

Automotive Innovation Forum Asia 2007 Thailand



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Deputy Secretary General
Thailand Board of Investment
Bangkok, 2007**



A Competitive Location Thailand



Forefront for investment

- ❑ World Bank Ease of Doing Business, Thailand ranks #18 in the world
- ❑ UNCTAD Global Investment Prospects Assessment, FDI prospects in Asia 2005 – 2008: *Thailand ranks #3*
- ❑ JBIC 2006 Survey on promising countries for overseas business operations over next 3 years: *Thailand ranks #4*
- ❑ JBIC 2006 Survey on promising countries for SMEs over next 3 years: *Thailand ranks #4*
- ❑ Grant Thornton International Business Owners Survey 2006: “Thailand’s assets include an entrepreneurial population, abundant natural resources and a wonderful lifestyle and, if these strengths are promoted and supported, the country will continue to be a great place to do business”

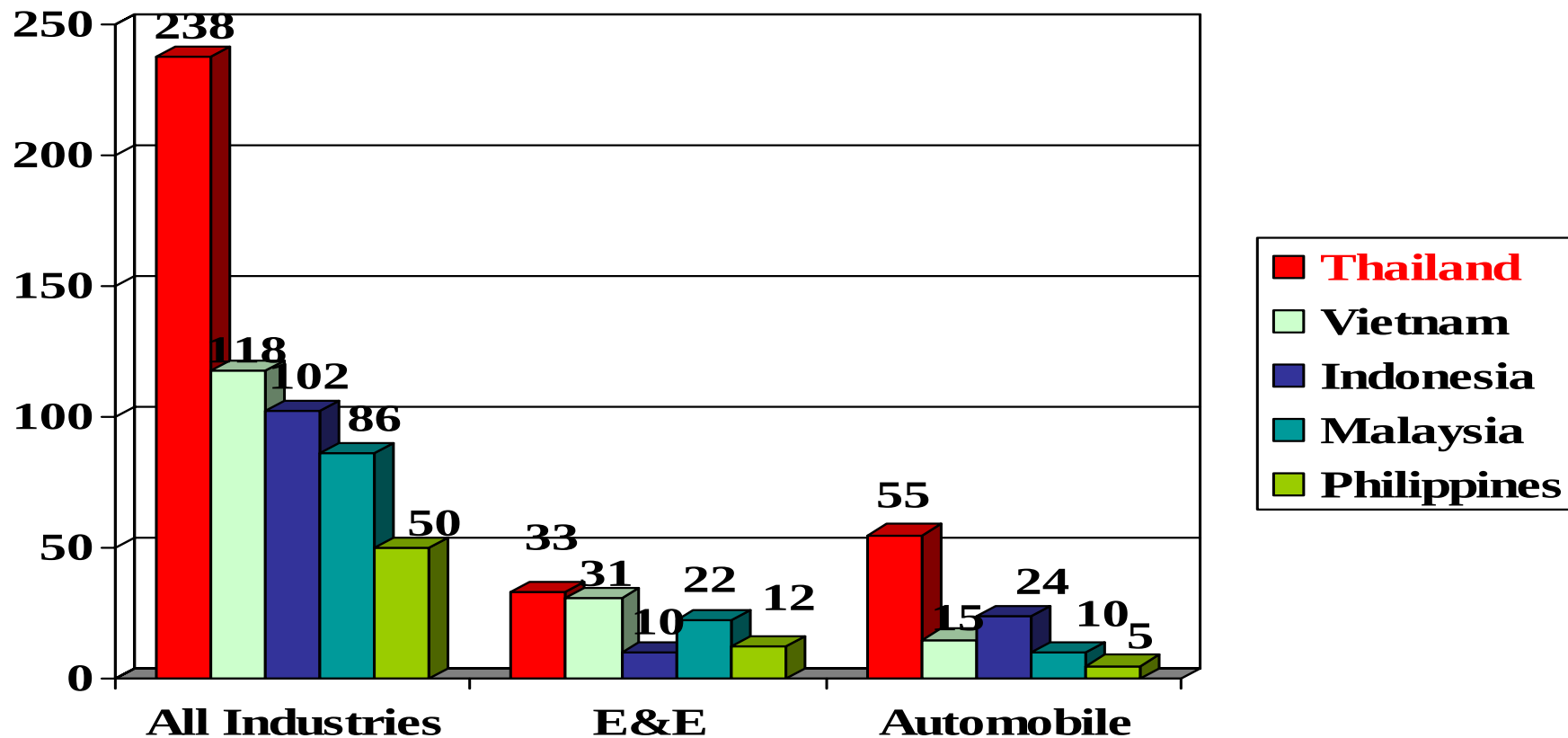


JBIC FY 2006 Survey

- ❑ When asked about profitability for each region, including Japan, “the percentage of companies answering “higher” was greatest for Thailand”
- ❑ **Automotives, “strengthen or expand” response stronger in Thailand than any other region, including southern China and North America.**



JBIC Survey: Companies Looking to Strengthen or Expand in ASEAN-4



Comparison of Land and Office Prices

	Bangkok	Beijing	Hanoi	Jakarta	Kuala Lumpur	Manila	Singapore
Industrial Estate Purchase Rate (per sq/m)	61.60	57 - 70	No Land Purchase	40 – 45	5.5 -11	45 - 50	79.54 - 241.82
Monthly Industrial Estate Rents (per sq/m)	5.2 - 5.5	6 - 9	0.16 - 0.23	4.1 – 4.6	---	1	5.40 - 13.64
Office Rent (per sq/m)	13.69	39 - 45	22 - 45	23 – 26	10.36 - 15.11	7.02 – 8.03	22 - 83
Monthly Housing for Foreigners	1,779	2,300 – 6,000	3,200	1,850 – 2,100	879 – 1,236	1,404 – 1,605	1,924 – 3,849



