

# Silver Bullet Fact Sheet

## Personal Monorail for Palo Alto's Stanford Research Park

Recent national studies by the Texas Transportation Institute and the Brookings Institution conclude that there is no 'silver bullet' to reduce housing costs and traffic congestion. Cities21 disagrees. We have designed a real suburban silver bullet: less traffic and more housing at no taxpayer cost. Our design uses personal monorail and advanced cellphone technology to provide alternatives to driving alone and to reclaim parking spaces for better use.

### Slash Suburban Solo Commuting!

A futuristic, five-mile, \$50M Personal Rapid Transit (PRT) "shuttle" system is proposed for Palo Alto's Stanford Research Park (SRP), complementing and significantly increasing the attractiveness of commuter rail, carpool, vanpool, bicycle, and bus commutes for the center's 20,000 employees. The office park is transformed into a transit village of two square miles. PRT provides non-stop, no-wait, 30 mph service over the commute's "last mile," and services mid-day trips.



Our rigorous, large (thirteen researchers), three-year market research study shows a reduction in solo commuting from 89% to 45%. Extrapolating to the entire office park, 6,600 cars per day are removed, freeing 50 acres of parking for reclamation. Fare box, additional revenue, and cost savings total \$16.9M per year, profitably covering PRT capital, operating, and maintenance costs. The model for Palo Alto readily translates to 200 other U.S. job-rich major employment centers.

### 100% Private-Sector Transit

Electric trolleys first came onto the scene in 1888. Cities granted "franchise agreements" to real-estate speculators who built and operated trolley systems. Within a few years, trolleys were the dominant mode of transit. A similar franchise agreement is proposed whereby Palo Alto will grant a franchise to a personal monorail operator. The franchisee will take on the investment risk, resulting in a system built with no taxpayer funds.

**System Benefits:** Less traffic, less greenhouse gas, more housing, more vibrant city, more auto-free mobility, improved public transit fare recovery, increased ability to attract employees, increased office and residential land values, increased retail sales, no taxpayer cost.

## Personal Monorail – Personal Rapid Transit (PRT)

PRT is an elevated monorail system with many three-person, driverless, electric vehicles. It is ideally suited short "feeder/distributor", shuttle, and "circulation" operations at train stations, airports, office parks, and shopping centers. PRT provides non-stop, no-wait, 30 mph service.

Vehicles travel above ground on 16' elevated "guideway." Stations are located near building entrances. Many stations are situated along the route to minimize walking once the trip ends. Station guideway branches from the main guideway - vehicles turn off onto a separate track to pick up and drop off passengers. Because of these turn-offs, vehicles travel non-stop to the destination at 30 mph, bypassing intermediate stops and speeding at twice the average speed of autos on congested city streets below. PRT combines concepts from monorail (Disneyland), automated people movers (San Francisco Airport), roller coasters, and automated highway systems (Governor Schwarzenegger drives a van using GM OnStar "auto-pilot" in the science fiction movie *The Sixth Day*).



Passengers travel alone or with people of their choosing. Vehicle weight minimization greatly reduces the size of the elevated guideway and supporting columns, dramatically reducing construction cost and right of way acquisition. Vehicles flow along the guideway almost like data packets on the Internet, anticipating demand so that wait time is eliminated. In addition to improving commute alternatives, the PRT system eliminates mid-day stranding caused by many commute alternatives, by providing efficient transit to adjoining shops and restaurants.

PRT is an emerging technology under development in Minnesota (SkyWeb Express), Texas (Microrail), and the United Kingdom (ULTra – this firm has a Berkeley subsidiary). Though differing in design, all three efforts have one or more vehicles and a section of guideway completed. First commercial deployment will be in 2007, at the earliest.



## Digital Mobility – Coordinating Your Transportation Needs

New mobility is a "new transportation approach that focuses on pairing clusters of smart technologies with existing transportation options to create a coordinated, intermodal transportation system that could substitute for the traditional auto." We combine web applications, phone support, and cellular location tracking applications (using GPS) into a comprehensive service to provide comprehensive door-to-door mobility.

### About Cities21

Cities21 is a group of professionals working together for better transit, greater urban livability, and reduced pollution. Some elements we favor: transit villages, real-estate in-fill, workforce housing, automated transit, and wireless connection-making software. We help improve twenty-first century cities. [www.cities21.org](http://www.cities21.org).

- "Our current transportation policy path in the U. S. is clearly unsustainable. Traffic, its environmental impacts and its impact on quality of life continue to get worse virtually everywhere in the country. Innovative new ideas and new approaches are badly needed. We need a portfolio of innovative approaches spread across the United States, with each one pushing the envelope towards a more sustainable future transportation system. Cities21 and its Suburban Silver Bullet should be in this portfolio. It is innovative; it is forward-looking; it addresses many key transportation challenges; and the potential benefits - if widely disseminated - are large." - Steve Offutt, EPA's Best Workplaces for Commuters.
- "I've long thought personal rapid transit would be a silver bullet for Edge City transportation woes if you could keep it as simple, customizable, scalable, affordable, and profitable as Legos. Cities21 may have cracked the code." - Joel Garreau, *Edge City: Life on the New Frontier*.
- "I am especially impressed with the Cities21 comprehensive approach to implementing an innovative transportation system. I think it represents a model that should be emulated by others around the country who wish to participate in our needed transportation revolution. More and more cars, however green, are not the answer we need to ward off a growing dependency on foreign oil and to help limit, perhaps reverse somewhat, the degradation that has been imposed on our cities by the automobile. We can do much better but we have to form large coalitions of like-minded people in order to overcome the tremendous vested interests that wish only to maintain the status quo. Cities21 has shown us how this can be done. One can hope it will be emulated across the land." - Jerry Schneider, Professor Emeritus, University of Washington.