

THAILAND OF INVESTMENT

Where success stories begin

Auto & Auto parts Industry



Geared for Excellence



THAILAND BOARD OF INVESTMENT
www.boi.go.th

Automotive Hub of ASEAN

- **14 assemblers from Japan, US, and Europe**
- **Exports to 140 countries**
- **Largest domestic pickup market in the world after the US**
- **More than 700 first-tier suppliers**
- **1,100 second and third-tier suppliers**
- **2006 motorcycle production – more than 3.5 million units**

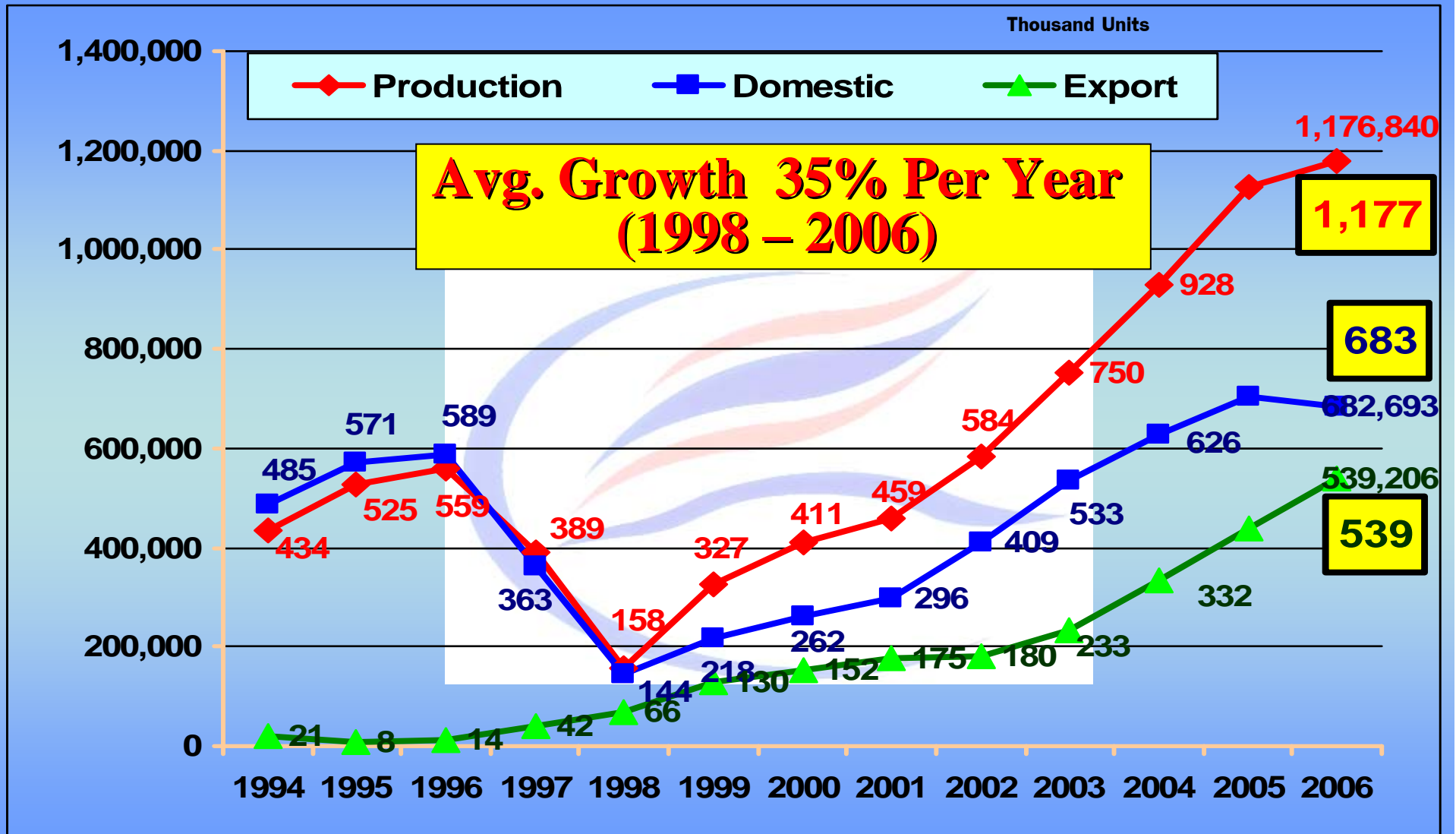


Thailand: Automotive Hub of ASEAN

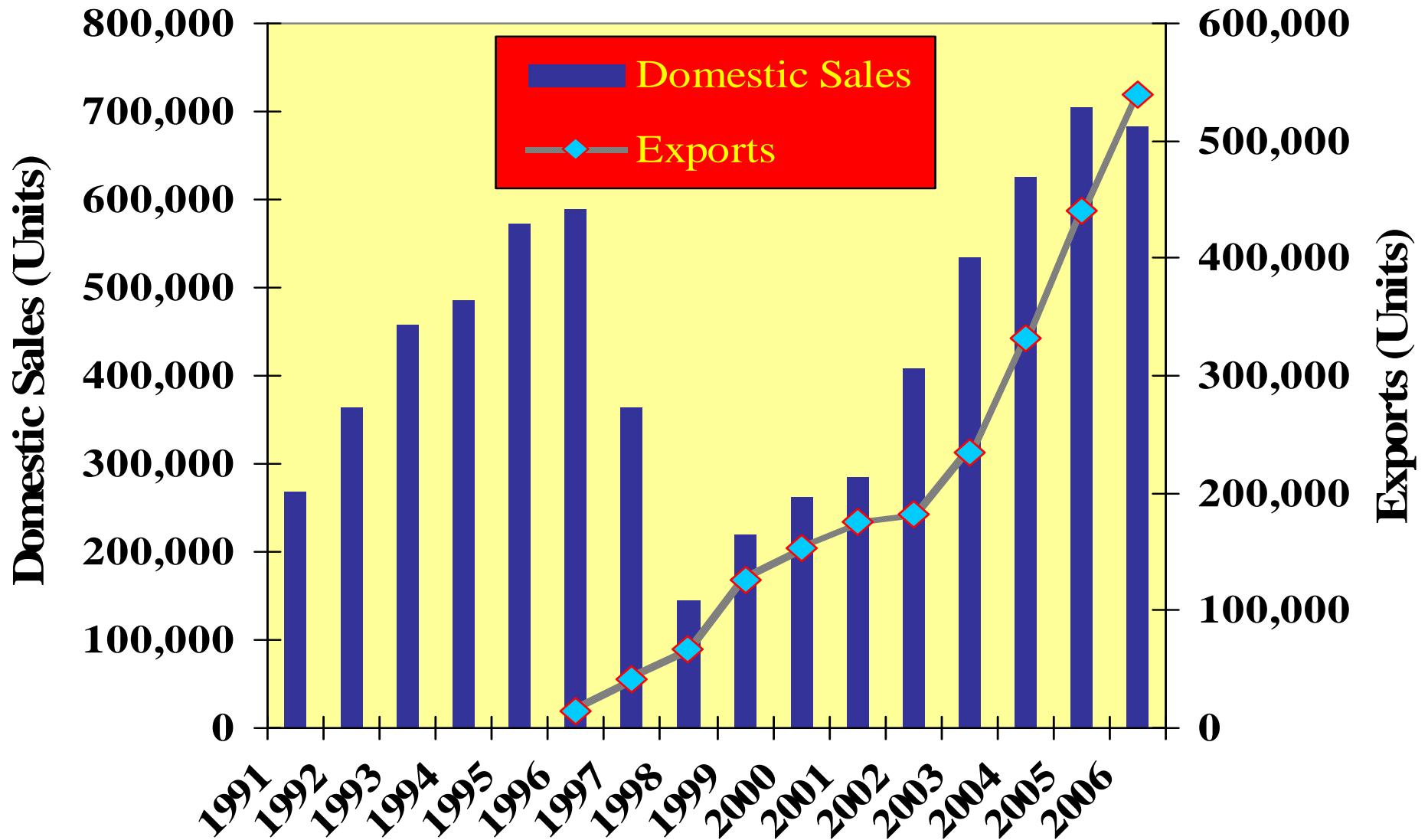
- ❑ 2006 production ~ 1,176,840 million units
- ❑ 2006 export ~ 539,206 units
- ❑ 15 assembly plants
- ❑ Largest in Southeast Asia
- ❑ Capacity of 2.0 million units by 2010
- ❑ Production of pickup trucks ~ 877,890 units – world's largest one-ton pick-up truck manufacturer



