Strategy and Technology for Intelligent Mobility

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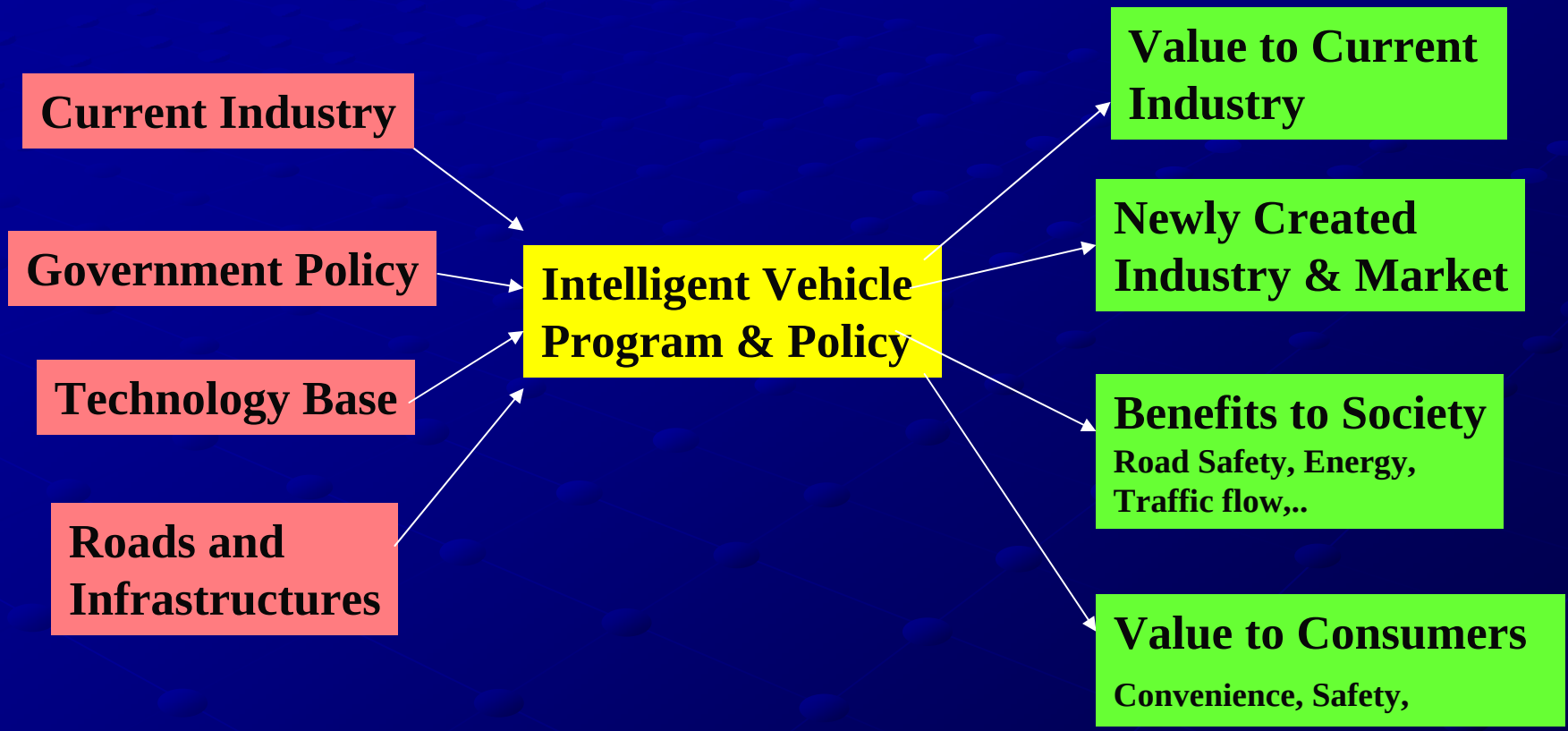
Strategic Intent and Specific Benefits



Major Issues

Strategic

- **Changing trends in mobility and automobiles**
- **Consistent government policy**
- **Growing established and new competitors**