A Cost-Effective Workforce Thailand

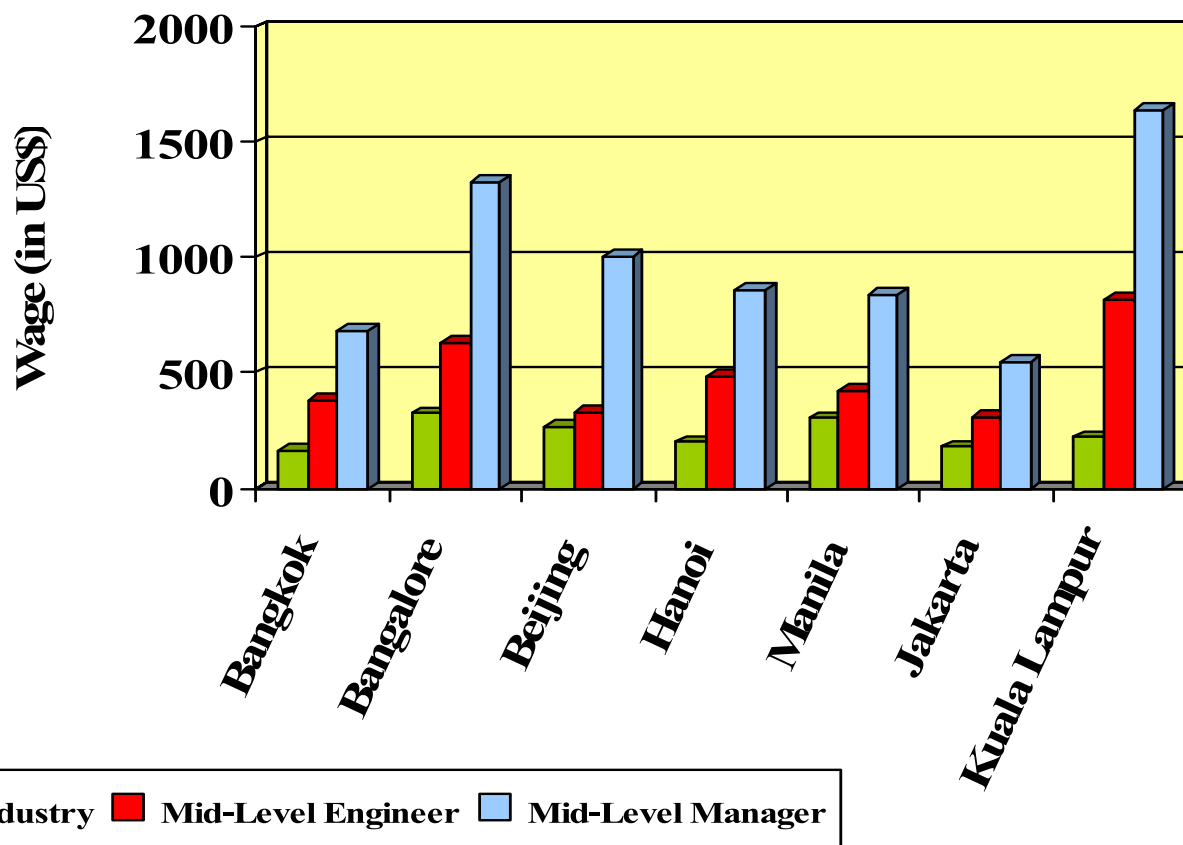


Thai Labor Force

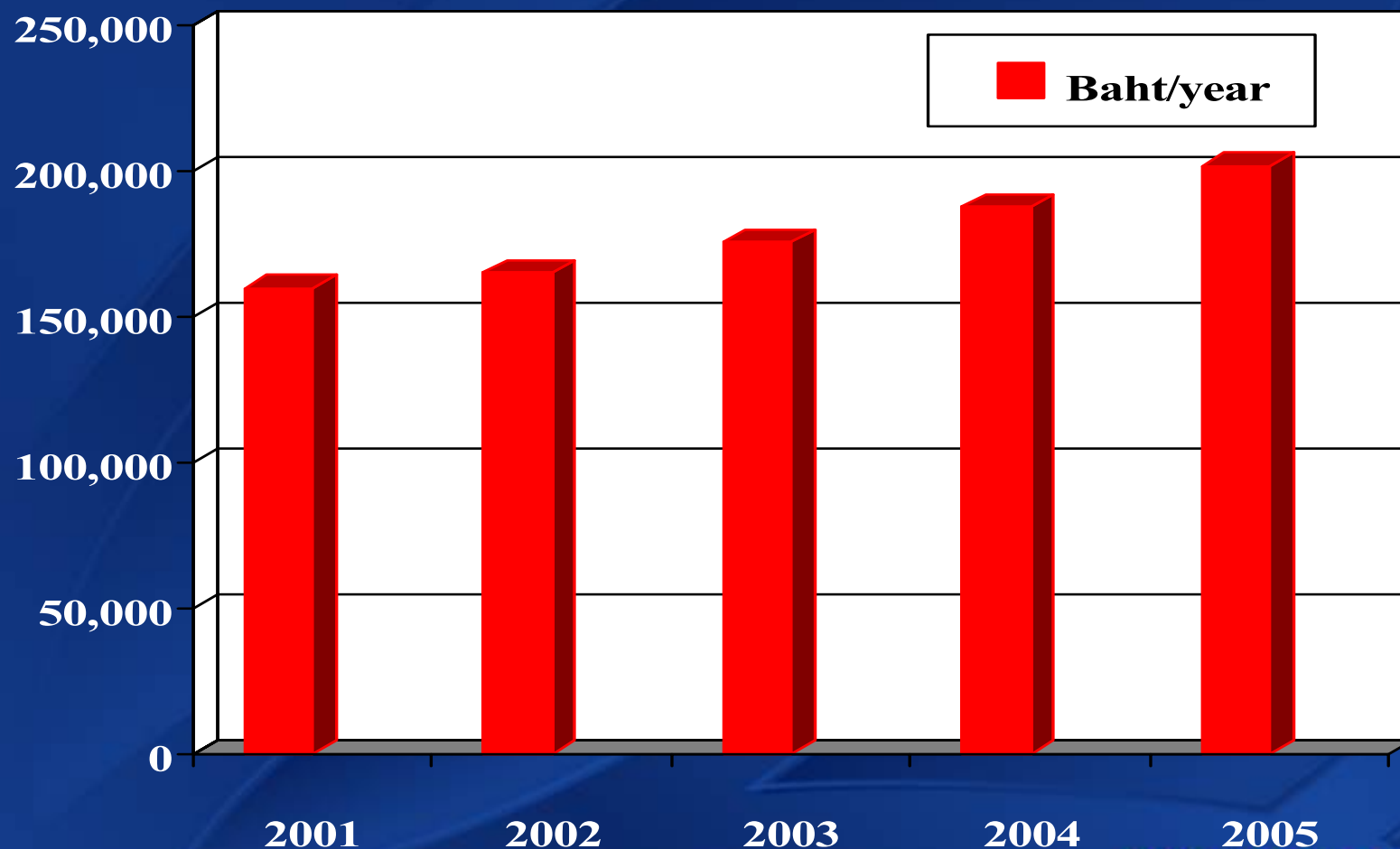
- Average Thai person works 2,184 hours/year, ranked #9 out of 55 countries surveyed
- Thailand ranks as the number 6th country of those surveyed for pro-business regulations (including minimum wage, hiring/firing practices)



Average Monthly Wages



Increasing Labor Productivity

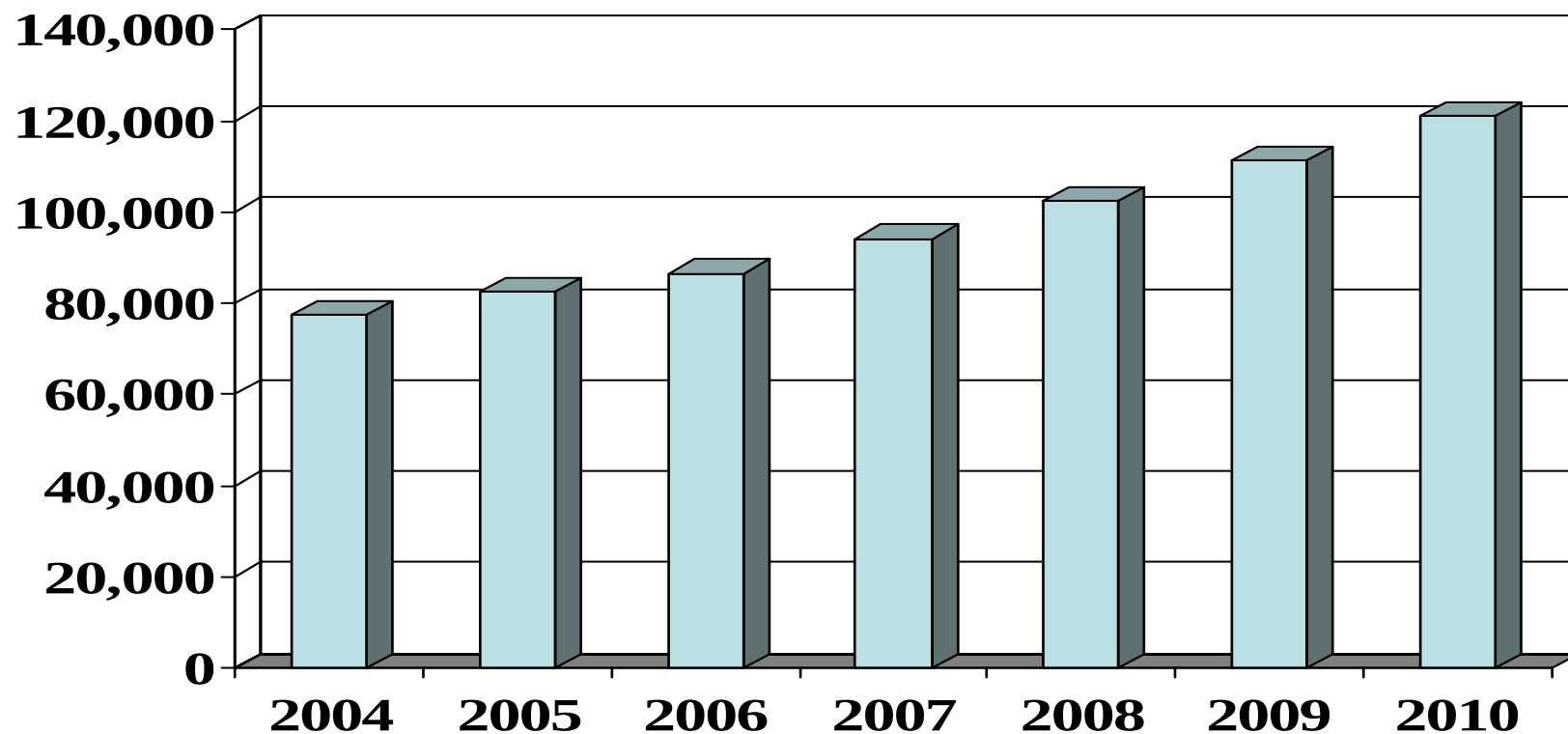


Human Resource Development

- ❑ **About 80,000 Students Graduated Annually in Science and Engineering**
- ❑ **Comprehensive training and R&D for specific high-tech sectors, e.g.**
 - ✓ National Science Park in electronics, material science, biotechnology, and nanotechnology
 - ✓ HDD Cluster Development Program
 - ✓ Thailand – Japan Institute of Technology