Automotive Industry in Thailand

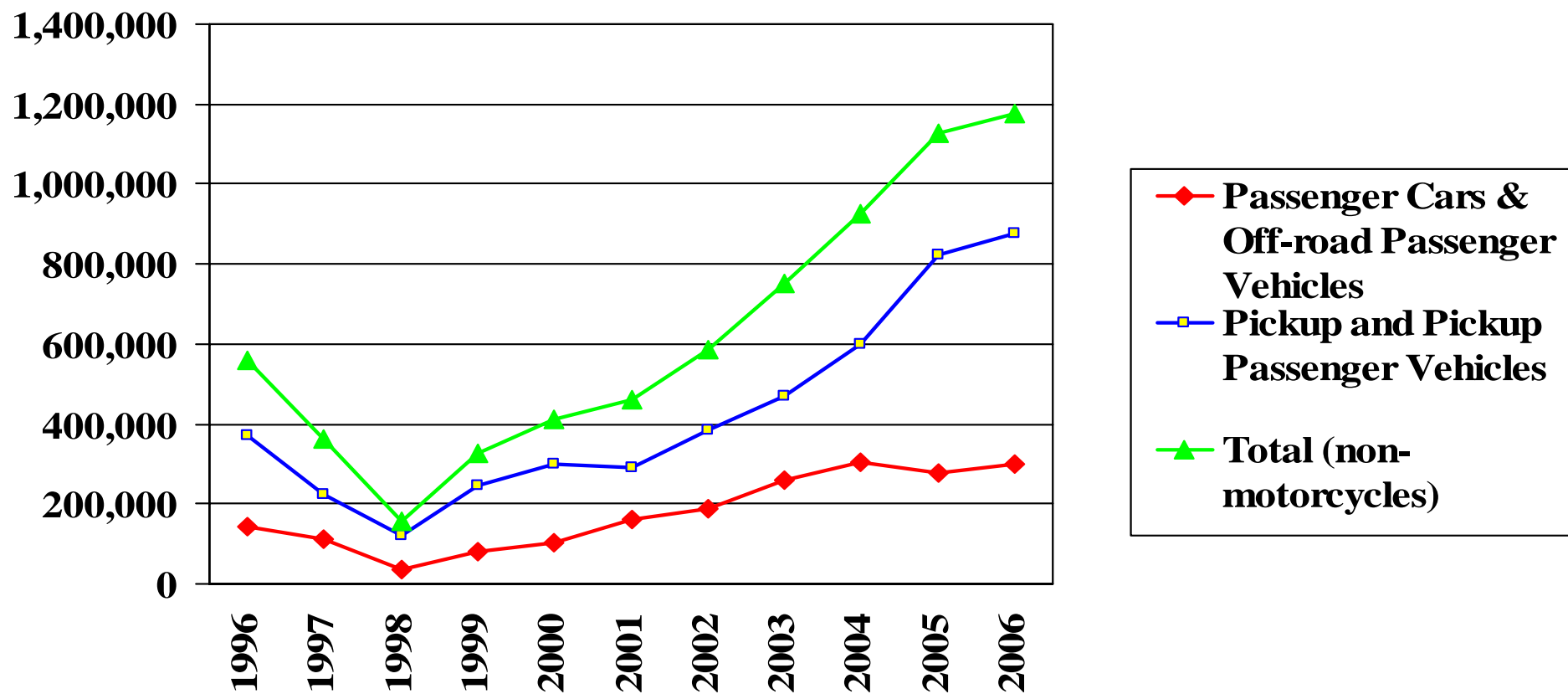


Automotive Sales and Exports

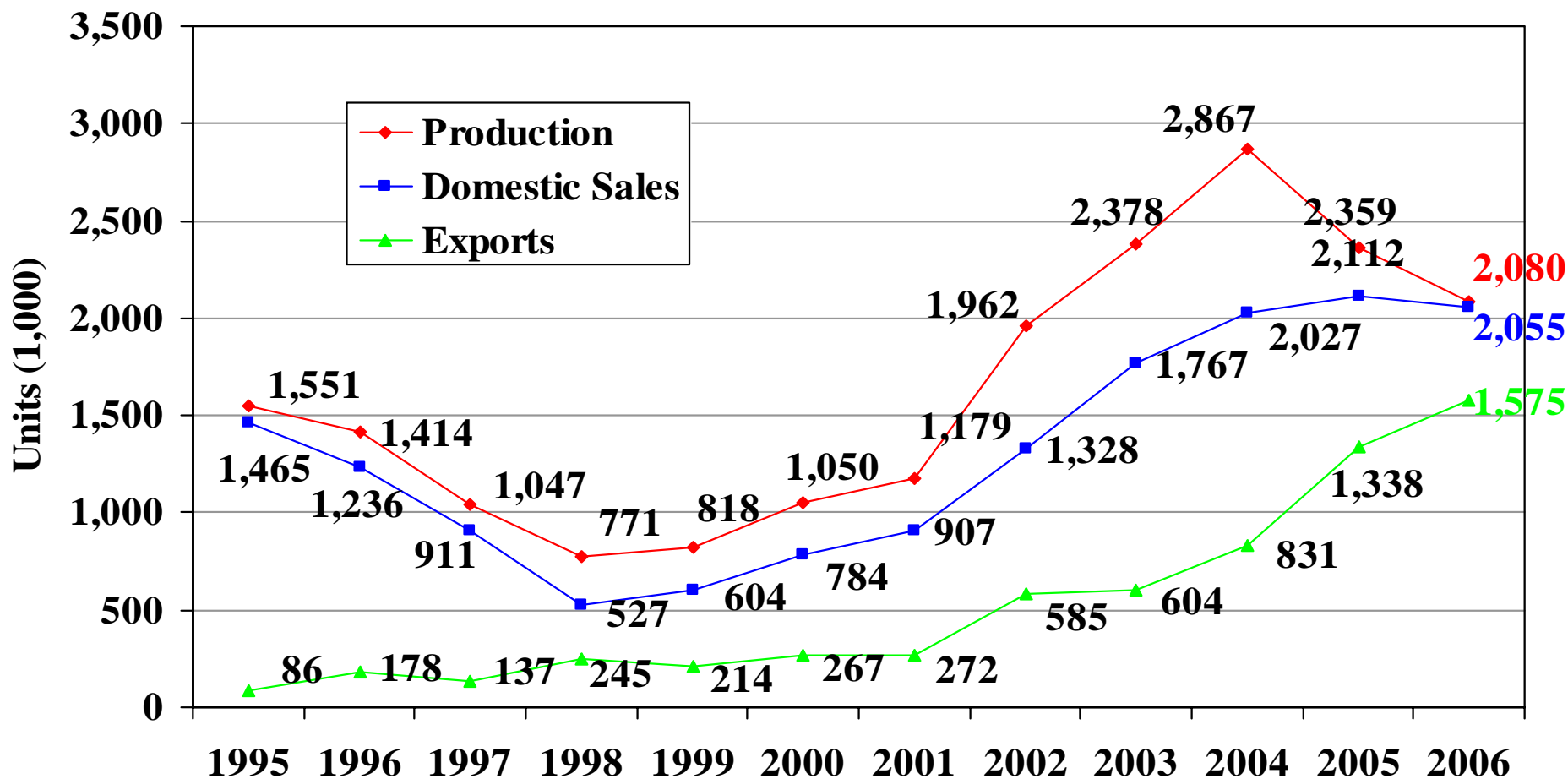


Vehicle Production in Thailand

Motorcycles Excluded



Thailand Motorcycle Production



Automobile Forecast 2007

Production

1,280,000 Units

Increase from last year **92,000** Units

Growth ~ **7.7%**



Domestic Sale

700,000 Units

Increase from last year **18,000** Units

Growth ~ **2.6%**



Export Sale

605,000 Units

Increase from last year **67,000** Units

Growth ~ **12.5%**



2010 Target – World's Top 10

- ❑ **Total production of 2 million units**
- ❑ **Domestic sales of 1 million units**
 - ✓ 1-ton trucks – 700,000 units
 - ✓ Passenger cars – 250,000 units
 - ✓ Commercial Veh. – 50,000 units
- ❑ **Exports of 1 million units**
 - ✓ 1-ton trucks – 800,000 units
 - ✓ Passenger cars – 200,000 units



Automotive Electronics

- ❑ Thailand's 2006 auto electronics and parts industry valued at US\$7 billion.
- ❑ Goal of becoming world-class auto electronics parts production center within 2011, with production to increase in value by US\$1.4 billion.

