

“Current Situation and Investment Incentives of E&E Industry in Thailand”



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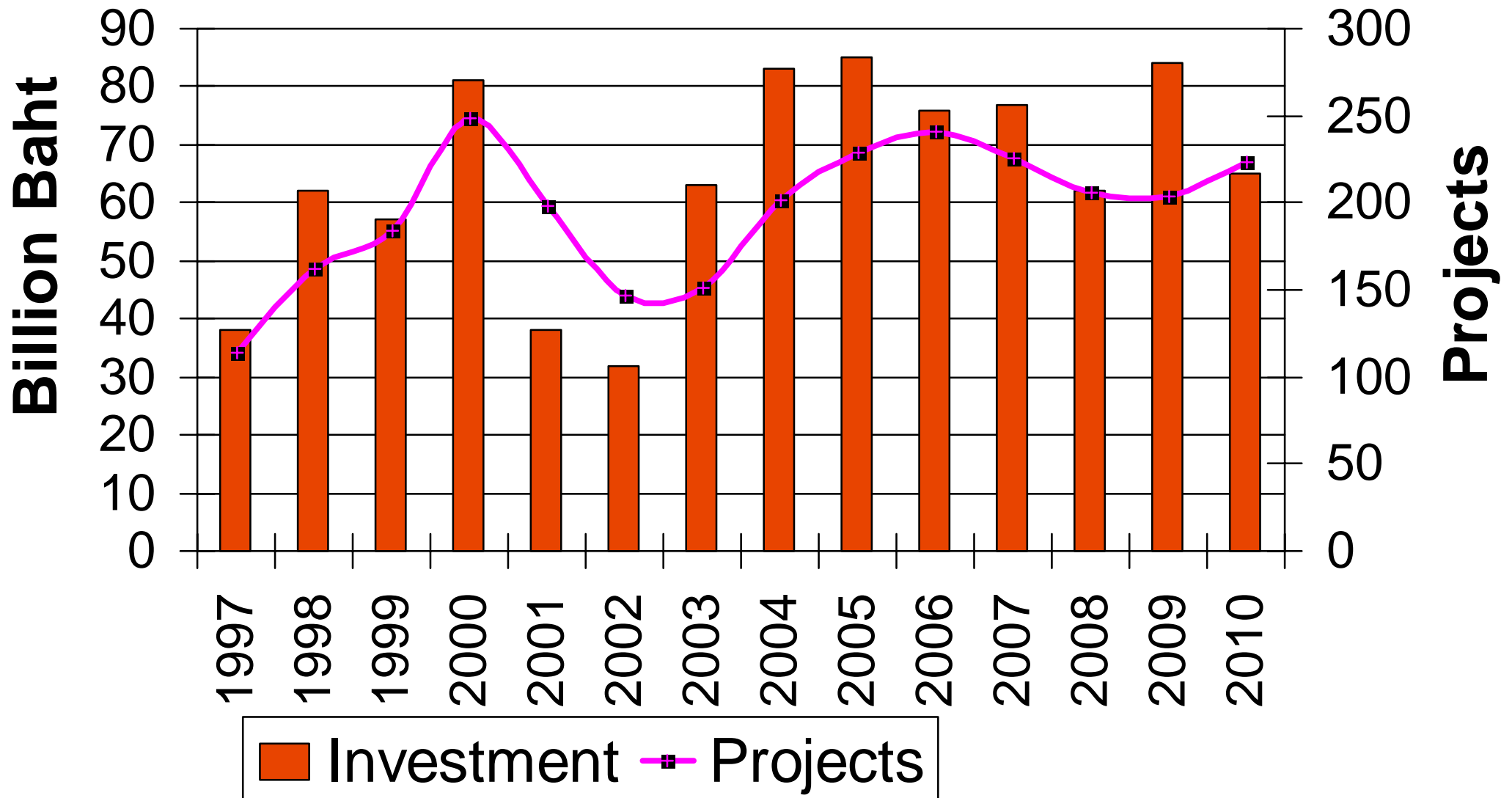
Thailand Board of Investment