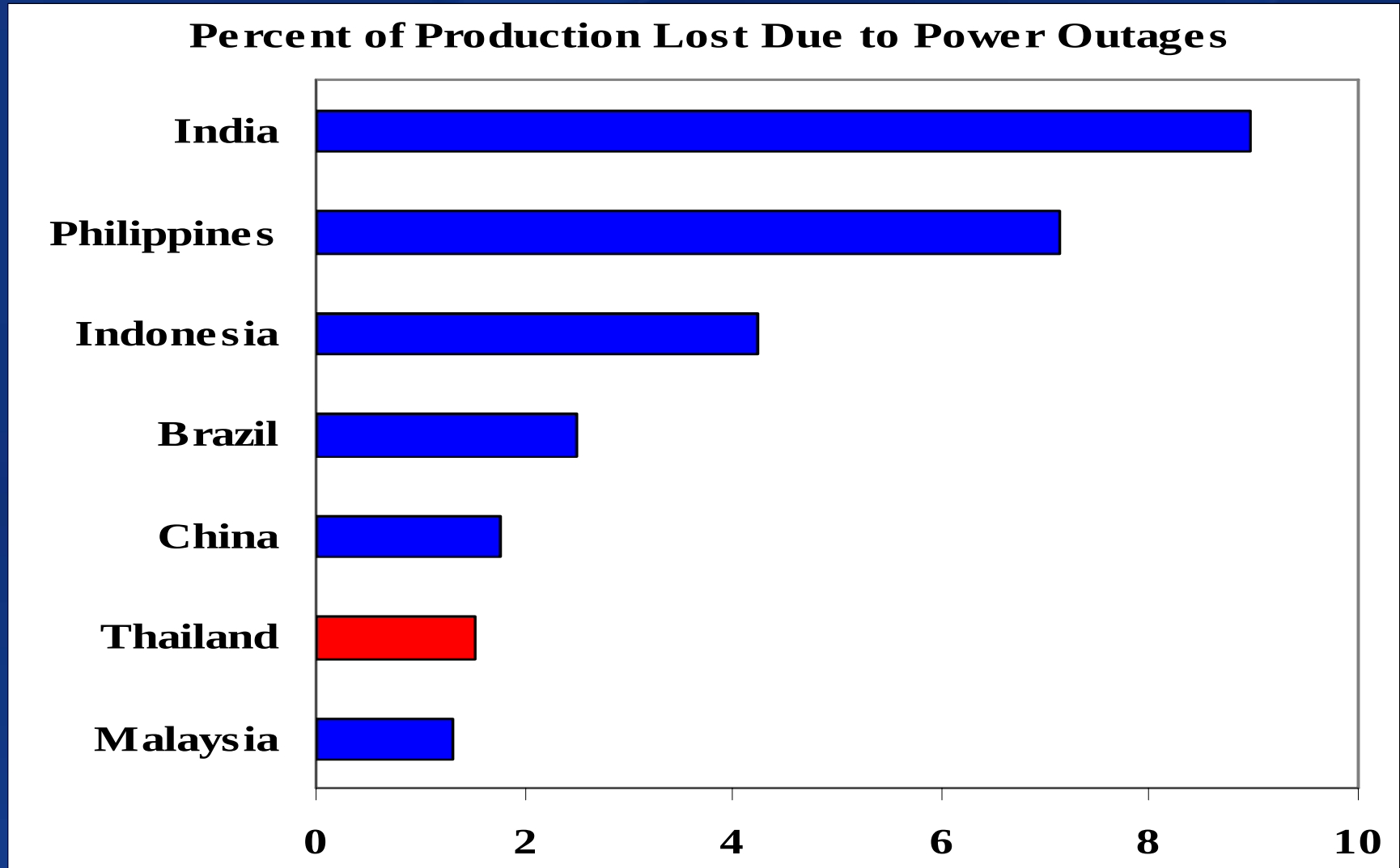
Thai Graduates in Science, Technology, and Engineering



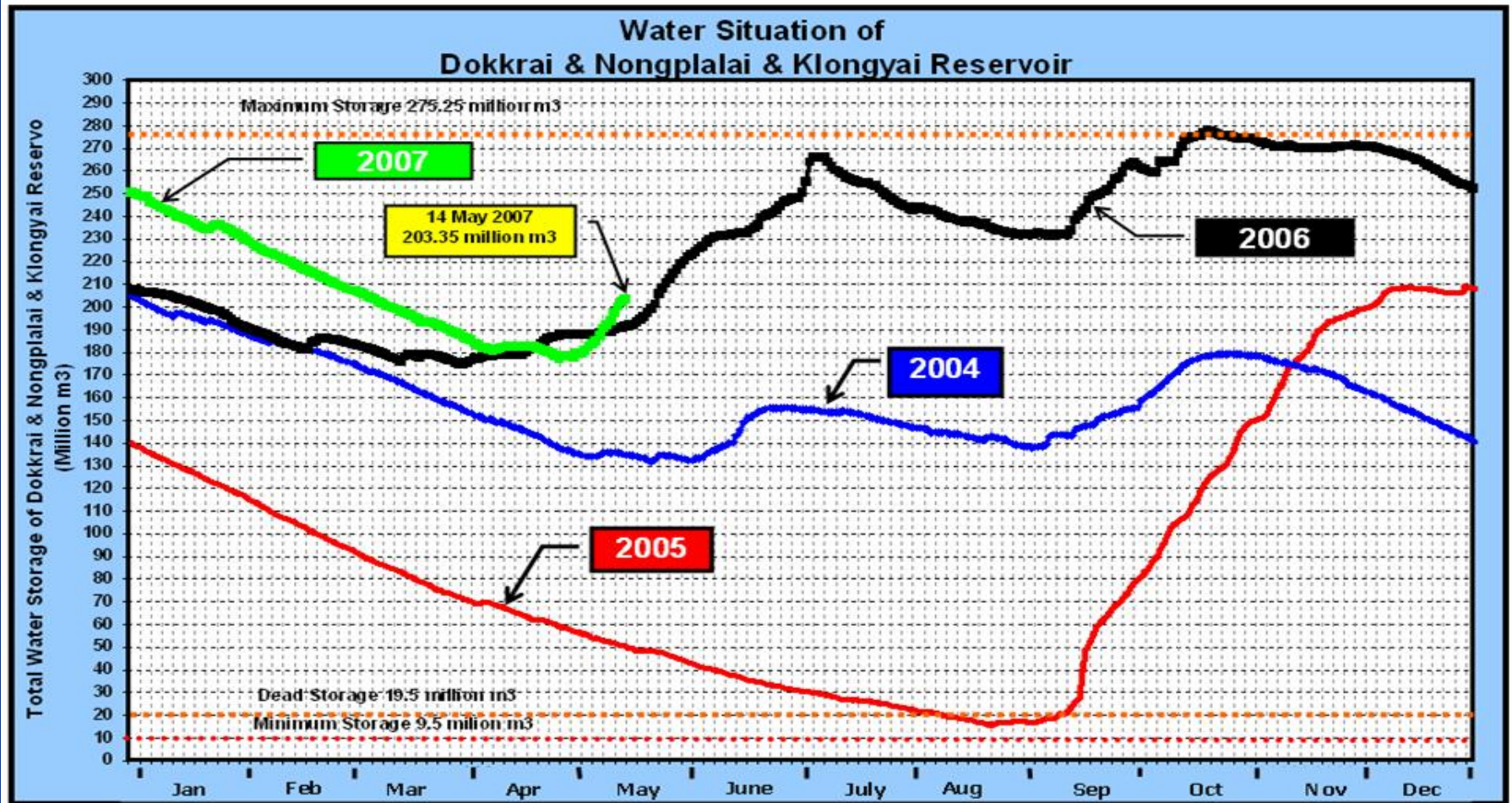
A Well-Developed Infrastructure Thailand



