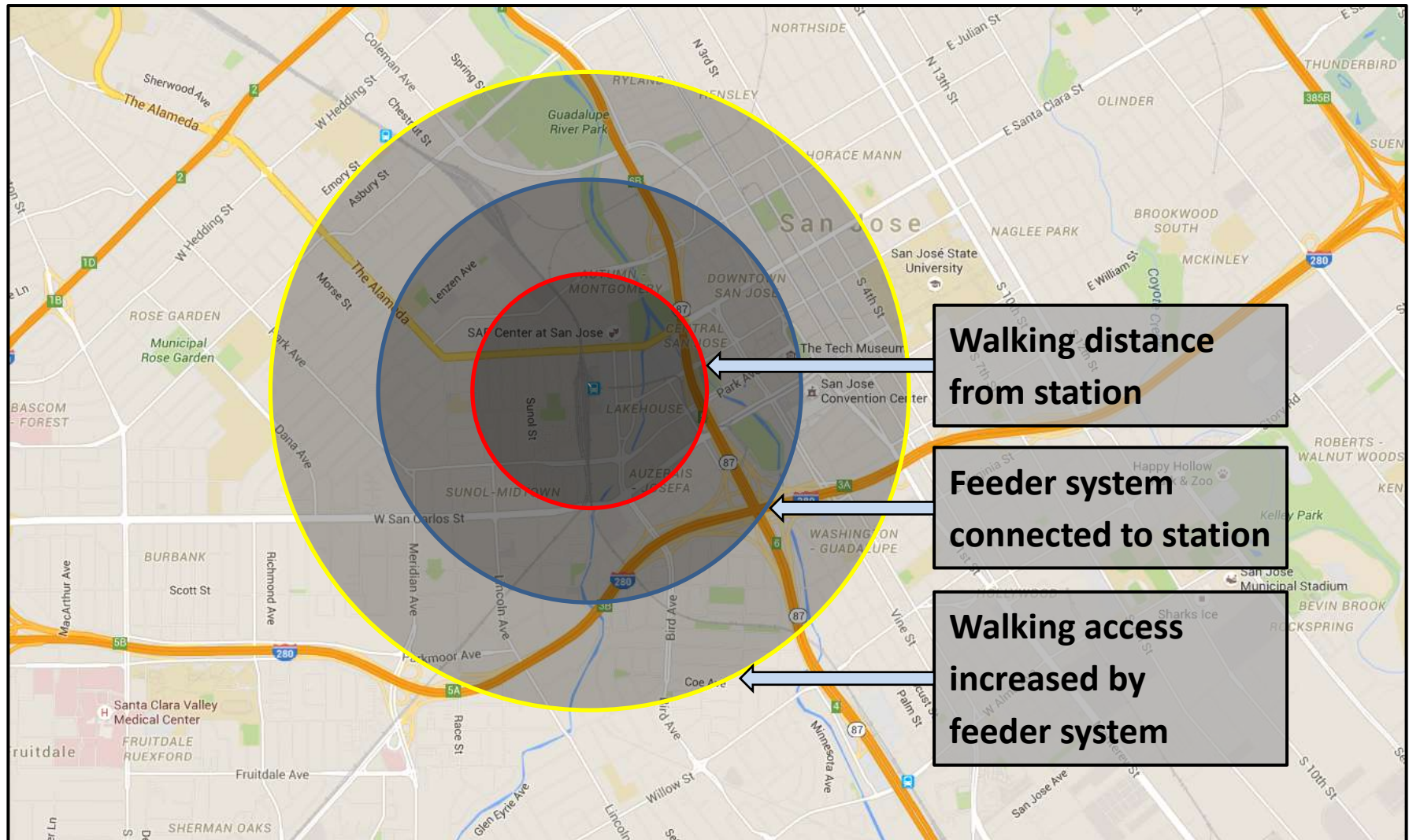
## Typical Approach to Public Transportation





# Effect of Circulation System









Low cost, safe, efficient and reliable





## How can we finance Feeder Systems



- Reduce parking requirements
- Increase density
- Assessment for increased property value
- Consider the cost of doing nothing



Thank You, Questions?



Bridges



Transit



Repair



Energy Infrastructure



Mageba USA