20 May 2011

Presentation Outline

- Current Situation of Investment Promotion of E&E Industry in Thailand
- E&E Investment Policies
- Update on BOI Investment Policies

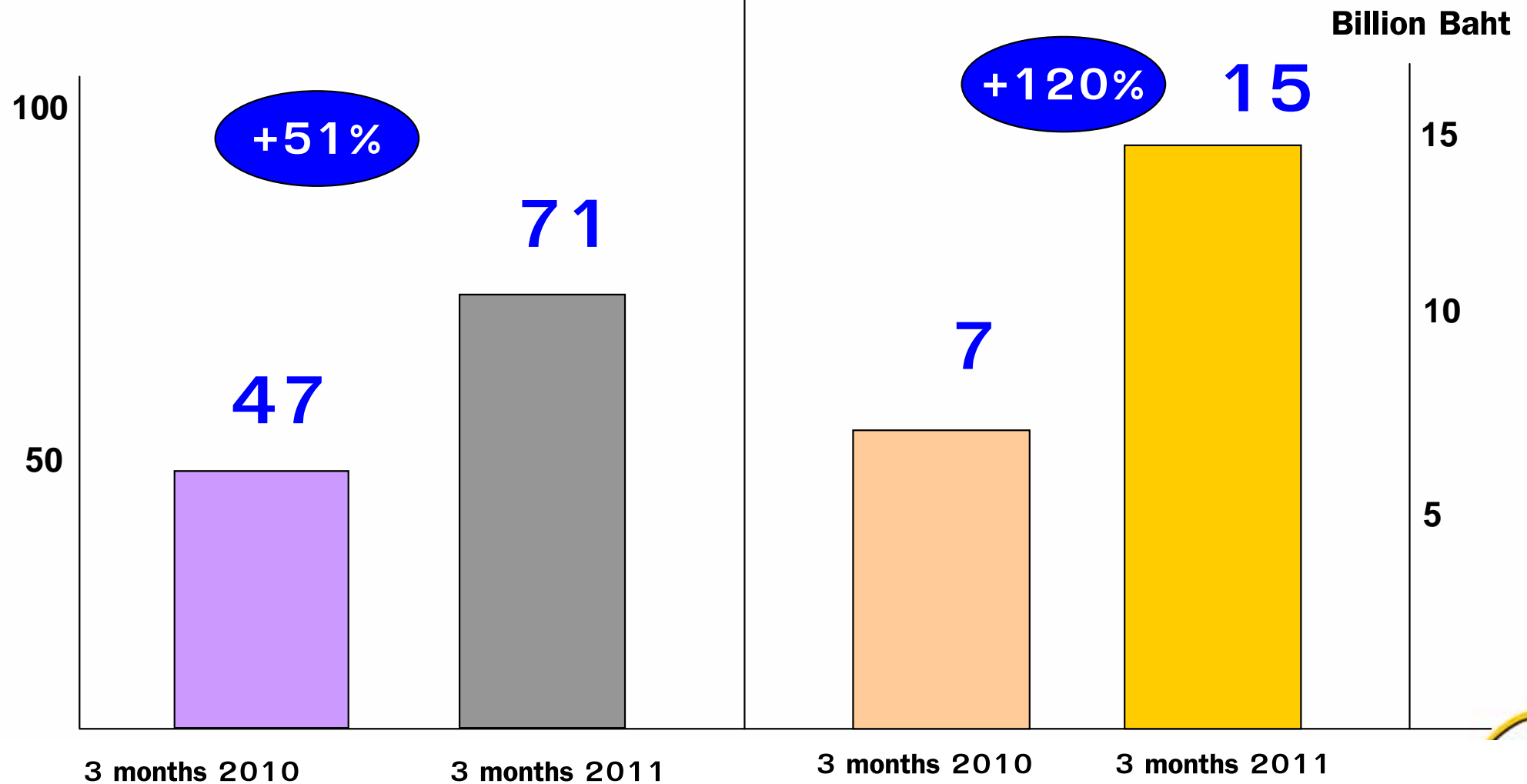
Net BOI Application for E&E Projects



Net application for E&E projects (Jan-Mar 2011)