Low incidence of Power Outages



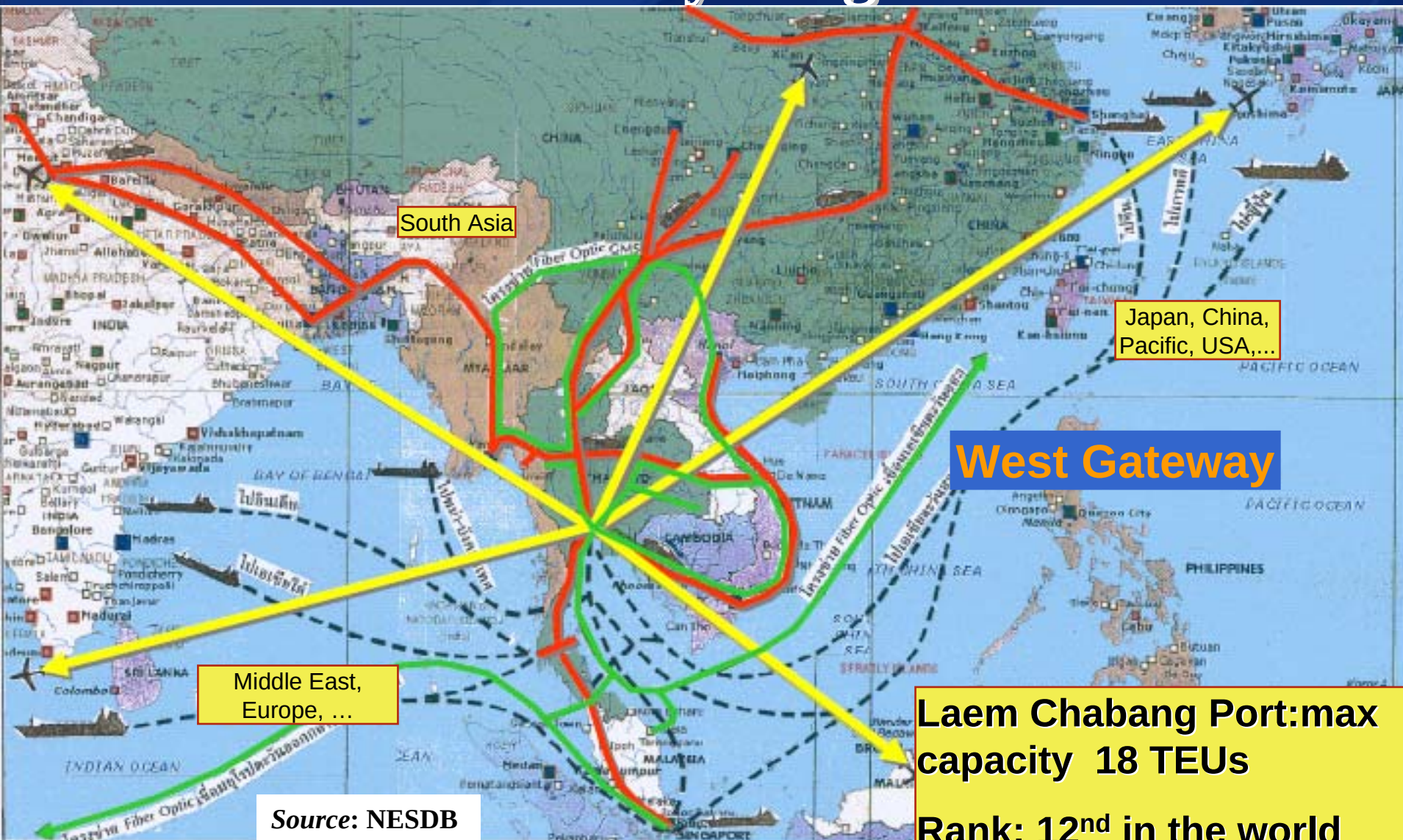
Water Supply on Eastern Seaboard



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Where success stories begin

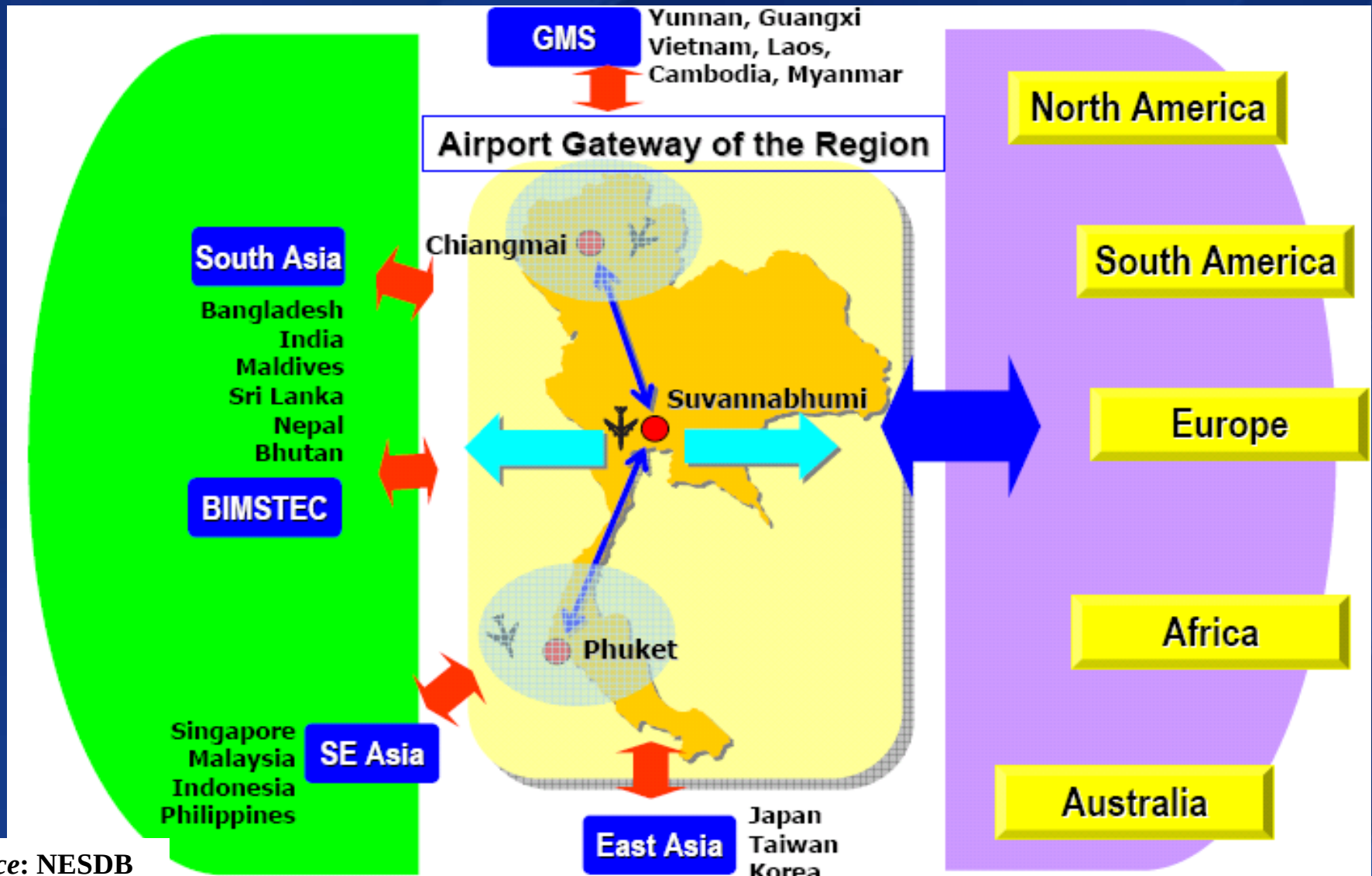
Economic Gateway: Regional Network



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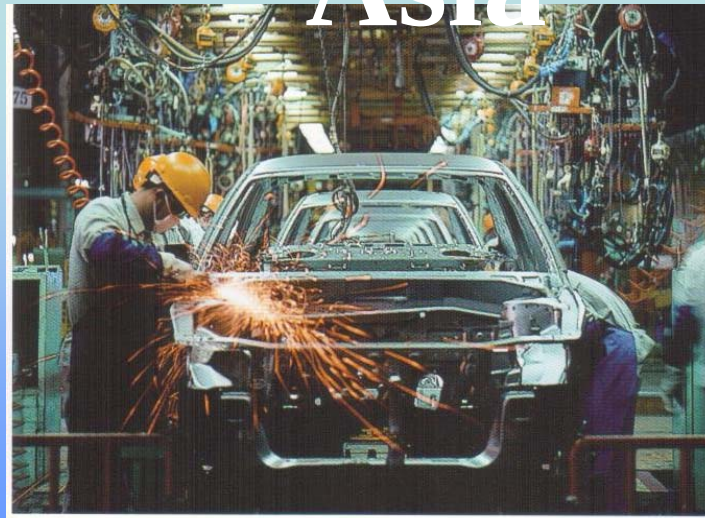
Where success stories begin

