

San Jose

Electronic Transportation Development Center

The **San Jose Redevelopment Agency** is providing the following information to acquaint you with this exciting opportunity. Please take the time to review the potential ETDC areas of study and help us determine where your technology would best be suited for inclusion in this project by completing a short online survey. [Click here to take the survey](#) or visit www.sjredevelopment.org/etdc.htm.

> **PROJECT BACKGROUND:**

San Jose and Silicon Valley connote a world-class technology industry, a vibrant entrepreneurial spirit, and a devotion to outstanding environmental stewardship. When Silicon Valley focuses on a particular challenge, its innovative talent pool can solve problems and accelerate the application of practical solutions in a manner unmatched by any other place in the world. These solutions fuel our region by creating new company revenue and jobs.

The City of San Jose and the San Jose Redevelopment Agency have partnered with the U.S. Economic Development Administration, the San Jose State University Foundation, and private sponsors to fund the planning and development of the ETDC. This project will bring together Silicon Valley companies to address significant opportunities in the surface transportation industry. The ETDC will assist Silicon Valley companies to transfer their technology to a surface transportation platform, thereby enabling current and emerging computer, chip, software, and communication technology companies to penetrate a new market.

> **TECHNICAL FOCUS:**

The ETDC pilot project will focus on the design of electronic, fuel cell, hybrid, and solar-assisted buses. Subsequent ETDC projects may study all surface transportation vehicles and all fuel types. Energy, environment, homeland security, and transportation safety applications will be addressed in the pilot project as well as in future projects.

> **OBJECTIVES:**

The objectives of the ETDC are to reduce dependence on oil, promote more environmentally-friendly forms of surface transportation, reduce the threat of terrorism to buses, trains and trucks, and make vehicles safer for drivers and passengers. The attached graphic illustrates these concepts.

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> PILOT PROJECT:

The ETDC project team brings together experienced energy, environment, homeland security, and transportation safety experts into study teams that will work with companies to determine how best to showcase Silicon Valley technology on a fully operational demonstration bus. The study teams will use the responses to the attached survey to determine which companies to work with on the pilot project. In order to help you determine if your company has solutions that could be used in the pilot project, examples of technologies that could be applicable to the pilot project are listed in an attachment to the survey.

> BENEFITS:

Qualified and selected Silicon Valley companies will:

- Participate in a technology development project,
- Share in technology partnerships, such as co-marketing and shared patents,
- Access the energy and environment transportation industry, an estimated \$3 billion market,
- Share in the surface transportation homeland security industry, an estimated \$1 billion market,
- Develop new markets while protecting proprietary technology through licensing and technology partnerships,
- Have its products and technology displayed aboard the ETDC demonstration bus, and
- Become a stakeholder in the advanced transportation sector in Silicon Valley.

> SURVEY:

Please complete the [survey by clicking here](#), or visit www.sjredevelopment.org/etdc.htm. When appropriate, your representative will be contacted to discuss how your product/technology could fit into the ETDC project.

> QUESTIONS/COMMENTS:

If you have questions or comments about the survey, please contact the Electronic Transportation Development Center project team at (408) 938-3923 or etdc@sanjoseca.gov.

Thank you for your time and interest in this project.



ETDC Pilot Project: **Sample Technology Application List**

Energy & Environment

- > Chip-driven fuel management to improve the cleanliness and range of vehicles
- > Battery energy storage for propulsion of the electric motors of the vehicle
- > Efficient electronic cooling and heating of batteries and power electronics
- > Advanced circuitry designed to reduce energy requirements and manufacturing costs
- > Advanced photovoltaic and regenerative technology allowing the vehicle to take on energy
- > Advanced electric motors and controllers for torque improvement and range extension
- > Propulsion regulators for reducing the need for unnecessary torque, horsepower and fuel
- > Power management systems for balancing of hybrid systems and components
- > Decision logic systems to more finitely control fuel and power used by the vehicle
- > Electronics that can make clean fuels even more adaptable to all types of vehicles
- > GPS for vehicle control, data logging, and transportation management
- > Flat-panel screens for driver information from the vehicle's subsystems
- > Voice and visual guided multimedia teaching tools for users of electronic subsystems
- > Advanced circuitry designs to improve device interactivity and after-market installation
- > New lighting techniques to reduce energy draw and increase vehicle safety

Homeland Security & Transportation Safety

- > GPS/wireless communication to insure the proper placement of buses
- > Explosive/metal detectors to screen passengers
- > Radar/sonar to spot unauthorized and potentially dangerous items
- > Armor materials for structures and interior panel passenger protection
- > Signal jamming/detection/encryption to reduce the triggering of explosives
- > Encrypted digital video surveillance cameras
- > Laser detection on packages and parcels carried by potential passengers
- > Wireless communication for after-market installation of electronics & detection
- > Decision microprocessors and databases for comparative calculations
- > Chip ID equipment for driver and passenger screening
- > Parked bus surveillance equipment with driver notification of change to vehicle
- > Remote system shutdown for unauthorized or dangerous vehicles.
- > Software based pattern/threat analysis
- > RFID technology for interface with other vehicle technologies
- > Sensors to prevent placement of dangerous compounds on unattended vehicles
- > Sensor monitoring and driver alert systems for all vehicle components
- > Electronic servo and pump solutions to enhance efficient vehicle steering and braking
- > Sensor monitoring to improve the road stability and safety of the vehicle
- > Safety devices to protect or provide for passenger comfort
- > Safety sensors/scanners alerting driver to pedestrian location & traffic to reduce accidents
- > Wireless communication of vehicle component status to monitoring/maintenance center
- > Diagnostic systems alerting driver to potential vehicle failures prior to a breakdown

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A project of the **City of San Jose**, **San Jose Redevelopment Agency**, **San Jose State University**, **Environmental Business Cluster**, and **Synergy EV**

Silicon Valley Technologies

Established & Emerging Companies

- MICRO-PROCESSORS
- GPS
- WIRELESS
- MEMORY & CHIPS
- DATABASES
- SENSORS
- NETWORKING SOFTWARE
- BIOMETRICS

creating

American Opportunities

Environmental, Energy & Homeland Security Technologies for Ground Transportation

- REDUCE OIL DEPENDENCY
- FIGHT TERRORISM
- ACCELERATE CLEAN VEHICLES
- REDUCE AIR POLLUTION
- DRIVE ALL NEW VEHICLE TECHNOLOGY
- CREATE SECURE BUSES/TRAINS
- INCREASE VEHICLE MILEAGE
- ADVANCE FUEL CELL TECHNOLOGY

phase 1

Survey SV Companies

phase 2

Design & Build
Demonstration
Vehicles



phase 3

Build ETDC

