



Connected Vehicle Trade Association

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Chairman



The Partners

- **CVTA** : Trade association of suppliers and related organizations involved in vehicle/infrastructure communications
- **CAR**: Research organization focused on strategic trends related to the auto industry
- **MEDC**: (Michigan Economic Development Corp.) The state partnership to promote economic growth & to develop strategies to create and maintain quality jobs in Mi. by defining competitive edge technologies in several targeted sectors including automotive related technologies.





THE MEDC AWARD

- **September 2006: MEDC awarded a 2 year, \$3.15 million grant to CAR for a cooperative venture with CVTA to develop and operate a Connected Vehicle Proving Center to:**
 - Create an environment that grows to become recognized internationally as the Center of Excellence for Connected Vehicle expertise.
 - Enable access to VII-enabled transportation infrastructure, traffic management centers, advanced test facilities
 - Facilitate demonstrations of Connected Vehicle products and services





CVPC - An Economic Engine for Michigan

RAW MATERIALS:

- Pubic Entity Contributions
- Private Sector Contributions
- Government Support
- Marketing

OVERSIGHT:

- Policy Advisory Committee
- Technical Advisors
- MEDC/MDOT



Failures

COMMERCIALIZATION SUCCESSSES:

- New Jobs
- Retained Jobs
- New Products
- New Companies
- New Efficiencies

- Catalyst for Short Term Opportunities
- Incubator for Long Term Opportunities
- Magnet for New Organizations
- Efficiencies at Michigan Transportation Agencies





WHY Michigan

- **Michigan is the International Center of the Auto Industry**
 - Michigan is home to over \$130 million in Government funded related activities
 - MDOT and RCOC are leading the state and local deployment efforts
 - Over 175 Academic and Industry test facilities located here
 - Federal VII Proof of Concept here
 - Public and Private commitments through CVTA exceed \$8 million





The Business Rationale

- **Market size: Tens of Billions of New Spending**
 - State and Local DOTs
 - Auto Industry
 - Consumer
 - LBS
 - Mobile search
 - Telematics
- **Job Growth**
 - Electronics in vehicle = 80% of Innovations by 2010
 - Vehicle “Telematics” content in North America to triple by 2011
 - 10,000+ New Jobs





What is the Proving Center

- **An Environment to support and encourage**
 - testing and development
- **The Physical Backbone**
 - MDOT Infrastructure
 - RCOC Infrastructure
 - Michigan Academic Facilities
 - CVPC VII-enabled Facilities
 - CVTA member organization technical contributions and support