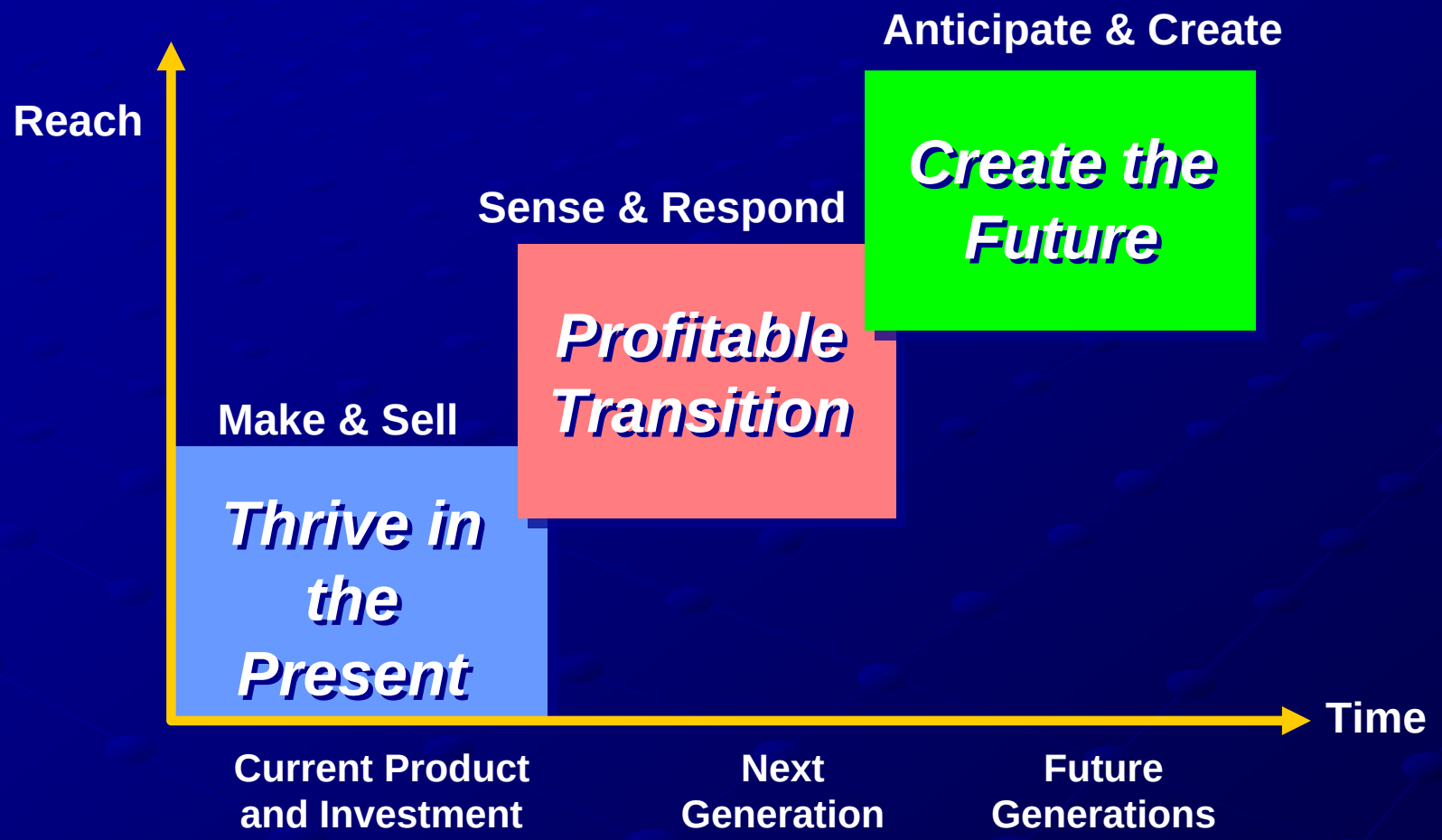
Business

- **Viable short and long term commercial plan**
- **Gain and risk sharing of collaborators**
- **Finding global upstream and downstream partners**