Number of Projects

Investment Value



Electronics and Electrical Industry

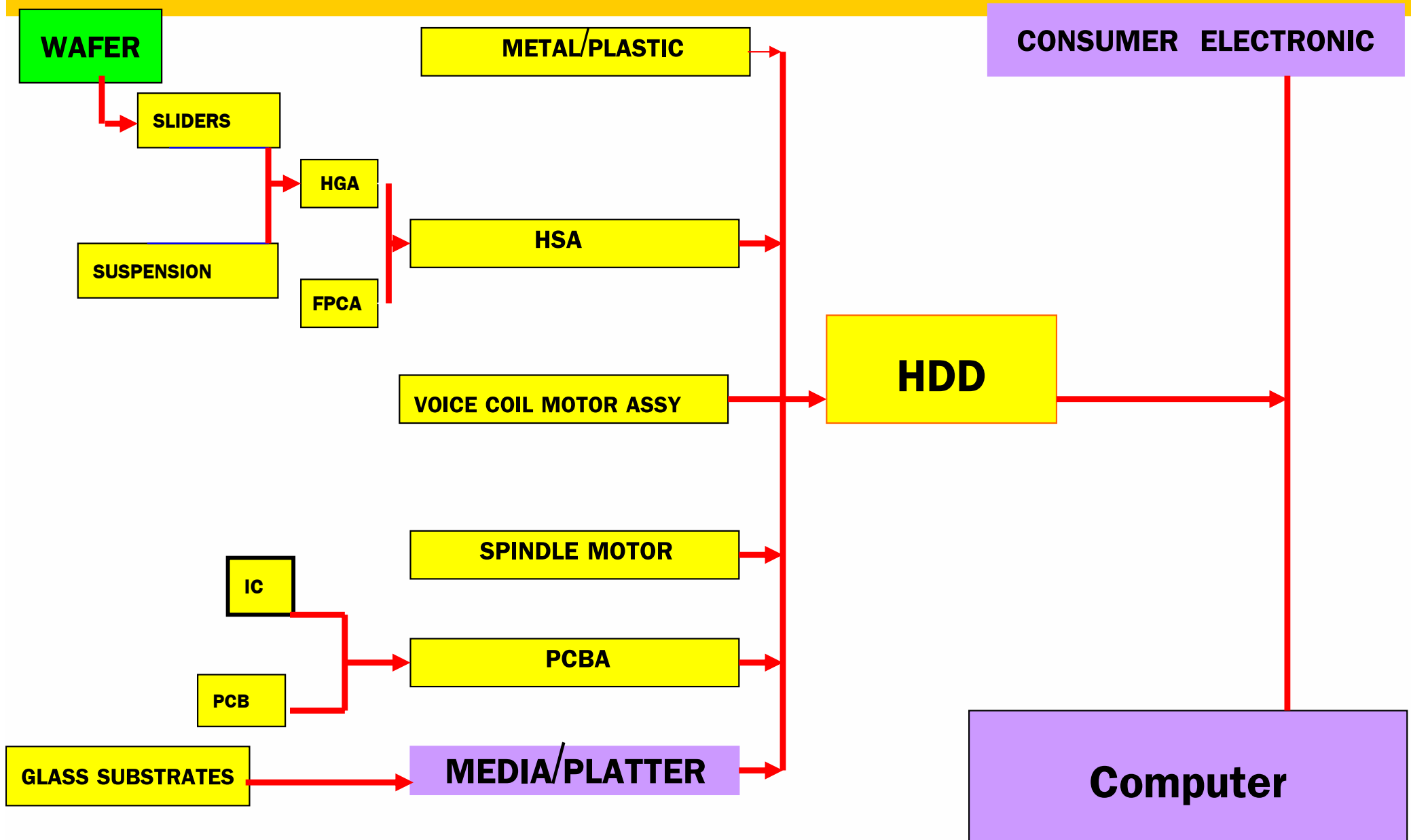
- ❑ Export over US\$ 53 Billion in 2010, 27% of total exports**
- ❑ Major products: HDD, IC, A/C & other WG**
- ❑ The world's largest producers of HDDs**
- ❑ Strong supporting industries for electrical appliances
 - Compressors, motors, plastic & metal parts****