Airport Development as Gateway of Southeast Asia



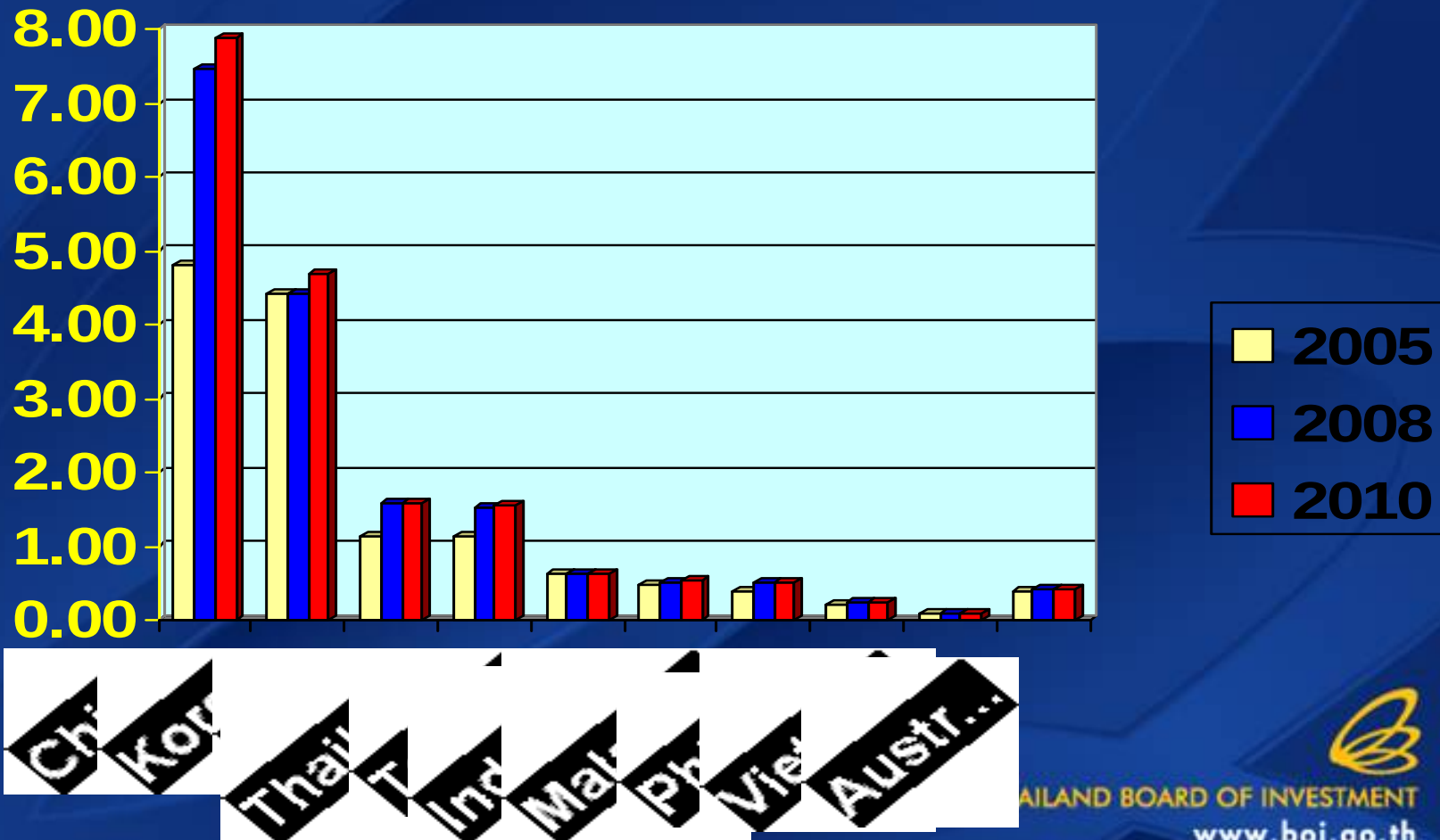
Auto & Auto Parts Industries

Thailand: Automotive Hub of Asia



Asia-Pacific Vehicle Production Capacity 2005-2010

Million Units



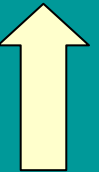
Automobile Forecast 2007

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

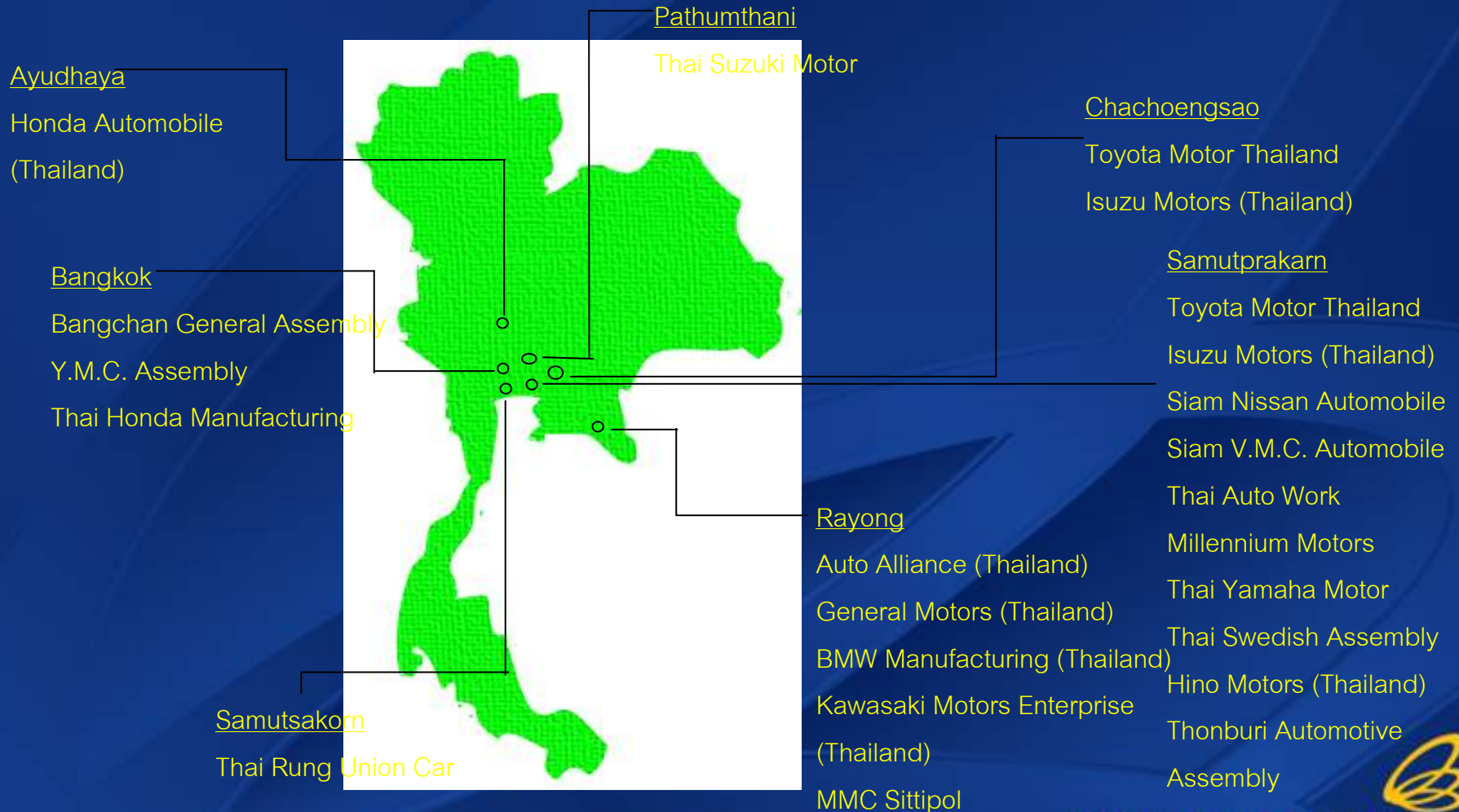
Growth ~ **12.5%**



AUTOMOTIVE CLUSTER

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Automotive Manufacturer Location