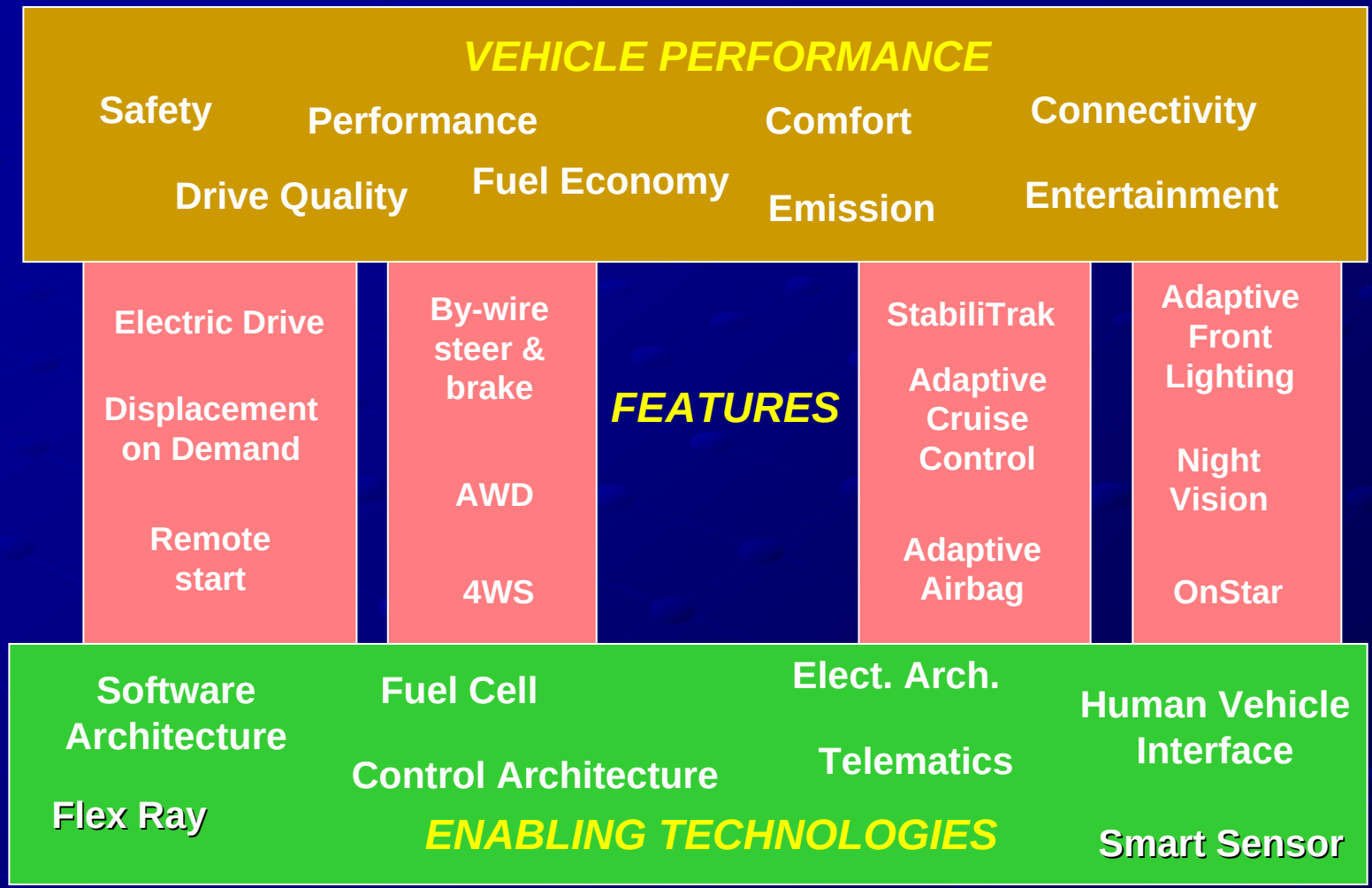
Technical

- **Establishing unique technical competence**
- **Knowledgeable system integrators**
- **Transferability of 3C technology to 4C**