HDD Manufacturers in Thailand

- Seagate**
Samut Prakarn
Nakorn Ratchasima
- Western Digital**
Pathumthani and Ayutthaya
- Toshiba Storage Device**
Pathumthani
- Hitachi Global Storage**
Prachinburi

Hard Disk Drive Cluster in Thailand



EX VA ML S&K



Integrated Circuit Cluster in Thailand

IC Design

- Rohm LSI
- Silicon Craft Technology

Wafer

Assembly

- Microchip
- NXP
- Spansion
- Hana Semiconductor
- Circuit Electronics
- Millennium Microtech
- Utac Thai
- Stars Microelectronics
- Statschippac
- Oki
- Sony Device Technology
- Sanyo Semiconductor
- Rohm Integrated System
- Toshiba Semiconductor
- Thai NJR
- Vigilant Technology

Lead Frame

- Sumiko LeadFrame
- TSP-T
- Rohm Mechatech
- Yamakin

Testing

- Microchip
- Maxim Integrated



Major E&E Investors from Japan

Company Group	Products
JVC, Funai, Sony, Orion, Nikon, Pioneer	AV
Panasonic, Daikin, Canon, Sharp, Hitachi, Mitsubishi Electric, Toshiba	HA, OA
HGST, Toshiba, Nidec, TDK, AGC, NHK	HDD & Parts
Rohm, Oki, Sanyo, Stanley, Shindengen	Semiconductor
NEC, Furukawa, Epson Toyocom, Kyocera	Telecom
CMK, NOK	PCB
SIIX, Kaga, Katata, Katolec, Eiwa, Alpine	EMS, PCBA
Fujikura, Minebea, Murata, Seiko	Electronic Parts

Major E&E Investors from Taiwan

Company Group	Products
Tatung	AV
Thaixon Tech, Min Aik Technology, Acer	OA, HDD & Parts
Lite-On	Semiconductor
Delta	Telecom
CKL, Shye Feng	PCB
Cal-Comp (Kinpo Group)	PCBA, EMS
Harmony Electronic, JDC Industrial	Electronic Parts

Major E&E Investors from Korea

Company Group	Products
LG, Samsung	AV, HA
KEC	Semiconductor
Haeng Sung, Hansol	PCBA
Dongjin, Duck Sung, Sung In, Yoowon	Electrical Parts

Major E&E Investors from USA

Company Group	Products
Seagate, WD, Donaldson, Hutchinson	HDD & Parts
Maxim, Microchip, Spansion, Honeywell	Semiconductor
Innovex	PCB
Sanmina-SCI, Benchmark	PCBA, EMS

Major E&E Investors from Europe

Company Group	Products
ETA	AV
BHS, Stiebel Eltron	HA
NXP	Semiconductor
Schaffner EMC	Telecom
ABB, Fasco Motor, Schneider	Power Electric
MPO Asia	Electronic Parts

Liberal Investment Policy

- No foreign equity restrictions in manufacturing sectors
- 100% foreign ownership possible in many services
- No restrictions on foreign currency remittances
- No export requirement
- No local content requirement

Investment Incentives

TAX Incentives

- **Import duty reductions or exemptions on machinery and raw materials**
- **Corporate income tax holidays up to 8 years; additional 50% reductions for 5 years**
- **Double deduction of public utility costs**
- **Deductions for construction/installation costs infrastructure**

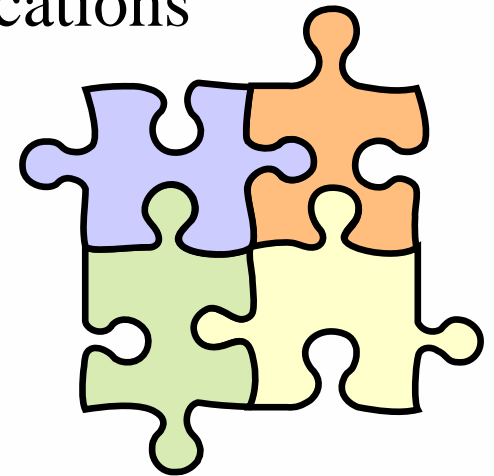
NON-TAX Incentives

- **Land ownership rights for foreign investors**
- **Permission to bring in foreign experts and technicians**
- **Work permit & VISA facilitation**