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

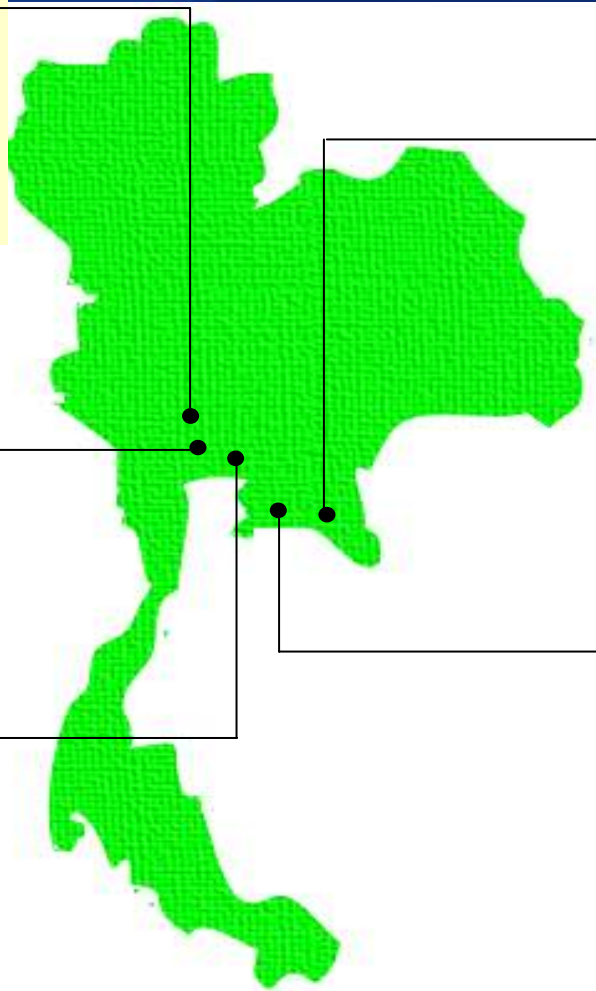
Total suppliers: 232

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%

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

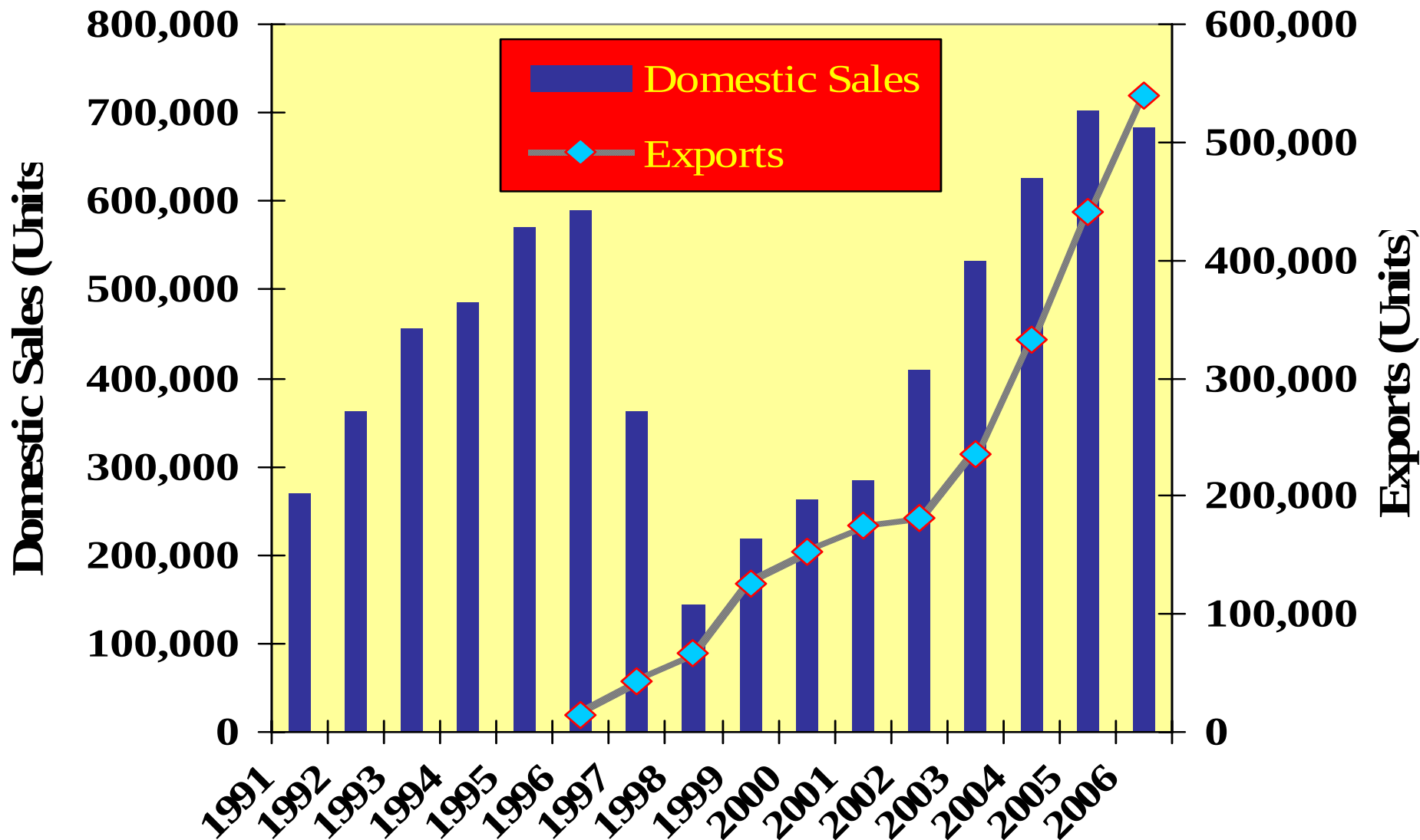
- ❑ 2006 production ~ 1,176,840 million units
- ❑ 2006 export ~ 539,206 units
- ❑ 15 assembly plants
- ❑ Largest in Southeast Asia
- ❑ Capacity of 2.0 million units by 2010
- ❑ Production of pickup trucks ~ 877,890 units – world's largest one-ton pick-up truck manufacturer