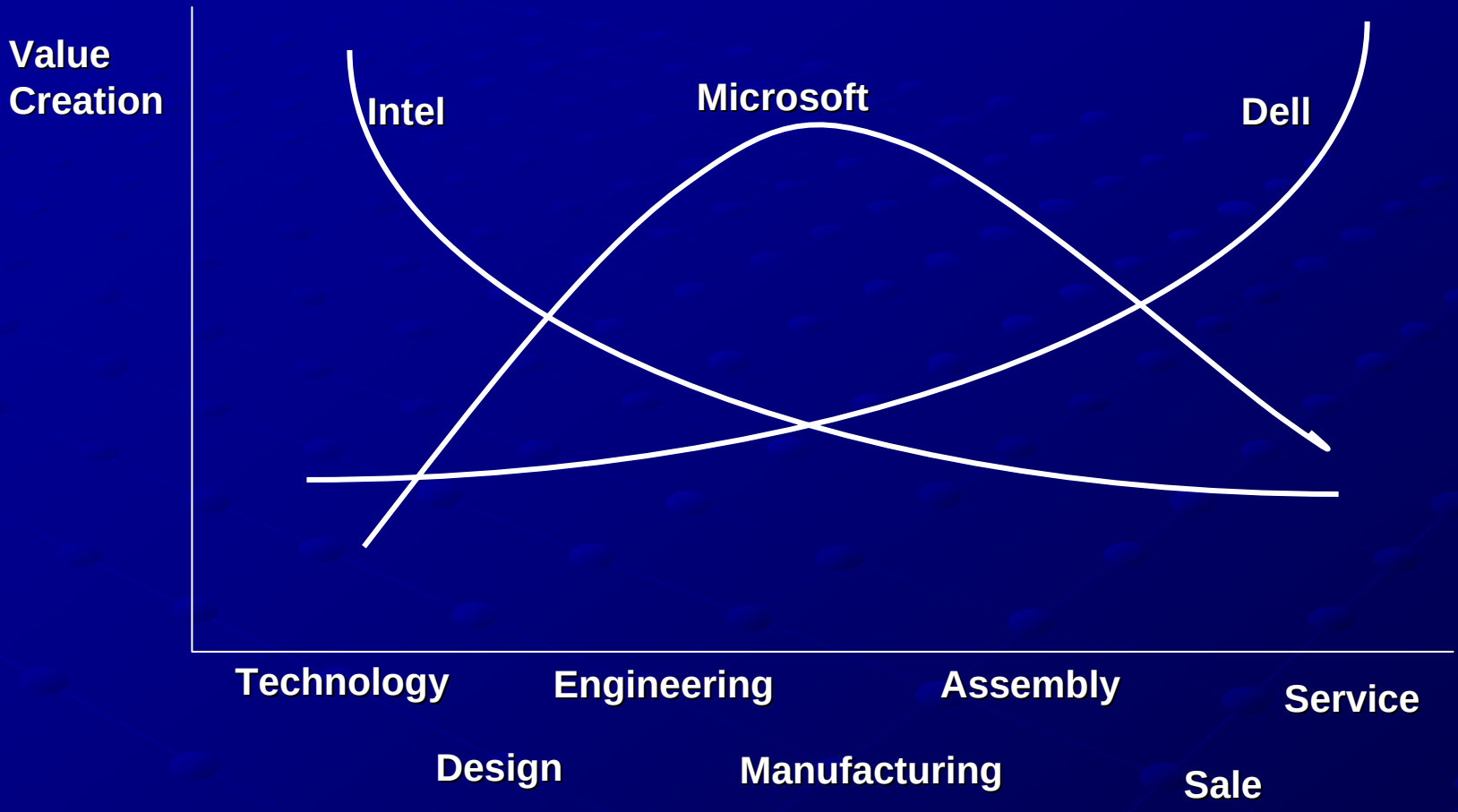
Intelligent Mobility Plan

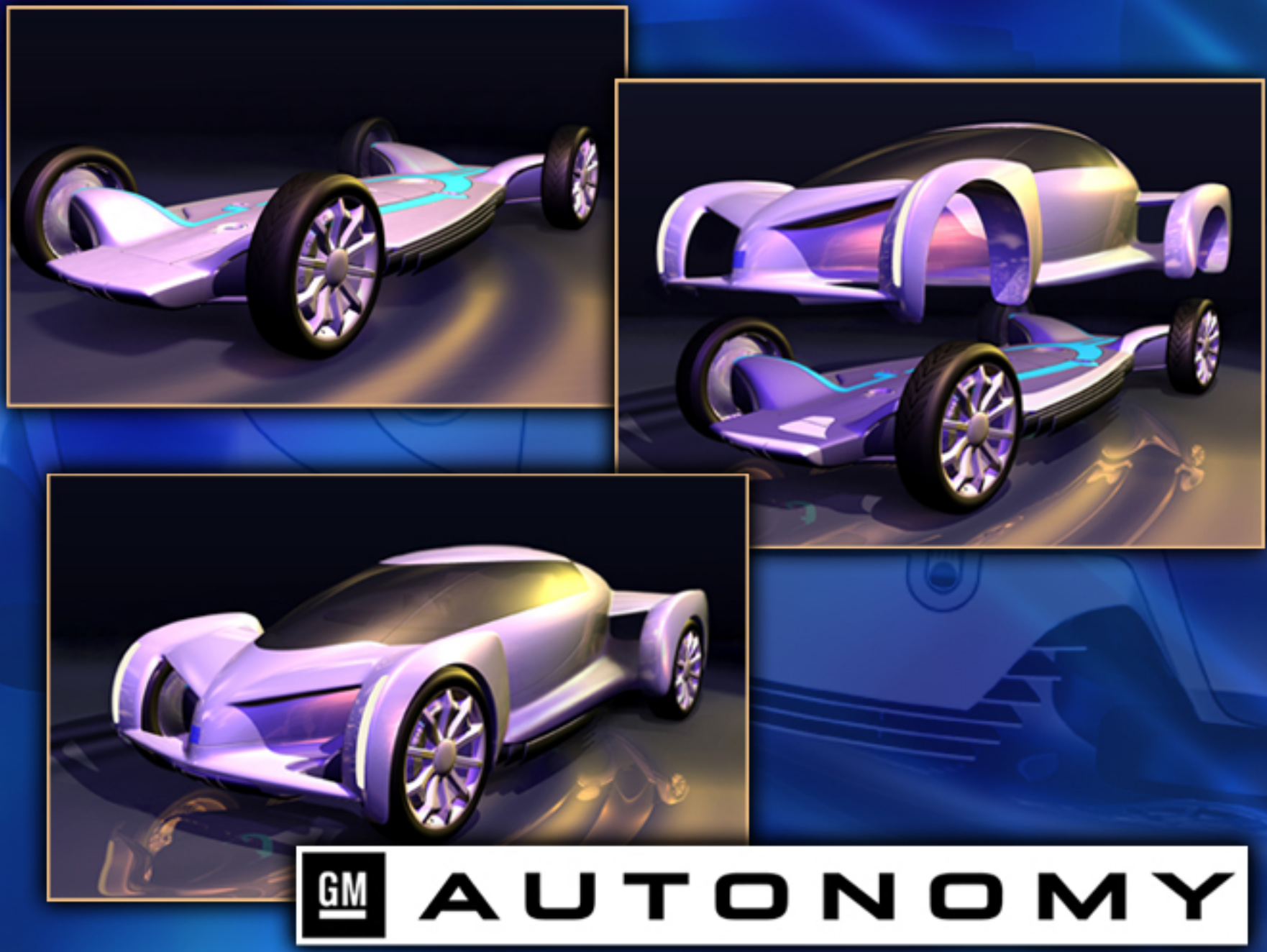


Technology → Features → Performance



Business Model & Value Creation




GM
AUTONOMY

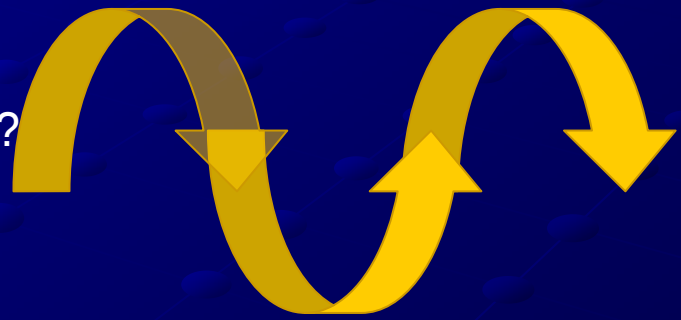
Integrated Planning

Strategic Questions

- What is the long-term and fundamental impact?
- Will it change the way we design and build vehicles?
- Will this force our competition to play our game?
- Can we afford not to do this?