Major BOI Incentives Schemes

- Decentralization
 - Incentives vary according to zones
- Priority activities
 - 8-year corporate income tax exemption and exemption of import duties on machinery regardless of locations
- Sector-specific policies
- Optional incentive scheme
 - STI Scheme
- Special temporary measures:

“Investment Promotion Policies for Sustainable Development”



E&E Investment Policies

Objectives of E&E Investment Policies

- **To enhance competitiveness of E&E industry**
- **To promote investments along the entire value chain**
- **To attract high value long-term investments**
- **To encourage development of Skills, Technology and Innovation (STI)**

Investment projects are categorized as follows:

1. General Investment Projects
2. Priority Activity Projects
3. Special Priority Activity Projects
4. High Value Long Term Investment Projects
5. Existing Projects

1. General investment projects:

Incentives = Basic Incentives

+

STI Incentive (Optional)

***Additional tax holidays**

***No limit on tax exemptions**

General Investment Projects (2/3)

Basic incentives for E&E industry are as follows:

Exemption of corporate income tax (years)						
	Zone 1		Zone 2		Zone 3	
	Outside IE	Inside IE	Outside IE	Inside IE	Outside IE	Inside IE
Basic incentive	5	5	6	7	8	8

IE = Industrial Estates/Industrial Zones

- **Exemption from import tariffs on machinery without time limit**
- **For ICs, HDDs and parts, Material for Micro Electronics (Wafer or Thin Film Technology), upgraded existing machinery can be utilized in new investment projects**

Additional STI Incentives (Optional)

Investment and Expenditures on:

- Research and development or design
- Advanced technology training
- Funding of educational and research institutes
- Donation to Tech&HRD Fund

% of First Three Years' Sales	Additional tax holidays
1% or max. 150 million baht	1 year
2% or max. 300 million baht	2 years
3% or max. 450 million baht	3 years

Priority activity projects:

**Manufacture of: Semiconductor , HDD and parts,
Telecom equipments and parts, Medical electronic parts,
Agritronics products and parts, Industrial automation
equipments, Automotive electronic parts, Flexible Printed
Circuit and multi-layer PCB**

**Incentives = 8 years corporate income tax exemption
regardless of location**

+

STI Incentive (Optional)

***No cap on tax exemptions**

Special Priority Activity Projects

Special priority activity projects:

- **Manufacture of: Solar cell and its raw materials, Media/Platter for HDD, Flat panel display, Wafers and thin film technology**

(production process must be approved by the BOI)

- **Electronic Design, Software**

**Incentives = 8 years corporate income tax exemption
without cap (regardless of location)**

Incentives for Software Development

Software Group

1. Enterprise Software (transaction processing, business solutions)
2. Embedded Software (mobile phones, microchips)
3. Digital content, including:
 - Animation
 - Cartoons and characters
 - Computer-generated imagery
 - Web-based applications
 - Cloud Computing
 - Interactive applications
 - Games
 - Wireless location based service content
 - Visual effects
 - Multimedia video conferencing applications
 - E-learning content via broadband and multimedia

**Incentives: Duty-free machinery without time limit
8 years income tax exemption without cap**

Specific Software Procedure

1. Modeling
2. Requirement Analysis
3. Design
4. Implementation
5. Program and System Testing
6. Deployment
7. Configuration and Change Management
8. Professional Training