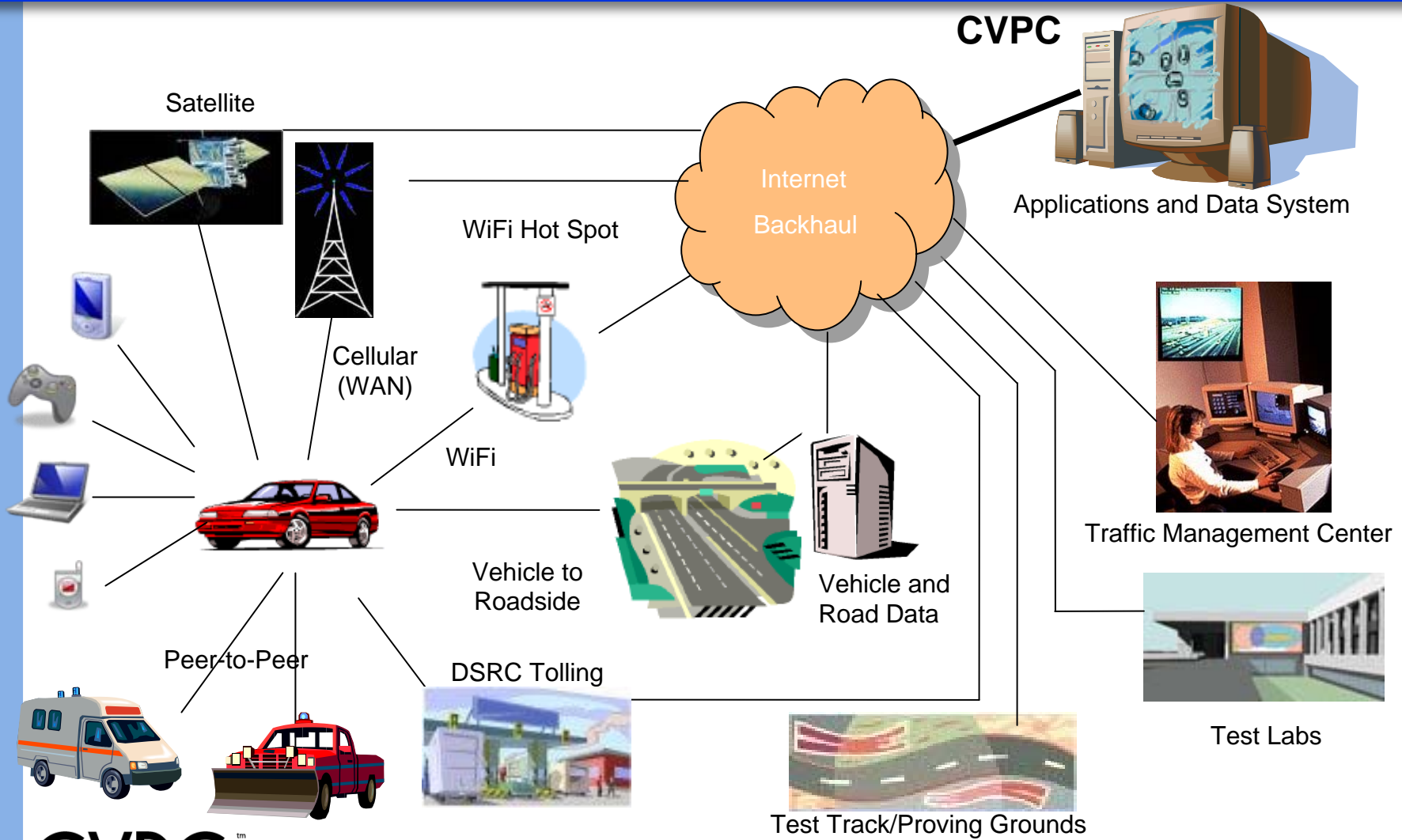
Proving Center Technical Capabilities

- **Wireless Network Connectivity within the State**
- **\$8 million in technology contributions from industry**
- **10+ VII demonstration applications**
- **Physical showcase for Connected Vehicle functions**
- **Network Operating Center (NOC) for statewide connectivity**
- **LOI with OmniAir (standards organization for DSRC certification and interoperability for the VII community)**
- **One-Stop Shop for Connected Vehicle Environment**



Connected Vehicle Proving Center

The start of the SILICON ROAD™



CVPC™



The First VII Applications

- Q4,07
 - **Wireless rest stop**
 - **Real time map updates (in-vehicle)**
 - **Real Time traffic signal status distribution**
 - **Smart parking (information and reservations)**
- Q1,08
 - GPS probe using fleet vehicles
 - Truck cross-border credentialing and tolling
 - In-vehicle Dynamic Signage
 - Traffic info collection via cellular probe
 - Long Haul Truck Parking Availability and Reservations
 - Carbon Emission Reporting using VII
 - Communication Network Security Demo





Status and Schedule

Q1,07

Contract Executed

Technology Roadmap Advisory Committee established

Architecture Committee established

Q2,07

Marketing & Advertising Firm retained

Proving Center Facility selected; design begun

First Industry Applications defined

Q3,07

Operating Plan Completed

Policy Advisory Committee established

Technical Workshop with Auto Industry for First Applications

Q4,07

Ribbon cutting

Connect to MDOT test beds, including DUAP

Determine feasibility of sustaining POC after federal role

Decision on Connecting to California VII Testbed

Evaluate using CVPC as rehearsal facility for 2008 ITS World Congress demos

Q1-Q2,08

Second set of industry applications fielded

International Connected Vehicle Summit and Technology Conference





The Growth Paradigm

- Twenty years ago, the advent of the world wide web fostered the tremendous growth of the internet
- Vehicle communications will foster the same growth as entities work to turn data into actionable knowledge for drivers and transportation entities
- Aside from the benefits of improving safety, mobility and efficiency, this will spawn new businesses and services, and provide a powerful economic boost
- New companies, products, communication channels and services grew explosively with the deployment of standardized tools, protocols and systems





CVPC Summary

- **The Proving Center fills a vacuum:**
 - We are on the threshold of a major new industry
 - CVPC accelerates deployment and commercialization
- **CVPC builds on existing strengths in Michigan**
 - Auto Industry and Suppliers
 - Ongoing research and development in vehicle communications
 - Transportation Agencies at all levels of government
 - The Wireless Industry (Telematics, LBS, ...)
- **It focuses job and industry growth in Michigan.**





Thank You