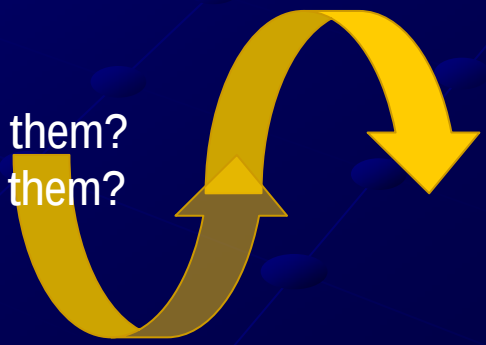
Business Questions

- How soon will this impact the market / product?
- Who are our business partners? Their needs?
- Can we afford to do this?
- How could we create value for the customers?



Technical Questions

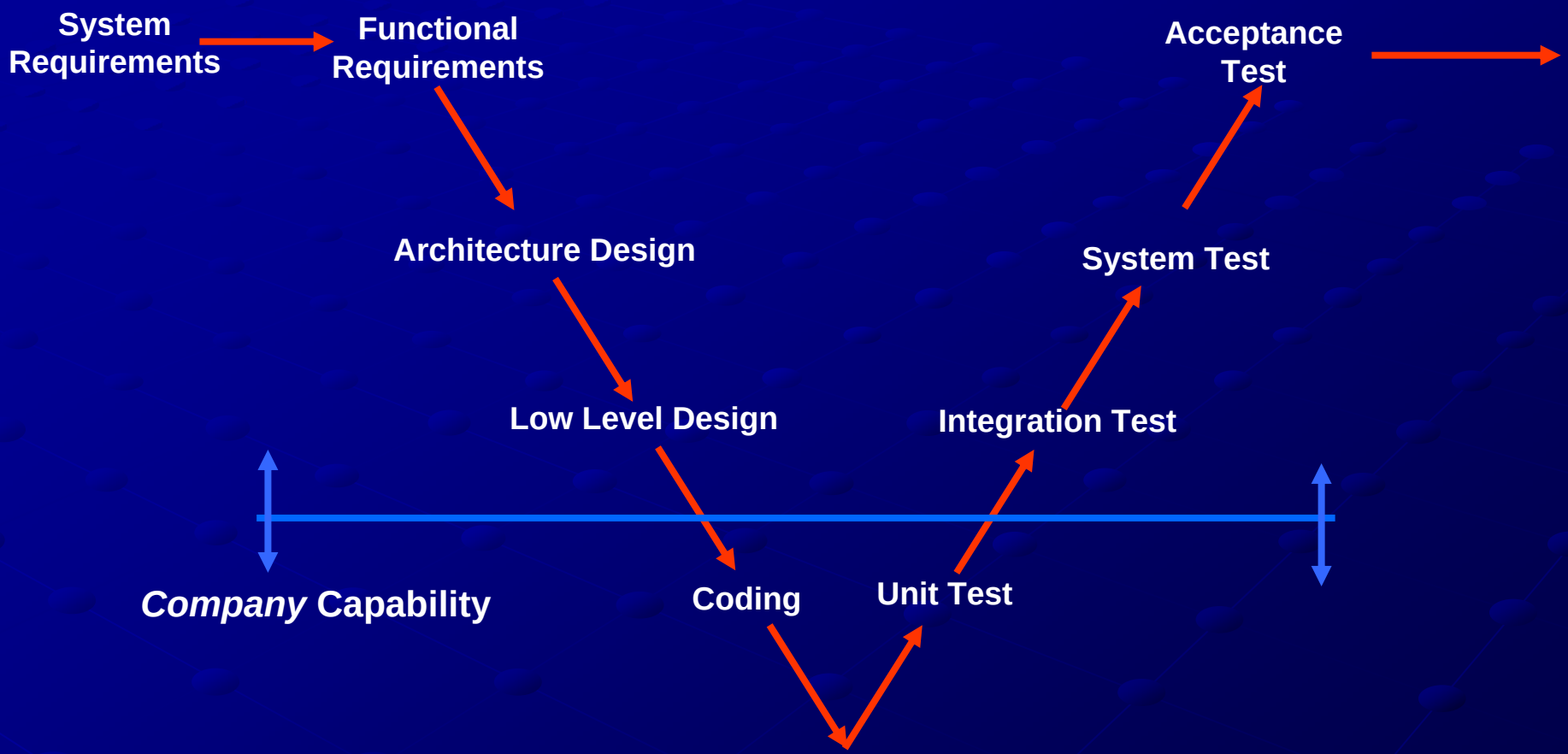
- What are the “show starters” and how to generate them?
- What are the “show stoppers” and how to remove them?
- Who are our technical partners?
- How do we validate and transfer the technology?