Omron Automotive Electronics
Pioneer Electronics
Summit Electronic Components
Kyushu Matsushita Electronics
Panasonic Automotive Systems

AUTOMOTIVE CLUSTER

Where success stories begin

Automotive Manufacturer Location

Ayudhaya

Honda Automobile
(Thailand)

Bangkok

Bangchan General Assembly
Y.M.C. Assembly
Thai Honda Manufacturing

Samutsakorn

Thai Rung Union Car

Pathumthani

Thai Suzuki Motor

Chachoengsao

Toyota Motor Thailand
Isuzu Motors (Thailand)

Samutprakarn

Toyota Motor Thailand
Isuzu Motors (Thailand)
Siam Nissan Automobile
Siam V.M.C. Automobile
Thai Auto Work

Rayong

Auto Alliance (Thailand)
General Motors (Thailand)
BMW Manufacturing (Thailand)
Kawasaki Motors Enterprise
(Thailand)
MMC Sittipol

Millennium Motors

Thai Yamaha Motor

Thai Swedish Assembly

Hino Motors (Thailand)

Thonburi Automotive

Assembly



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Principal Auto Parts Production Sites

Pathumthani

Total suppliers: 39

Body Parts: 18%, Engine Parts; Electrical Parts: 13% each, Suspension & Brake Parts: 10%, Drive, Transmission & Steering Parts; Accessories: 8% each, Other: 31%

Bangkok

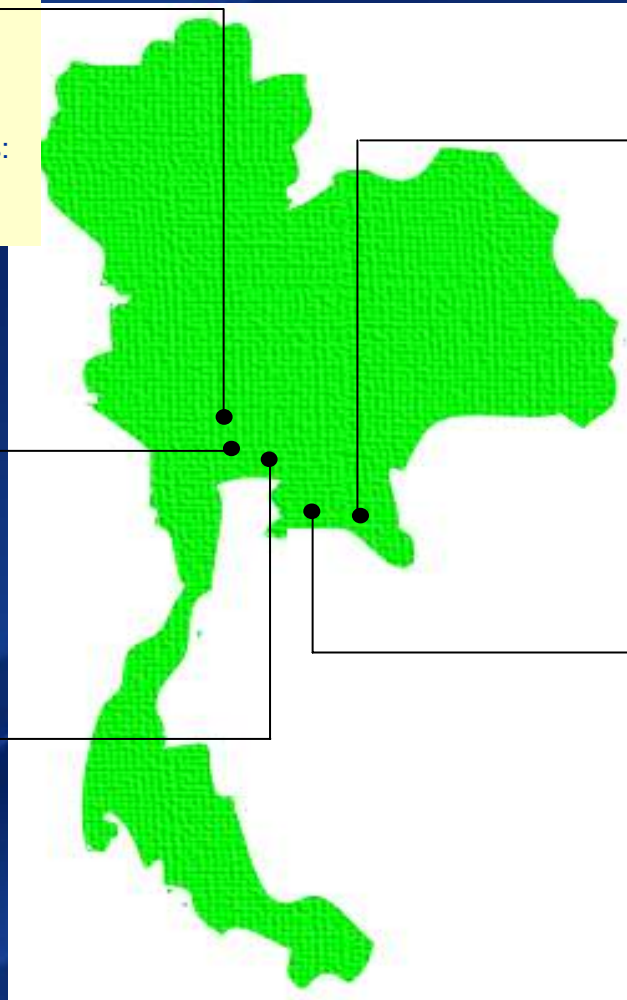
Total suppliers: 232

Body Parts: 9%, Engine Parts; Electrical Parts; Drive, Transmission & Steering Parts; Accessories: 6% each, Suspension & Brake Parts: 4%, Mold&Die: 3%, Other: 60%

Samutprakarn

Total suppliers: 158

Body Parts: 22%, Electrical Parts: 15%, Engine Parts; Drive, Transmission & Steering Parts: 8% each, Suspension & Brake Parts: 5%, Mold&Die: 4%, Accessories: 3%, Other: 36%



Rayong

Total suppliers: 41

Body Parts: 24%, Engine Parts; Drive, Transmission & Steering Parts: 15% each, Suspension & Brake Parts: 12%, Electrical Parts: 10%, Accessories: 7%, Mold&Die: 2%, Other: 15%