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

Automotive Sales and Exports



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



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**



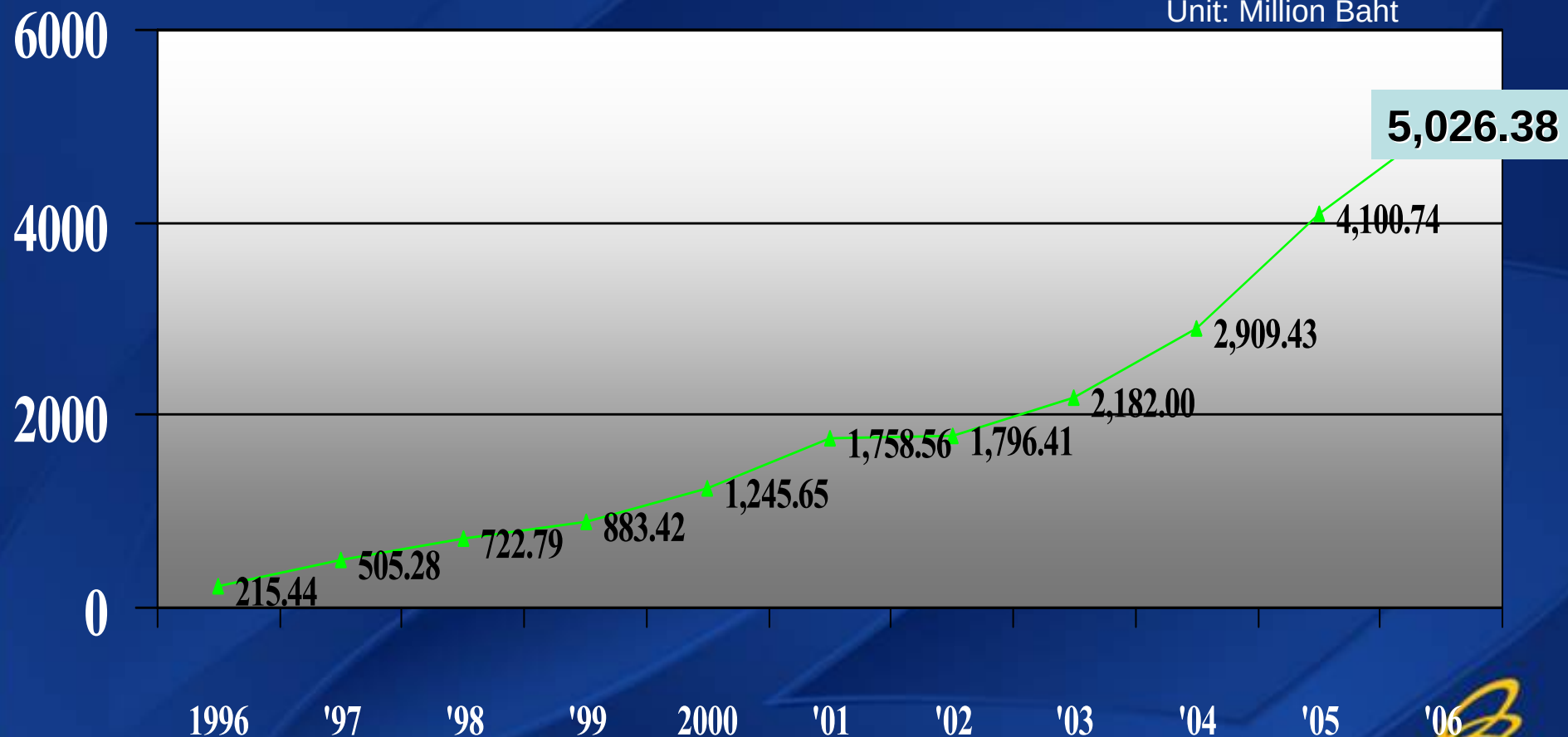
General Guidelines for Eco-car Incentives

- ❑ **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**



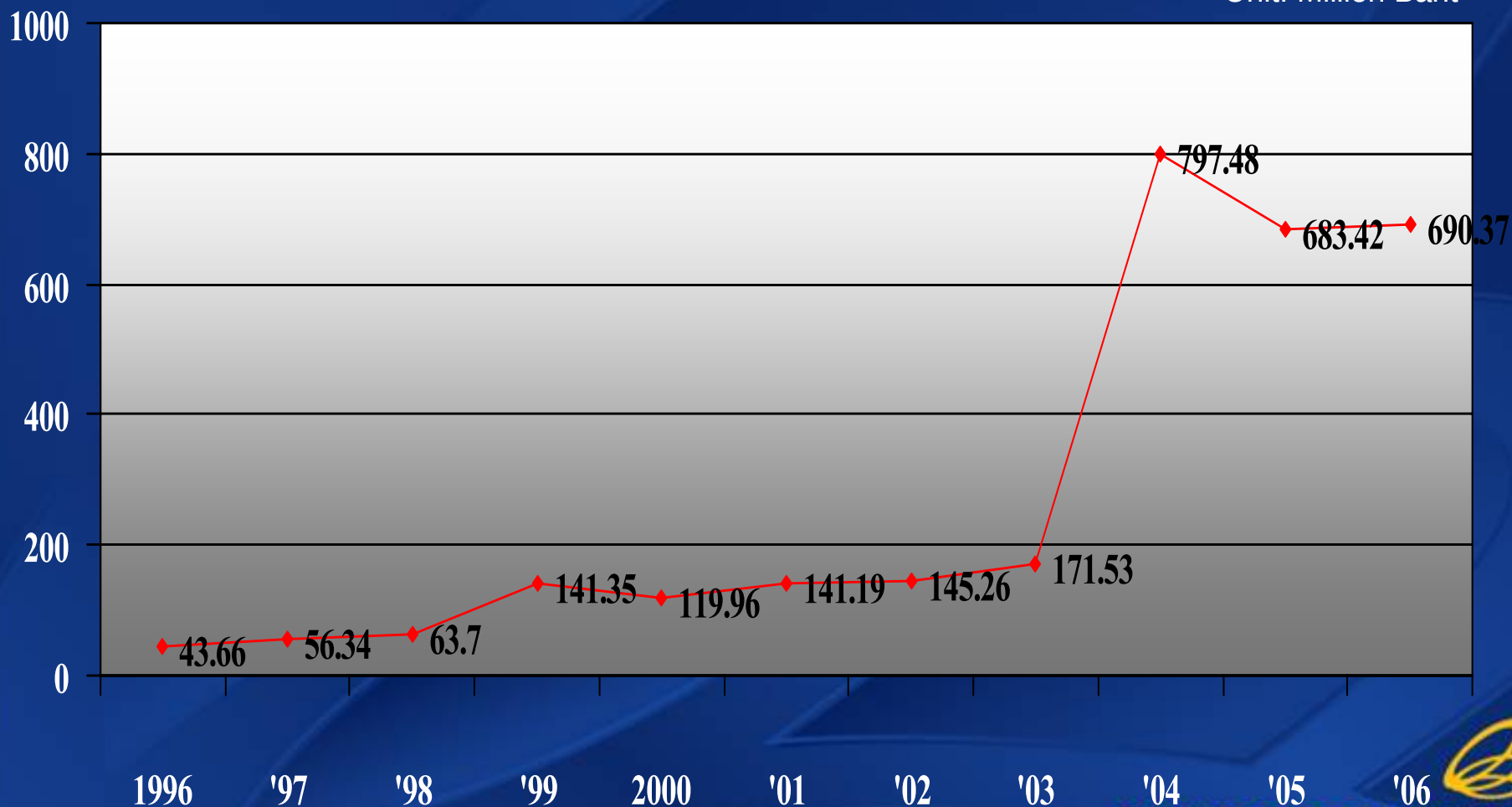
Spare Auto Parts Exports

Unit: Million Baht



Vehicle Jig & Die Exports

Unit: Million Baht



OEM Auto Component Part Exports

Unit: Million Baht



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

Opportunities in Automotive Sector Alternative Fuels

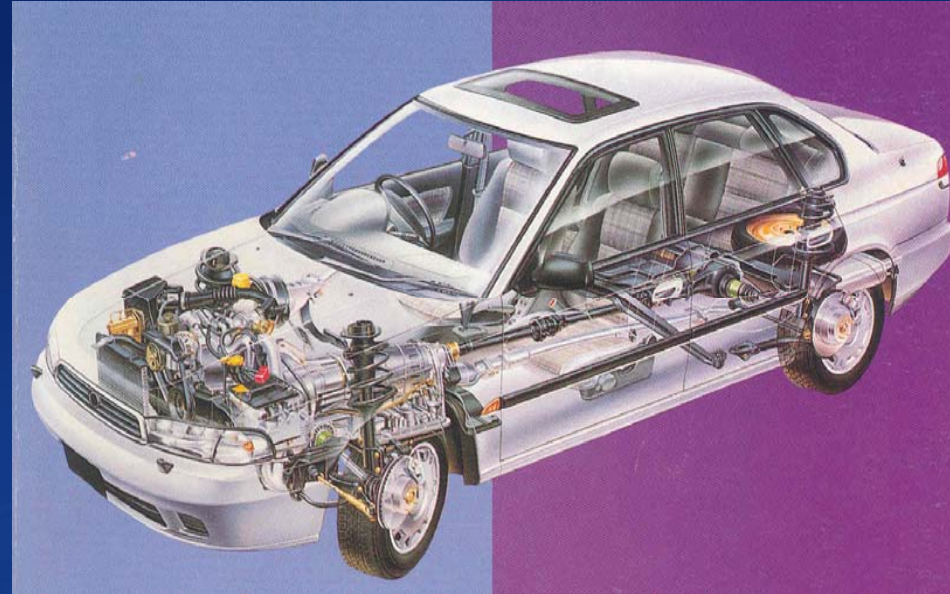
Government target: 99,000 NGVs by 2008, replace 20% of oil consumption in the transport sector within the next 20 years