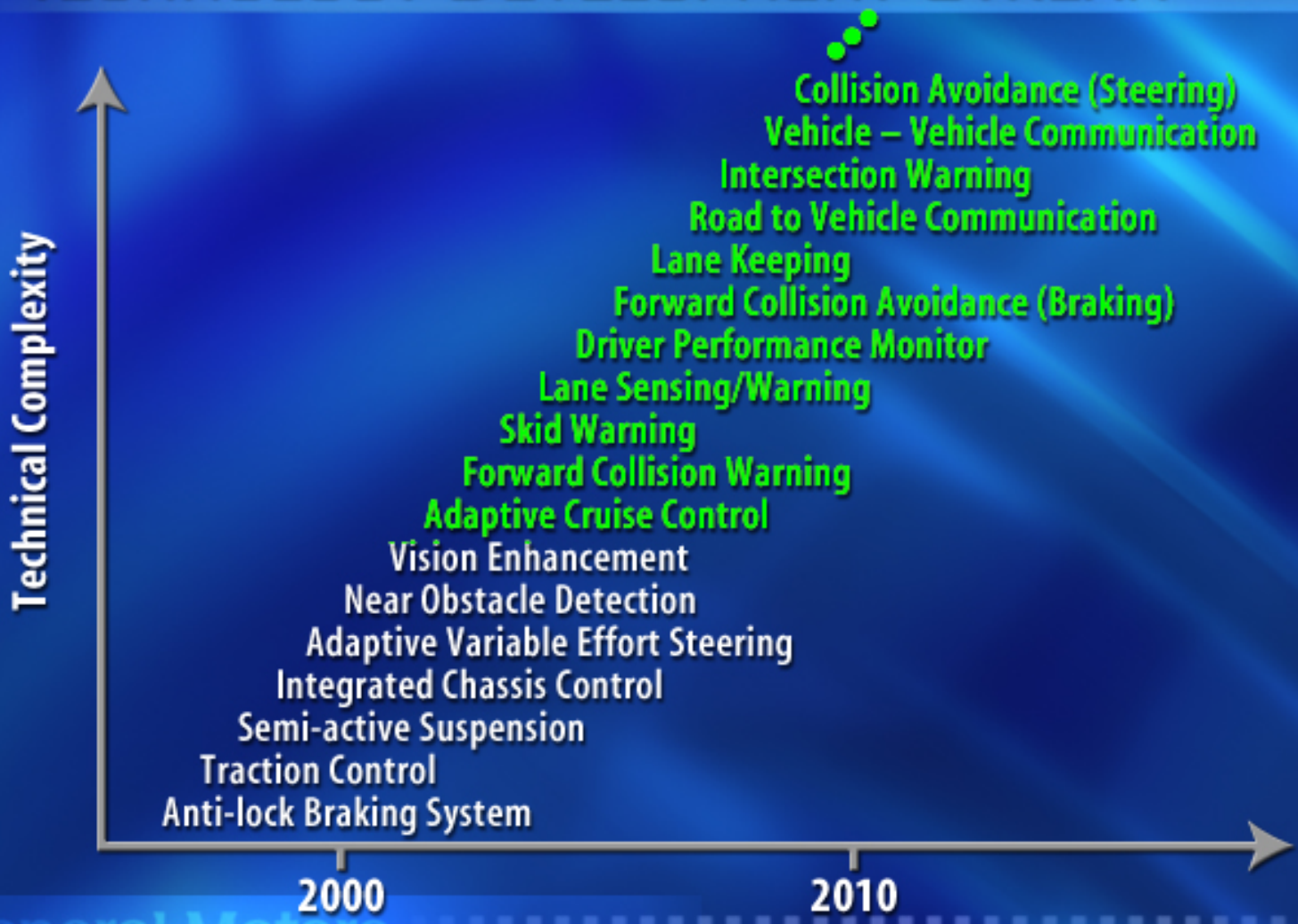
SWOT of Intelligent Mobility

Current Strength	**Future Opportunity**
Current Weakness	**Future Threat**

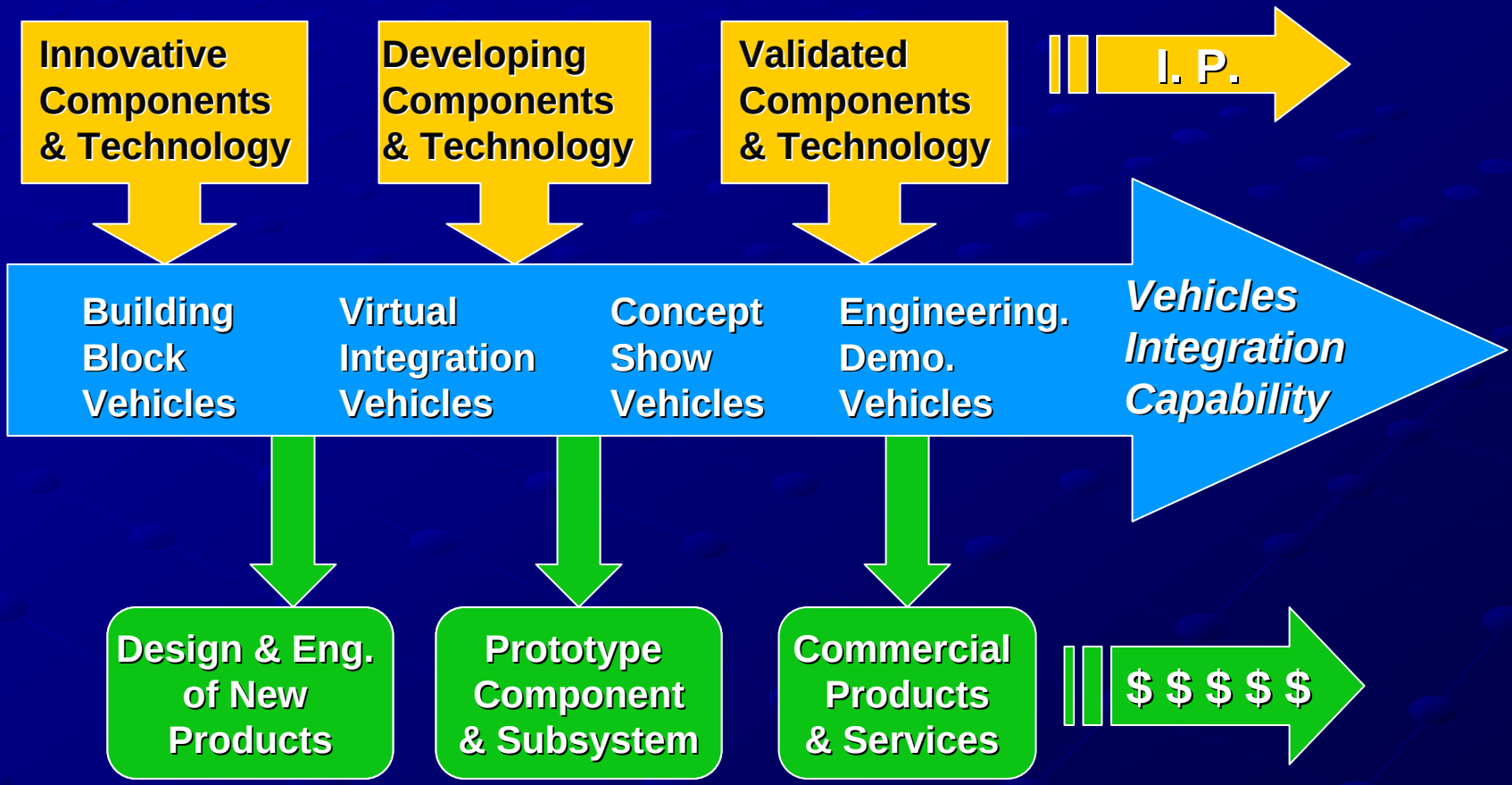
OEM vs. Supplier Engineering Capability



Crash Avoidance – Advanced Technology Development Stream



Master Road Map
to create I.P., Vehicle capability, & Revenue

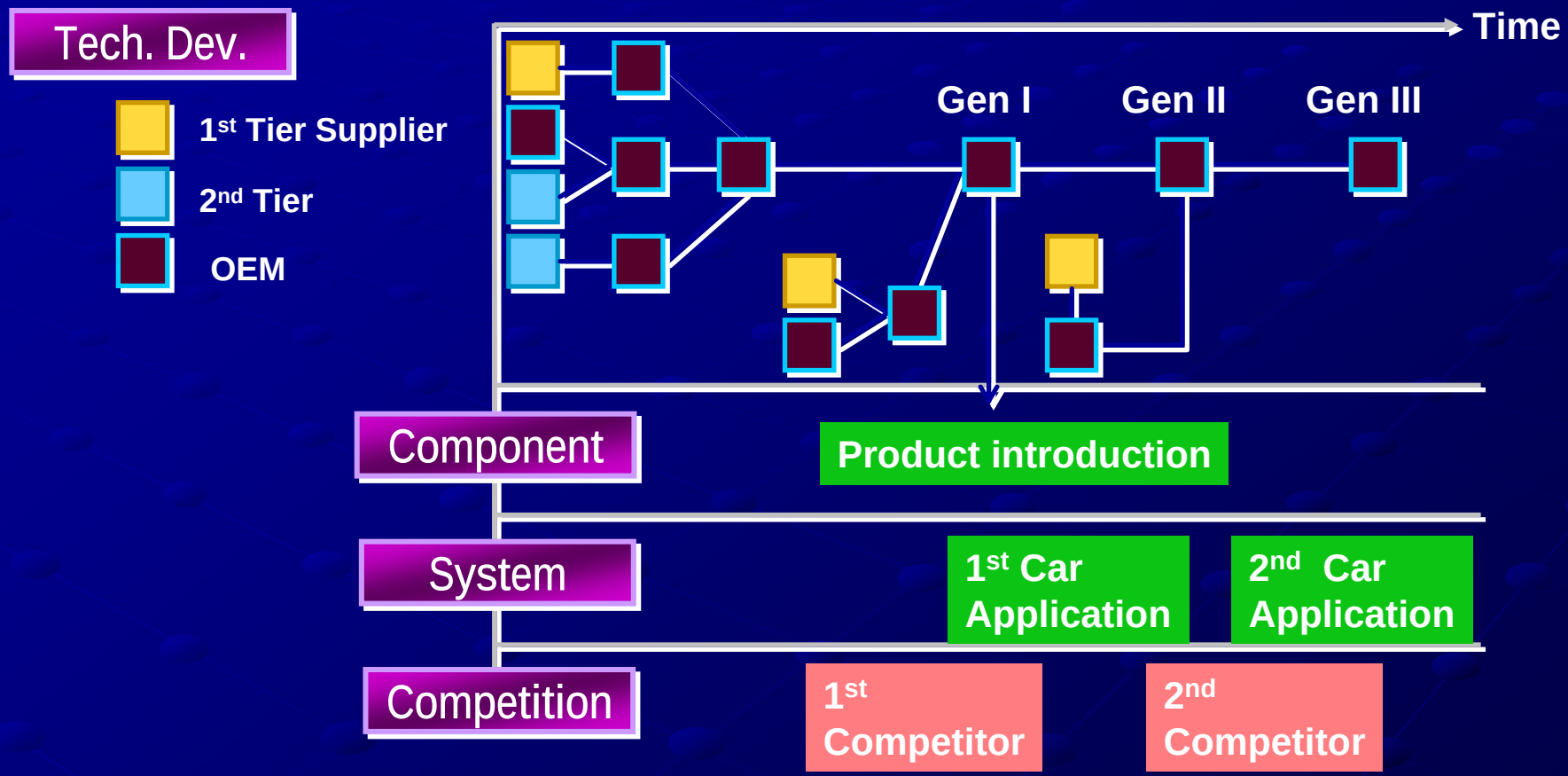


From Plan to Action

Intelligent Mobility Initiative #1:

Why	Why is this important and how will it impact the strategic key success measures ?
What	What are the key concepts, new ideas, and contents of this initiative ? Show starters and show stoppers ?
How	How will this be done ? Specific action and resource plan, methodology, tools, and collaboration
Who	Who will lead and who are the RASIC people (responsible, approve, support, informed, consulted)
When	Dates for milestones, progress reviews, communication, feedback, implementation, and assessment

Technology Map