Chonburi

Total suppliers: 55

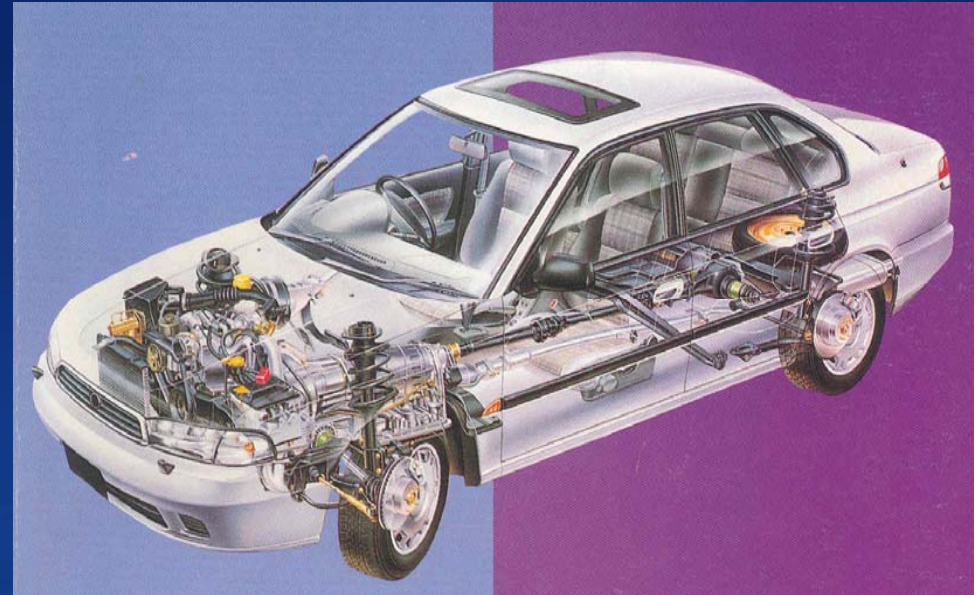
Body Parts: 25%, Engine Parts: 22%, Drive, Transmission & Steering Parts: 15%, Electrical Parts: 9%, Accessories: 5%, Suspension & Brake Parts: 4%, Mold&Die: 4%, Other: 16%

Major Auto Assembly Production Capacity

Company	2006 Total
Toyota	450,000
Isuzu	200,000
Mitsubishi	208,000
Auto Alliance (Ford/Mazda)	155,000
Honda	120,000
General Motors	160,000
Nissan	134,400
Hino	28,800
DaimlerChrysler(2006) Others (2007)	16,300
YMC Assembly	12,000
BMW	10,000
Volvo	10,000
Total 2006	1,576,500
Projected total for 2007	1,627,710

Opportunities: Components not Sufficiently Produced in Thailand

- ✓ **Passenger Car Engines**
- ✓ **Fuel Injection Pumps***
- ✓ **Transmissions***
- ✓ **Differential Gears**
- ✓ **Injection Nozzles***
- ✓ **Electronic Systems**
- ✓ **Electronic Control Units**
- ✓ **Turbo Chargers***
- ✓ **Substrates for Catalytic converters**
- ✓ **Anti-Lock Brake Systems**
- ✓ **NGV Equipment → target: 99,000 NGVs by 2008**

