

# Business Model draft from infrastructure suppliers' and device manufacturers' view

Hans-Joachim Schade  
Siemens AG, I&S ITS



Workshop on Business Models and Business Cases  
for Cooperative Systems  
ERTICO, Brussels, 29 June 2007

C2I projects and Siemens

Business model basics







Different impact on deployment by stakeholders

Deployment framework

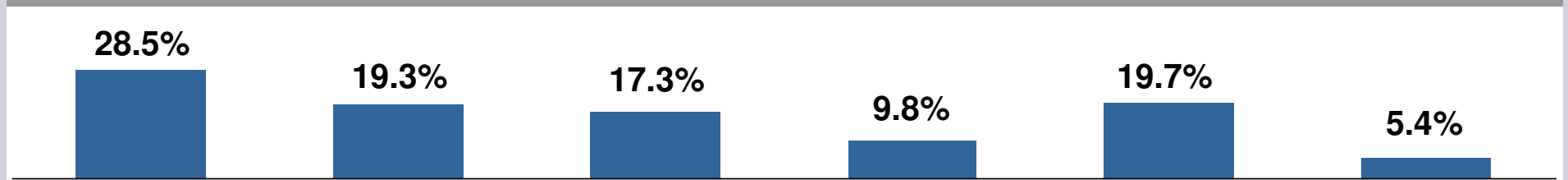
Issues for policy leaders

Business model requirements and assumptions

## Siemens: Active in six business areas

Automation and Control	Power	Transportation	Medical	Information and Communications	Lighting
					
Automation and Drives	Power Generation	Transportation Systems	Medical Solutions	Communications <sup>1)</sup>	OSRAM
Industrial Solutions and Services	Power Transmission and Distribution	Siemens VDO Automotive		Siemens Business Services	
Siemens Building Technologies					

### External sales of Operations Groups excluding Other Operations (as of September 30, 2006)



1) Since Oct. 1, 2006 represented by Siemens Networks GmbH Co. KG and Siemens Enterprise Communications GmbH & Co. KG

Siemens is partner in several C2I projects

<p>EU</p>	<p><b>CVIS</b></p> <p><b>Safespot</b></p> <p><b>COOPERS</b></p>	<p>Partner in DEPN, CURB, CINT, COMO, COMM, Test site Germany</p> <p>Main participation by SVDO</p> <p>Main participation by VIB (Content- and Service Provider)</p>
<p>D</p> <p>in preparation</p>	<p><b>AKTIV VM, AKTIV AS</b></p> <p><b>SIM TD</b></p>	<p>I&amp;S, SVDO</p> <p>SVDO, I&amp;S</p>
<p>USA</p>	<p><b>VII</b></p>	<p>Observer status</p>