– From Development to Commercialization



Managing for Success

Accountability, Collaboration, Inter-dependence

	Leader / Organization	Org. A	Org. B	Org. C	Org. D	Org. E
Prog. I	John Doe / Org. C	HC $	HC $	HC $	HC $	HC $
Prog. II	Joe Blow / Org. E	HC $	HC $	HC $	HC $	HC $
Prog. III	Jill Irving / Org. A	HC $	HC $	HC $	HC $	HC $
Prog. IV	David Cell / Org. B	HC $	HC $	HC $	HC $	HC $

電子在智慧汽車上的應用

Automotive Electronics Application

趙克強 博士

Dr. Marcus Chao

機械 + 電子控制 → 智慧機械

汽車 + 電子 →

安全 (safety)
駕駛功(functionality)
節能 (energy)
舒適與方便(convenience)
環保 (environment)
通訊 (communication)
娛樂 (entertainment)

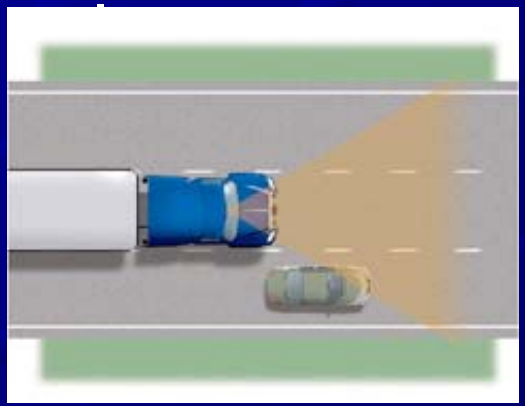
電子電氣系統與汽車功能

System \ Function	Safety	Communication	Entertainment	Comfort
Electronics & Control System	Fore & Back Warning Air Bag	Telematics Navigation	DVD/Games Audio	Smart Seat Climate Control
Electrical & Signal Distribution System	Cable/Connector Integrated Center			
Wireless System	Remote Keyless Entry Alarm	Blue Tooth	Satellite	Power Door Engine Start
Micro-Electro-Mechanical System (MEMS)	Sensor/Actuator Motor/Switch			

Integrated Safety

- Collision warning, lane departure warning, side alert, and back-up aid
- Active night vision
- Occupant protection systems
- Distracted and drowsy driver

Drowsy driver alert
Smart cruise control



Lane departure warning

Cocoon of Safety

Integrated Media Systems

Mobile Entertainment

- Audio system
- Satellite radio
- Rear seat entertainment system
  - DVD
  - Electronic games

電子零件設計 + 製造 → 系統開發

臺灣的優勢		系統開發
Integrated Circuit	→	Control + Algorism
Computer	→	Mobile Communication
LCD	→	Mobile Entertainment
MEMS	→	Sensors + Actuators
Service	→	Road Service

如何着手開發汽車電子
How to develop auto electronics applications

瞭解在汽車應用上的規範 **(specification)**

市場調查與客戶咨詢 **(market research)**

Bench Marking

競爭產品的解體分析 **(tear-down analysis)**

產品開發 **(product development)**

價格分析 **(cost analysis)**

測試與認證 **(testing)**

客戶認可 **(system validation)**

Thank You