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



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: 120,000 NGVs by 2008



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



Opportunities in Machinery

Thailand continues to industrialize, but is dependent on foreign industrial machinery for immediate future.

High demand for:

- ✓ Food and farm machinery
- ✓ Alternative energy/energy conservation machinery
- ✓ Textile machinery
- ✓ Automotive machinery
- ✓ Mould & Die Industry



More Moulds & Dies Needed in Thailand

❑ Moulds for Die Casting

- Engine block
- Crank shaft
- Front case
- Oil pan
- Gear box – auto
- Safety parts : Master pump & Clipper brake

❑ Moulds for Plastic Injection

- Automotive Electronic Control Unit (ECU)
- Housing for automotive steering column
- Automotive dashboard
- Parts for digital camera & cellular telephone
- Parts for notebook computer and PDA (personal digital assistant)

Transfer press dies

- Automotive body press die



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THAILAND BOARD OF INVESTMENT

www.boi.go.th

Focus 2007

Auto industry

Incentives for “green car” production

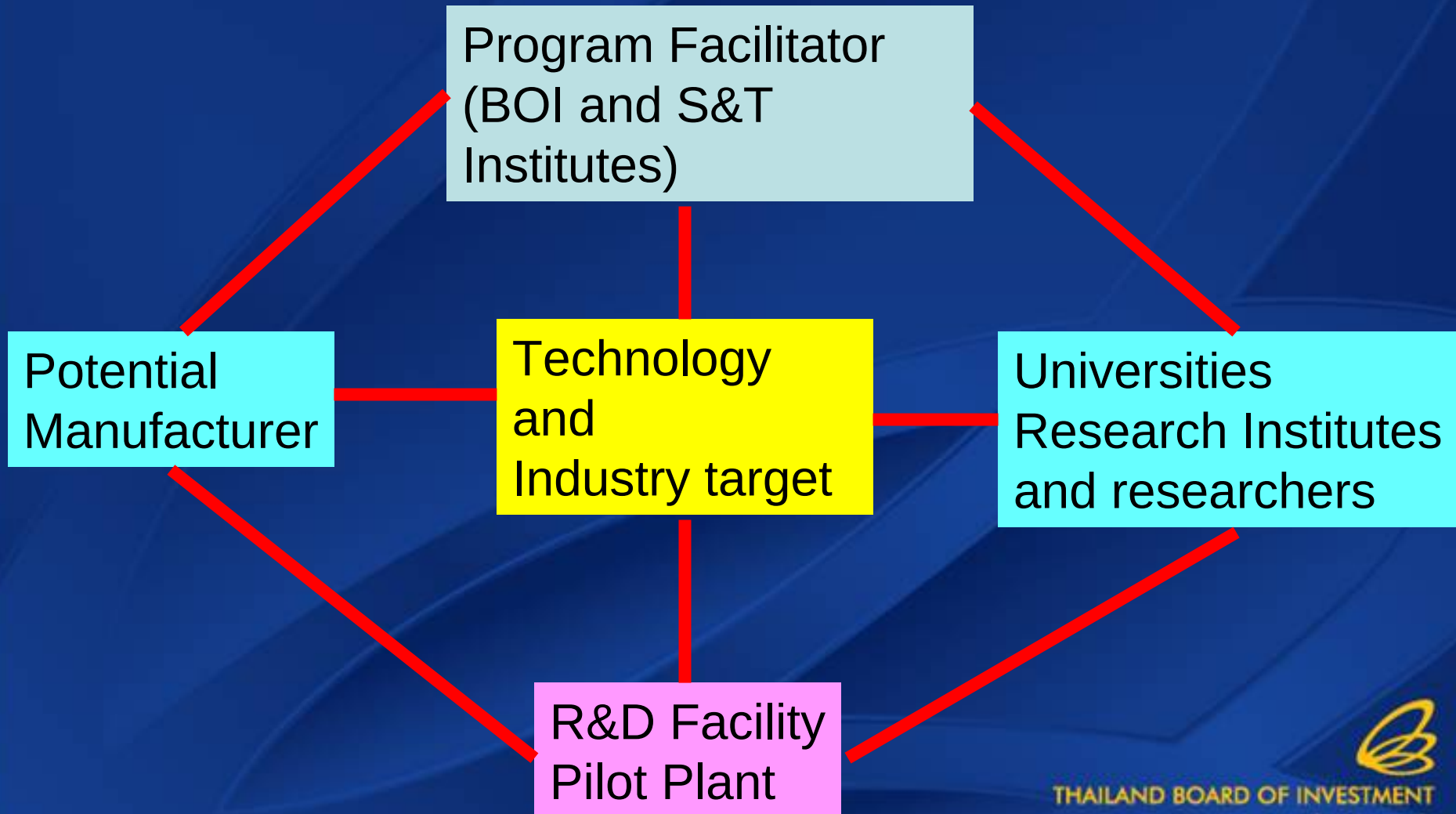
Enhancing competitiveness

Think tanks and academia

Human resources development

Skills, technology and innovation

Enhancing university linkages to promote productivity, technology and R&D



BUILD Activities

- ☐ **Provide information on subcontracting opportunities in Thailand via database web applications**
- ☐ **Assist foreign buyers wishing to source from Thai manufacturers**
- ☐ **Match buyers and subcontractors in related businesses**
- ☐ **Arrange participation of Thai manufacturers in trade shows and exhibitions abroad**

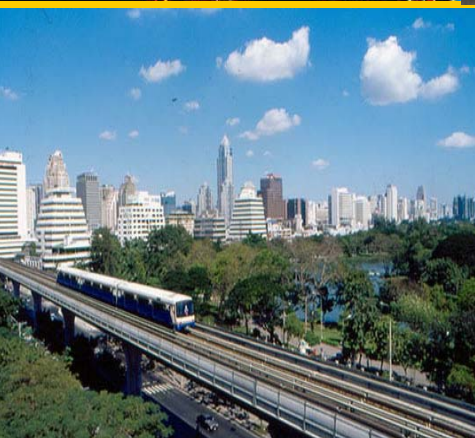
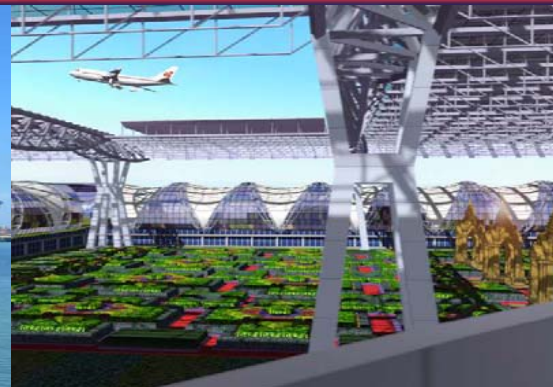


Free Zones

- ☐ Foreign and domestic goods moved into FZs are eligible for tax and duty privileges, dependant on the good
- ☐ Imported machinery, equipment, and tools exempt from import duty
- ☐ Imported merchandise from other FZs, and exports, exempt from duties
- ☐ Imports exempt from VAT
- ☐ No excise taxes for imports or manufactured goods in a FZ

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