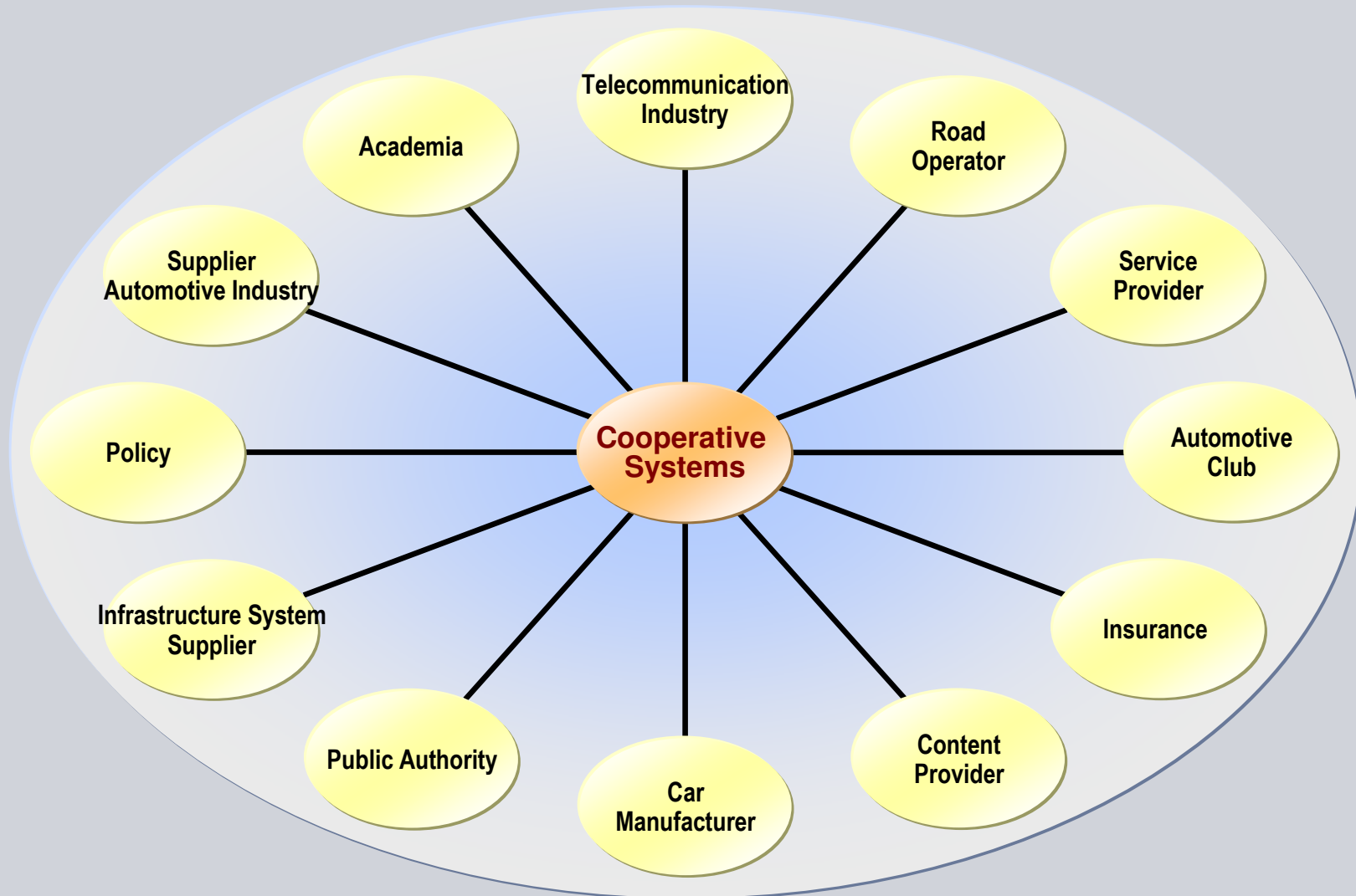
## Business model basics

- CIVS is an open system with defined services supporting applications.
- One major goal is to facilitate free market forces (price and quality combined approach).  
However - in the discussion to date - there are some ideas, that have to be verified seriously:
  - Competition in the core technology services independent of the hardware manufacturer?
  - CIVS shall also make sure, that traffic related data are available in sensor and aggregated format, given this software packages will have the chance to use raw data and reveal their true potency?
- The core architecture group is not sufficiently influenced by the main stakeholders.