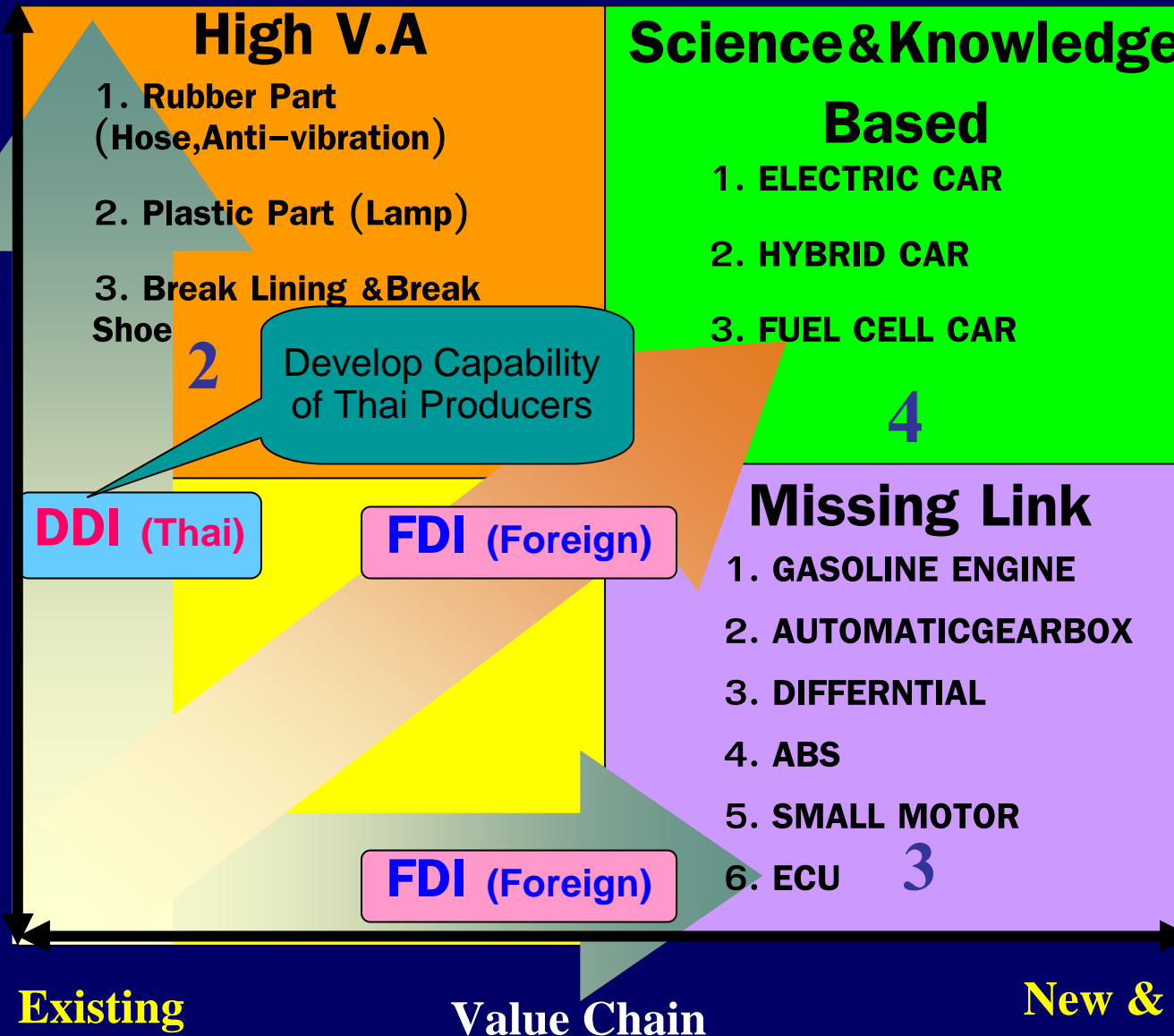


Automotive Part and Component Industry

Strengthening

Industry & Service

Existing



New Eco-Car Promotion

New import and corporate tax waivers (up to 8 years, regardless of zone) to develop smaller, more fuel efficient cars

- **No more than 5 litres/100 km**
- **Emissions compliant with Euro4 specification or higher**
 - ✓ **Carbon dioxide emissions no more than 120 gm/km**
- **Full front and side impact protection based on UNECE specifications**
- **Investment applications starting March 2007**



Why? ≤ 5 L/100 km

5L/100km = CO₂ 120g/km for Benzene engine

- ✓ In 1998, EU agreement with automotive companies that by 2008, 2012 cars sold in EU will have an average of CO₂ ≤ 140 g/km and 120g/km
- ✓ “The European Commission has published an action plan on energy efficiency which restates the threat to the car industry that legislation will come if the makers do not meet the EU’s carbon dioxide reduction target of 120 g/km by 2012.”

*[European Federation for Transport and Environment,
October 2006]*



General Guidelines for Eco-car Incentives

- ❑ **Project package must be proposed along with:**
 - ✓ auto assembly, motor manufacture and motor vehicle parts project, and
 - ✓ investment and manufacture plan for 5-yr period must be included, along with actual production quantity of not less than 100k units/yr from the fifth year
- ❑ **Qualify on MOI energy saving, environmental and safety specifications**