High value long-term E&E investment projects

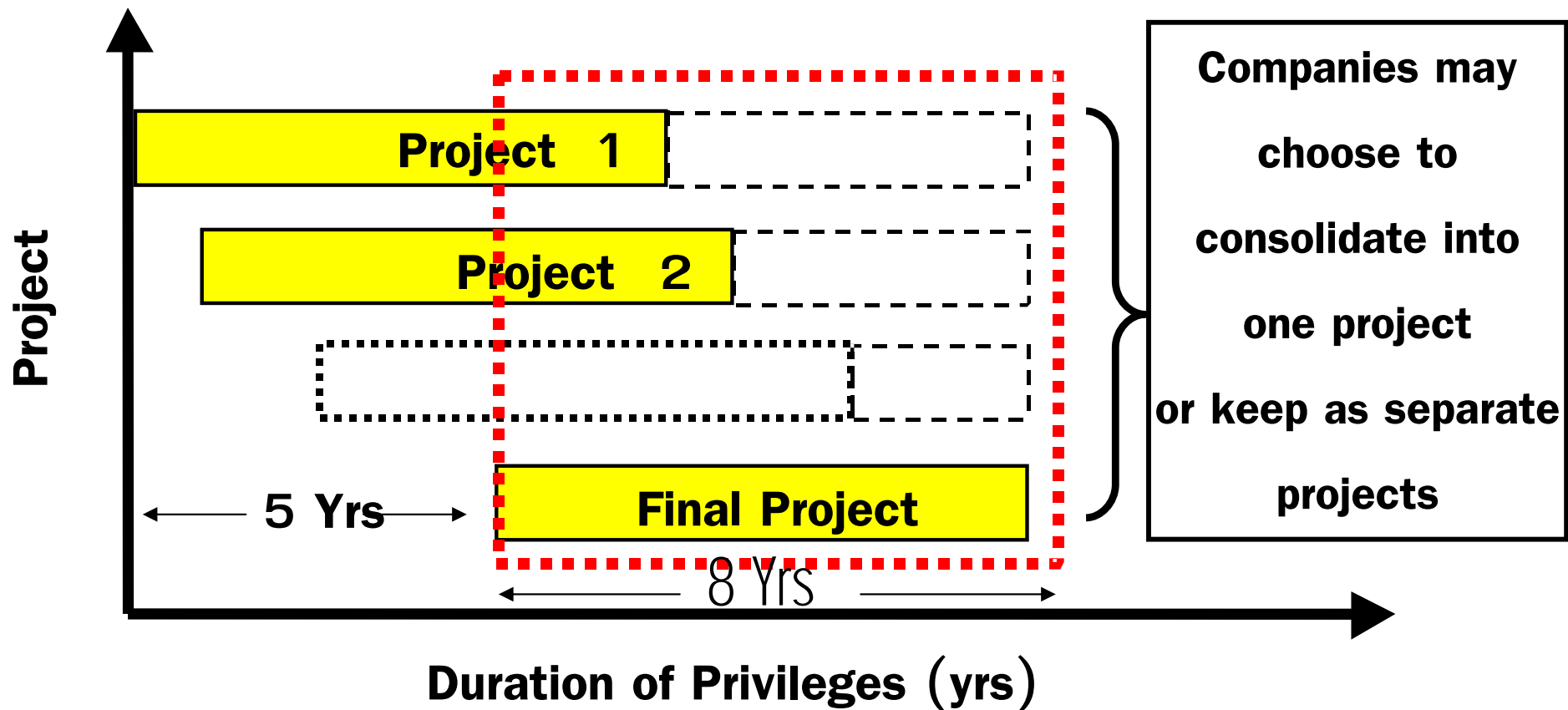
- **A five-year plan of investment projects must be submitted**
- **All projects within the plan must be in the Electrical and Electronics Supply Chain**
- **All projects/phases in the plan must be submitted by the same legal entity or have the same group of shareholders**

High value long-term E&E investment projects

- **Total investment value of all projects must be at least 15 billion baht (excluding cost of land and working capital)**
- **Final project under the plan must commence within 5 years from the start of the 1st project**
- **All initial projects will receive privileges under E&E Policy**
- **All initial projects combined with final project will get additional 8 years corporate income tax exemption**

Privileges for high value long-term E&E Investment projects (15,000 M ₪)