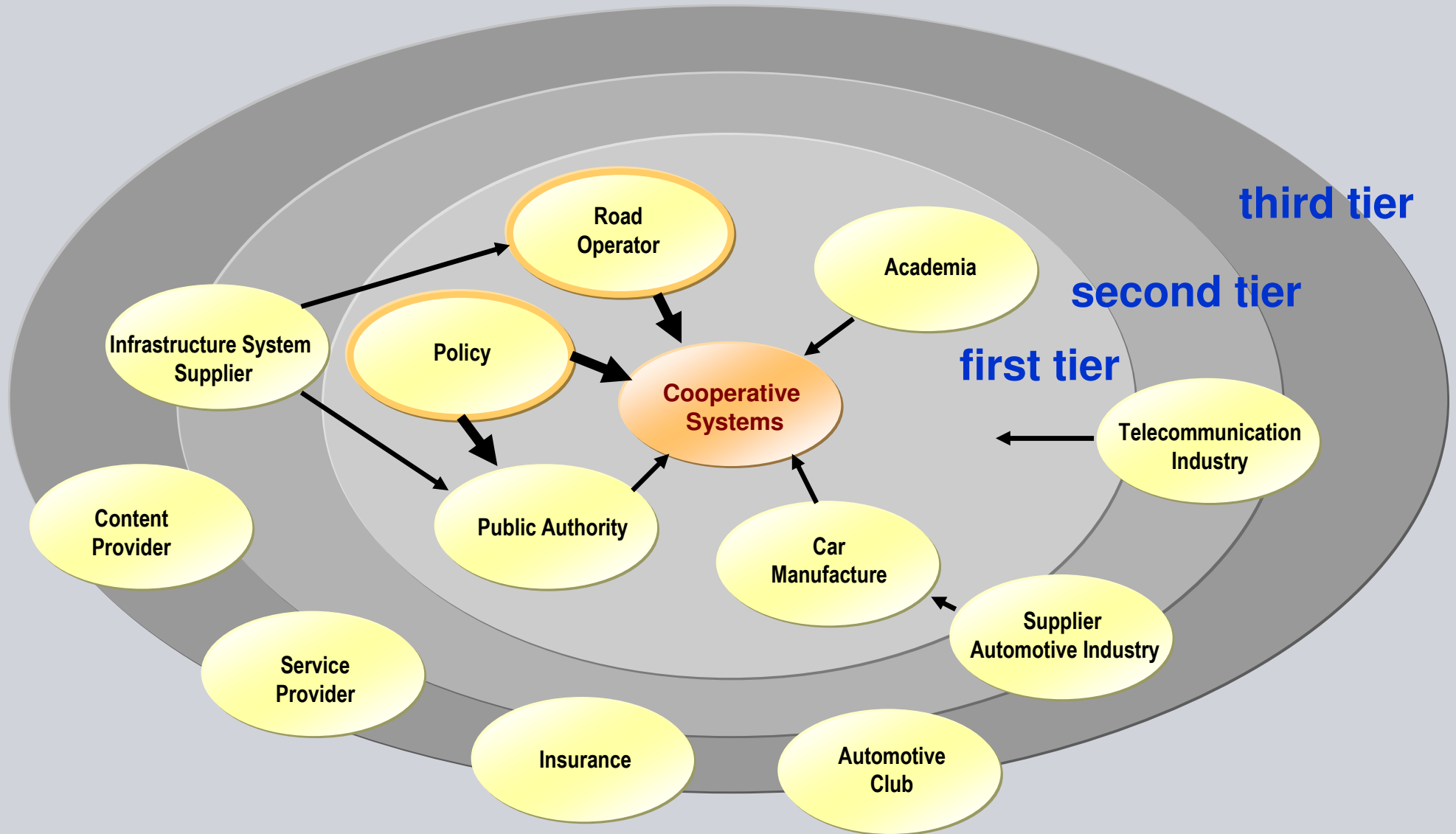
- Cooperative systems mandatory?
  - Target: Traffic safety enhancement / traffic efficiency enhancement
  - The eCall story
- Traffic “self-regulation” by C2C communication?
  - Traffic management, a sovereign task
  - Impact of road side units vs. centre systems
- Life cycle infrastructure systems and life cycle vehicles
- Commercial vehicles and private cars

- Killer applications for traffic safety enhancement?
  - Slippery road warning / hazard alert?
  - eCall?
  - ...
- Killer applications for traffic efficiency enhancement?
  - Traffic data collection?
  - Traffic information?
  - Strategy management and network management?
  - Road pricing?

A huge number of stakeholders are involved in deployment



Different impact on deployment by stakeholders



## Deployment framework

- Which are the most likely deployment scenarios?
  - Which role should be played by the roads authorities and operators of roads and highways?
  - How will the investment and expenditure from public sources be justified?
  - Which practicalities have to be solved before deployment can go ahead?
- 
- Government should establish the frameworks and outline what road authorities have to do and not to do!

Source: PIARC

## Issues for policy leaders

- Create public understanding
- Establish the benefits
  - Consumer benefits
  - Road safety
  - Efficiency
  - Environmental
  - Economic performance
  - Not just car driver benefits but transportation and community benefits for all modes and for all travellers
- Justify engagement and show leadership

*Source: PIARC*

## Business model requirements

- Finalize standardization issues latest 2008
- Adopt terms of reference for deployment and market launch by EU and C2C CC latest 2009
- Proof of concept C2x technology successfully finished in 2009
- Step-by-step market launch with I2C-applications free of charge for end users
- Provide FCD (C2I) free of charge by automotive industry (win-win concept)

## Business model assumptions

- C2C-CC OEM self-commitment to equip new cars with C2x technology beginning 2012
- Deployment of RSUs on primary and secondary road network (interurban, urban) and deployment of C2x-control/management centers by road operators/public authorities

## Business model status to date\*

### **Market launch, first stage (0-4 years)**

- Start 2012
- Step-by-step C2x-equipment in new vehicles
- eFCD to detect hazard situations successfully will depend on the individual electronic car equipment (ADAS)
- Communication modul too expensive because of a small number of pieces in the first market launch stage

### **Market launch, final stage**

- Start 2017

---

\* Based on OEM discussions in Germany

**Thank you for your attention!**

**Contact:**

Hans-Joachim Schade  
Siemens I&S ITS NB&T

Phone: +49 89 722 29522

Mobile: +49 171 5586722

E-mail: [hans-joachim.schade@siemens.com](mailto:hans-joachim.schade@siemens.com)