Agile

Clean

Economical



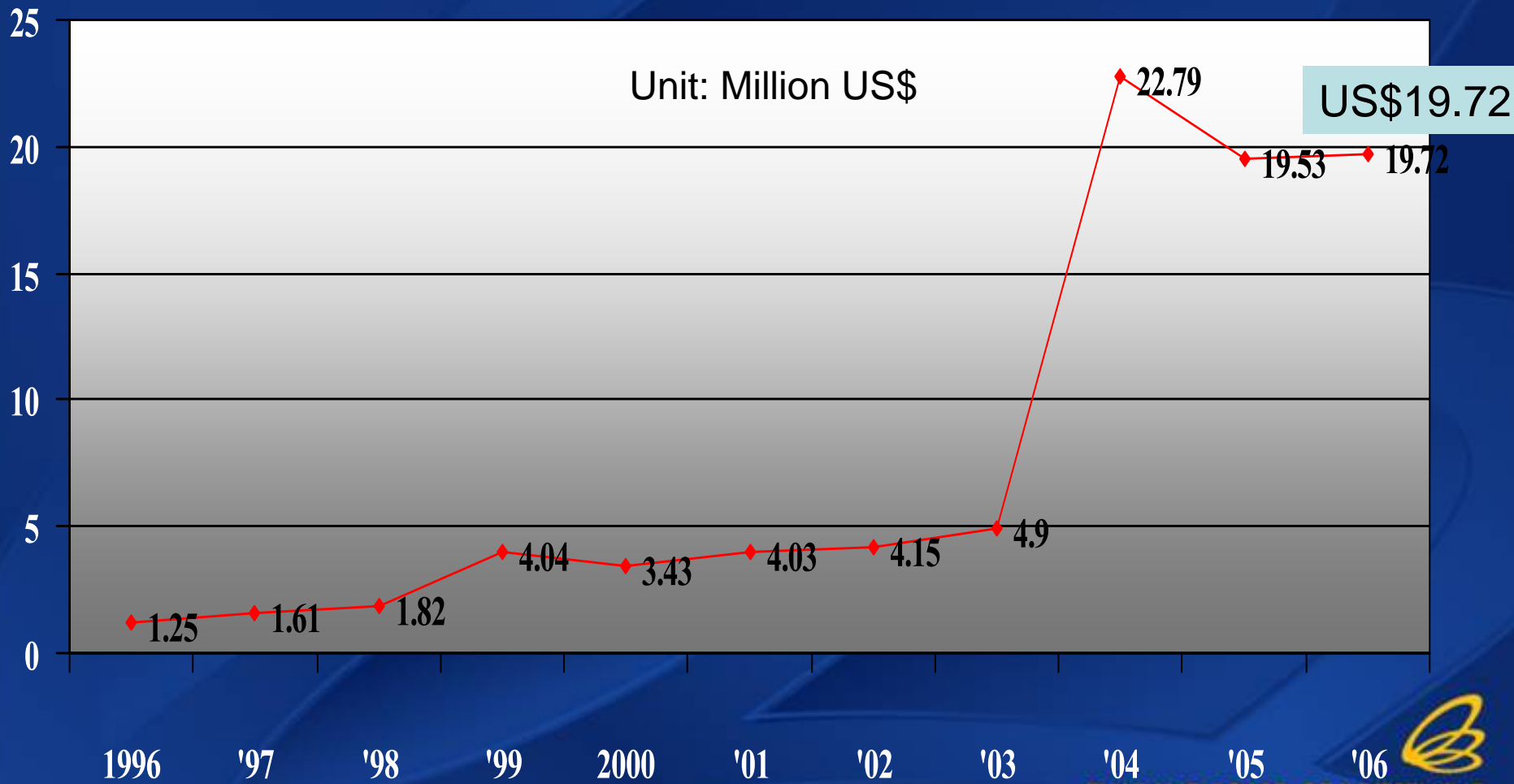
with **S**afety



www.carsdesignnews.com

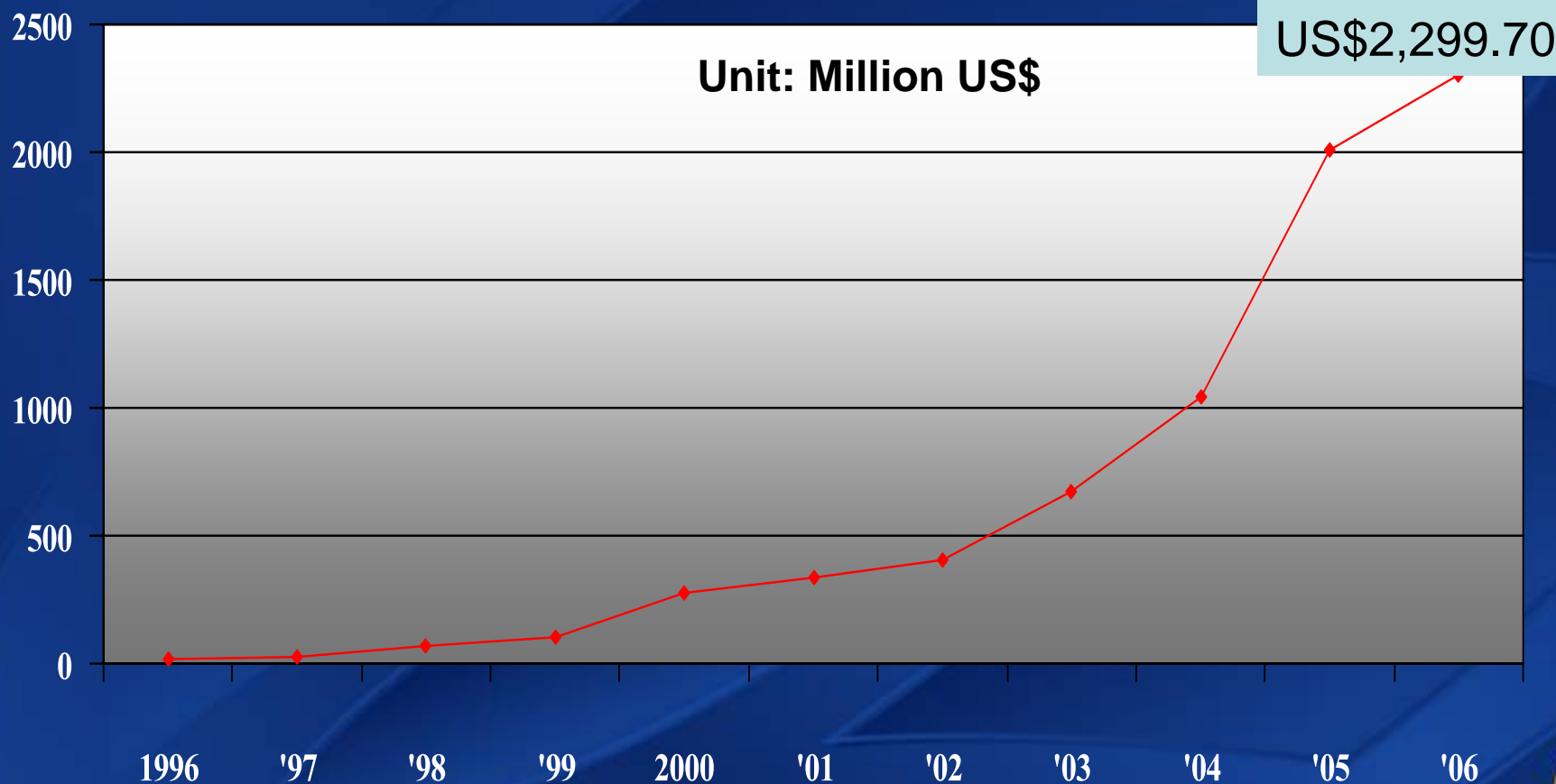
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Vehicle Jig & Die Exports