Extended duration of corporate income tax holidays



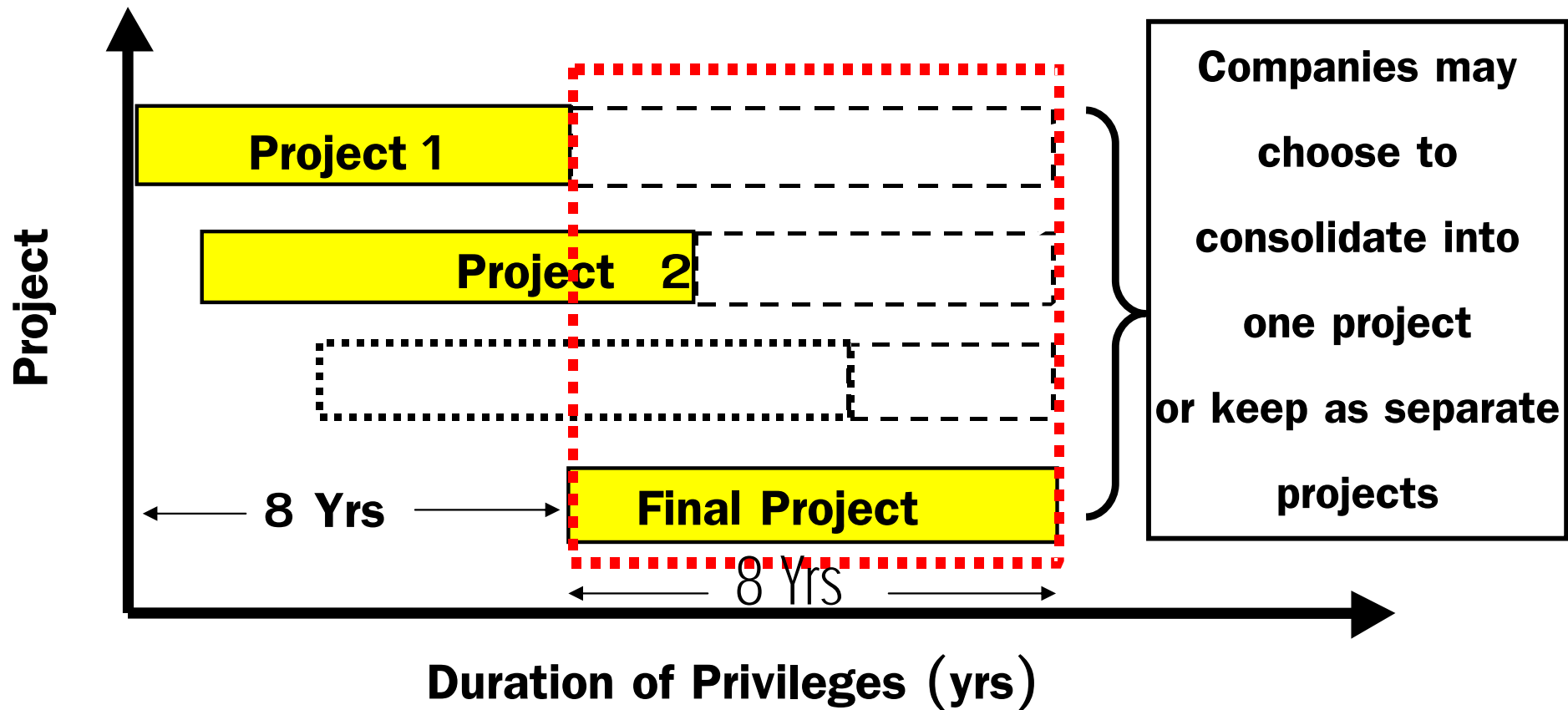
Compulsory STI expenditures for high value long-term E&E investments

All high value long-term investment projects must meet the following STI criteria during operation of final project:

STI requirements	Zone 1	Zone 2	Zone 3
<ul style="list-style-type: none"> • R&D • Advanced Technology Training • Funding educational/research institutions 	<ul style="list-style-type: none"> • 2% of total 1st 3-year sales or at least 500 million baht whichever is less 	<ul style="list-style-type: none"> • 1.5% of total 1st 3-year sales or at least 400 million baht whichever is less 	<ul style="list-style-type: none"> • 1% of total 1st 3-year sales or at least 300 million Baht whichever is less
<p>Required total STI expenditures are calculated from the first 3-year sales of the final project and previous projects combined.</p>			

