

# Networked Vehicle Business and Technology Initiative Precis of September 2008 Workshop

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## Context: The Networked Vehicle as the Game Changer

Information Technology (IT) is now the principle driver of almost every sector: health care, manufacturing and the service industries.

Today, the automotive industry is undergoing a fundamental transformation: from basing its principle value on manufacturing, it is now poised to use IT to become in the main a service industry.

The service sector currently accounts for 70% of a developed economy's GDP and 75% of employment. The top five highest-paying and fastest-growing job segments are in the service sector.

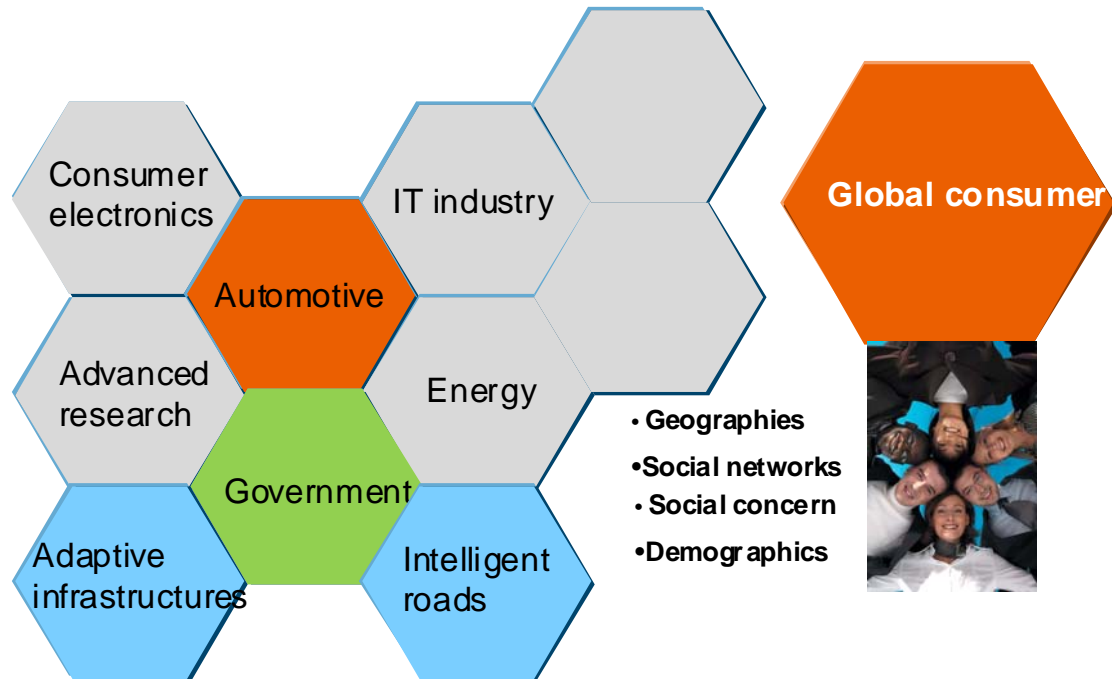
As the auto sector continues to evolve from a manufacturing industry to a services business, ***firms will gain more and more access to the sector.*** Instead of being concentrated in a few select metal-banging centres, the sector will be able to receive its value from IT services contributed ***from across the globe.*** Further, the IT services will be contributed by a sector that is competitive, entrepreneurial, and accustomed to global success.

Finally, the evolution of the networked vehicle offers an opportunity to bring together and coordinate all the contributing components of the service sector eco-system: ***environmental, energy, human design, health care, and finance,*** through consensual adoption of practices and standards by the public service, academic, and business communities.

The IT service sector transformation is the axle that wraps the service sector up; it is where the "Rubber meets the world."

# Interdependent eco systems

- The biggest challenge of the automotive industry is to think and execute in interdependent ecosystems



## Current Status: Success of Initial Sept 25-26 2008 Workshop

- ➔ Goal of first Workshop: Bring together the world's leading experts to visualize the technology and business opportunities beginning to emerge from the transformation, and formalize an action plan to take advantage of the "last frontier" in Information Technology.