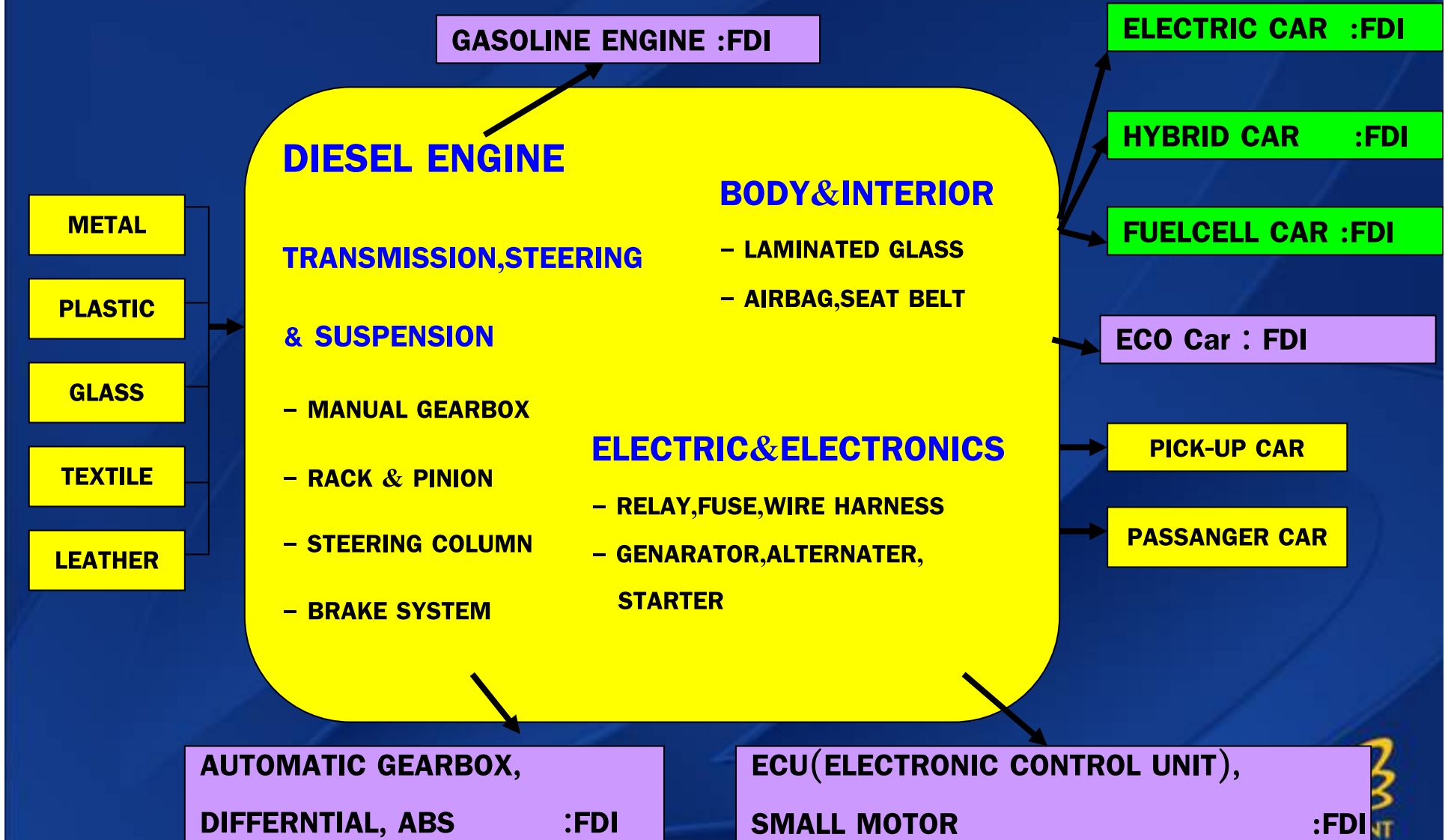
Conversion rate: US\$/35THB

OEM Auto Component Part Exports



Conversion rate: US\$/THB35

Auto and Auto Parts



Opportunities in Automotive Sector Alternative Fuels

Government target: 99,000 NGVs by 2008, replace 20% of oil consumption in the transport sector within the next 20 years

- NGV Assembly/Manufacture
- NGV Equipment
(i.e. cylinders, conversion kits for gasoline and diesel engines)
- NGV Conversion Service
- NGV Service Stations



Automotive Investment Opportunities

- ❑ Auto assembly for local and export markets under AFTA and other FTA arrangements
- ❑ Auto part manufacturing to serve domestic and export markets
- ❑ NGV segment → target: 99,000 NGVs by 2008
 - ✓ NGV Assembly/Manufacture
 - ✓ NGV Equipment
(i.e. cylinders, conversion kits for gasoline and diesel engines)
 - ✓ NGV Conversion Service
 - ✓ NGV Service Stations



NGV Expansion Target

Vehicles

Type	2006	2007	2008	2009	2010	2011
Benzene Car	22,890	52,000	74,700	101,000	128,000	160,000
Diesel Car	2,950	8,850	24,300	50,300	79,600	96,600
Total NGV	25,840	60,850	99,000	151,300	207,600	256,600

Stations

Region	2006	2007	2008	2009	2010	2011
BKK/vicinity	73	181	212	253	277	285
Countryside	31	89	138	172	203	250
Total stations	116	270	350	425	480	535

Natural Gas Vehicles

Current status

- 25,371 NGV vehicles
- 8,277 are taxis
- 99 NGV service stations

NGV on national agenda:

Government

Targets 99,000

NGVs by 2008

New BOI NGV incentives:

- NGV parts production including engines, tanks and other parts
- Production of natural gas equipment and machinery for NGV service stations

Priority Incentives: 8 year corporate income tax holiday, duty free machinery regardless of location

- NGV assemblers and NGV service stations: duty free machinery regardless of zone