Privileges for *Higher* value long-term E&E Investment projects (30,000 M ₪)

Extended duration of corporate income tax holidays



Incentives for Existing projects

- Existing projects can import machinery and equipment with duty exemption in order to enhance efficiency and technological capabilities

Update on BOI Investment Policies



New Policies for 2010-2012

“Investment for Sustainable Development”

Application submission deadline: **December 31, 2012**

Special incentives for 3 groups of targeted activities

- 1) Manufacture of eco-friendly material and product, e.g. bio plastics**
- 2) Energy saving and alternative energy**
- 3) High technology activities e.g. industrial electronics, electronic parts for vehicles, biotech, semiconductor, HDD, SSD, Electronic Design, R&D etc.**

Incentives

- Exemption of import duties on machinery**
- 8-year exemption of corporate income tax with no cap**
- 5-year 50% reduction of corporate income tax on net profit**
- 10-year double deduction of transportation, electricity and water supply costs**
- deduction from net profit of 25% of investment in infrastructure installation and construction costs in addition to normal capital depreciation**

Policy to Support Hi-Tech Industry

Eligibility

- Any Location except Bangkok
- Applicable to designated activities only
- Application submission deadline:
Dec 31, 2012

Policy to Support Hi-Tech Industry

Hi-Tech E&E Products

- 5.4 Telecom Products, Industrial Automation Equipment
- 5.5 Semiconductor, Solar Cell, HDD & SSD & Parts, Telecom Parts, Flat Panel Display, Automotive Electronic Parts, Agritronic Parts, Medical Electronic Parts
- 5.6 Material for Micro Electronics
- 5.7 Electronic Design

New Policies for 2010-2012

“Investment for Sustainable Development”

2) Measure to promote energy conservation, alternative-energy utilization or reduction of environmental impacts

Incentives

- Import duty exemption on machinery.
- 3-year corporate income tax exemption on the revenue of existing projects, accounting for 70% of the investment under this measure excluding cost of land and working capital.

New Policies for 2010-2012

“Investment for Sustainable Development”

3) Measure to promote production efficiency improvement by technology upgrade for manufacturing of new products

Incentives

- Exemption from import duties on machinery, regardless of zone.
- Exemption from corporate income tax for 3 years, regardless of zone. The benefit from this exemption may not exceed 100% of the project's investment value.

New Investment Promotion Measures for SMEs

Adding more activities eligible for investment incentives from 10 to 57 activities and removing restricting conditions to further support Thai SMEs

Incentives

- Exemption from import duties on machinery, regardless of zone.
- Exemption from corporate income tax for 8 years without Cap, regardless of zone.

New Investment Promotion Measures for SMEs

Conditions

- Minimum investment capital of 500,000 baht (excluding cost of land and working capital)
- Thai nationals must hold shares totaling not less than 51 percent of the registered capital
- The ration of debt to equity must not exceed 3:1
- The investors are allowed to use their used local machinery at the maximum value of 10 million baht and the newly invested machinery not less than 1/4 of their used machinery value
- The total investment value of the project, excluding cost of land and working capital, must not exceed 80 million baht but net fixed asset of the company must not exceed 200 million baht
- Must submit by the end of 2011

New measures to relieve impact from strong baht

Measure to promote production efficiency improvement by upgrading or replacement machinery

Incentives

- Exemption from import duties on machinery.
- 3-year corporate income tax exemption on the revenue of existing projects, accounting for 70% of the investment under this measure excluding cost of land and working capital.
- The application must be submitted before 31 December 2011

Priority Activities under Electronics Sector

- Industrial Automation Equipment
- HDD, SSD and Parts
- Media/Platter for HDD
- Semiconductor
- Electronics design / IC design
- Flexible / Multi Layer Printed Circuit Board
- Flat panel displays
- Telecommunication Products & Parts
- Agriculture Electronics and Parts
- Automotive Electronic Parts
- Medical Electronics and Parts
- Wafer and Thin Film Technology
- Solar Cell

Thank you