### Success Metrics

- ➔ Partnerships
  - Eleven Canadian organizations began direct partnership discussions to expand their business outreach or development at the Connected Vehicle Workshop:
    - **Telus**, on mobile tele-health
    - **Nortel**, on cloud computing
    - **Itellimec**, on product development

- **QNX**, on voice-from-text
    - **InMotion Technology**, on software platforms
    - **The University of Waterloo**, on mobile platforms
    - **BelAir Networks**, on distributed computing
    - **PayMail**, on delivery of info-tainment to vehicles
    - **Toronto Region Research Alliance**, on new regional linkages
    - **Ontario Centres of Excellence**, on creation of a new partnership node
    - **Gowlings**, on legal implications of the rise of IT services to vehicles
    - **WATcar** on research collaboration
  - Other Canadian private and public organizations such as **RIM** and the **National Research Council** have participated in the meeting or joined the Social Network with a view to continuing their dialogues with their American counterparts.
  - A dozen American experts came from the cream of the American corporate IT community: **Cisco, INTEL, IBM, Hewlett-Packard, Xerox, Computer Associates, Microsoft, BMW U.S. and other American auto OEMs.**
- ➔ Creation of a joint ICT-Auto Action Plan to move to concrete projects
- Four new Workshops were formed, to focusing on specific areas of interest with appropriate leaders:
    - Standardization: Dr. Sumedh Sathaye, IBM Watson Centre, IBM U.S.
    - Mobile enhancement: Flavio Bonomi, Head of Research, Cisco U.S.
    - Social networks: Joel Hoffman, Worldwide Automotive Lead, INTEL U.S.
    - Auto cloud computing: John Wargin, EMEA Automotive, HP U.S.
- ➔ Agreement on Opportunity Areas for Mutual Exploitation:
- Through the two-day discussions, participants determined that the following technologies and services would be well suited and appropriate for the next generation of vehicles:
    - Access to web services from social networks
    - A special in-vehicle platform to compute vehicle efficiencies and navigation service (GPS storage, vehicle interface)
    - A cloud computing platform and service connected to the social network
    - An IP connection from car to internet (real-time or occasionally connected)
    - Security profiles and related technologies
    - Telemetric connections for healthcare, safety and security
- ➔ Upgrade of "Connected Vehicle" Meaning
- The participants will exploit a new realization of the real meaning of the evolution of the "Connected Vehicle".
  - The participants will start and run the global network devoted the new "NETWORKED Vehicle" -- with its implication that the value is not in telemetrics, but in the information that is sent to and between the occupants of the vehicle.
- ➔ Visibility
- CATA has driven awareness of these opportunities to its network of 33,000 business leaders, and to media outlets such as CTV. Interest is immense, from companies with diverse kinds of business offerings

➤ The new Supply Chain

- The Networked Vehicle Social Network: now at 40 participants, drawn from the top experts of the top companies in the U.S. and Canada. It is a repository for documentation, Workgroup discussion, project completion and planning.
- The Networked Vehicle Foundation, a new body in partnership with CATA, will work as a bridge to the American Connected Vehicle Trade Association, to develop partnerships.
- Export NOW is an opportunities-exploitation program that gives Canadian companies immediate details of coming demand requirements, using webinars and email alerts.

**Proposal For Going Forward: Program Elements for Phase II**

Building on the overwhelming success of Phase I, the ambition of the Phase II program is to make partnerships complete and widespread, to reach the level of success achieved by an earlier model of cooperative Supply Chain development: the case of the Joint Strike Fighter program (see Appendix).

The elements of the Phase II program (and its estimated investment needs) are:

1. Expansion of the new business association to reach all firms that could increase sales by access to the evolving service market
2. Coordination of the Workgroup Sessions and penetration of their membership through structured and proactive inclusion of firms
3. Creation of a Joint Conference in the Spring of 2009, with the American counterpart, to link Canadian and American research results from the Workgroups
4. Creation of a new Conference in Toronto in the Fall of 2009, to expand the network to thousands of Canadian, American, Asian and European companies and academic organizations
5. Population of a Canadian University Research Network, through CATA's links with academia
6. Formal development of the Supply Chain Dominance Strategy, based on the JSF concept (above)
7. Creation of the "Foundation Document" for the Networked Vehicle, as the seed crystal that is at the centre of the coming service industry transformation
8. Out-build of the Social Network, to include features such as a wiki and a Network Architect for discussion moderating