





**Innovating
Force** by JMAC

Consideration Related to Engineering Human Development in Thailand Focusing on After AEC

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Abstract

Due to sudden labor cost jump and population ageing in Japan, promoting new manufacturing factory in developing country is accelerating more and more.

Recently, product rollout is started by marketing which focused on developing country market and R&D strengthening. Beginning with top-rank corporations, developing country business strengthening is advancing.

Until now, there are some type of industries such as food, electrical machinery, machine have been promoted in ASEAN, but it is said that promoting and localization for other type of industries such as medicine manufacturing, transportation/service, construction will be accelerated from now on. In ASEAN, AEC (ASEAN Economic Community) will be launched in 2015. It is said that many kinds of infrastructures will be provided, transferring of human resources, technology, products and investment etc. will go forward due to AEC. Required human resource must be changed more due to business expansion in entire ASEAN, especially Indochina peninsula by Thailand local enterprises and localization of management level of Japanese/foreign enterprises.

This presentation considered about movement of engineering human resource development in Japanese and local companies which our company Thailand is dealing with, skill set which will be required from now on, and education/training method etc. to acquire these.

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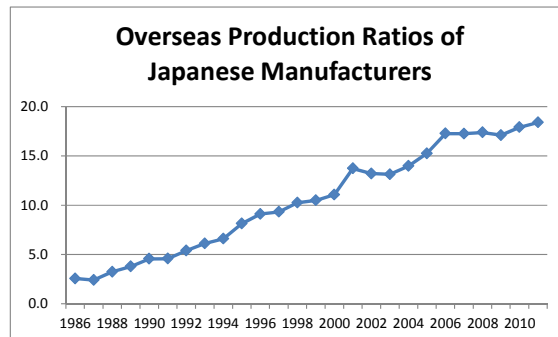
1. Introduction

- Background
- Purpose
- Method

Background



Given surging labor costs and population aging in Japan, manufacturing plants are increasingly shifting to developing countries.



Meti Report 2012

Background



Recently, product rollouts are being initiated by marketing with a focus on emerging markets and strengthening R&D. From first-tier corporations down, Japanese companies are bolstering their presence in emerging markets.

Company Name	Type of industry	Main Products	Overseas sales ratio
NIKON	Precision instruments	Camera, Stepper	86%
HONDA	Car, Motor Cycle	Car, Motor Cycle	83%
TOYOTA	Car	Car	75%
Takeda Pharmaceutical		Medicine	53%
BRIDGESTONE	Rubber	Tire	77%
KIKKOMAN	Food	Soy sauce	46%


Annual Report 2012

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Panasonic TH-L32C22 LCD TV with an emphasis on audio



<p>Overview</p> <ul style="list-style-type: none"> - Panasonic - “Sound for India” - Emphasis on audio, enabling manufacturer to reduce the number of backlights and cut costs 	<p>Target</p> <ul style="list-style-type: none"> - 32-inch, development targeted at so-called “next rich” market with monthly incomes of around ¥50,000 	<p>Value</p> <ul style="list-style-type: none"> - Prices kept under ¥50,000 - Designed with an emphasis on high-output speakers - Reduced weight to enable TVs to be wall mounted
<p>Strategy</p> <ul style="list-style-type: none"> - Using own IPSα panels with superior transmission (manufacturing key components in-house) - Maintaining ongoing partnerships with Indian distributors 	<p>Business Model</p> <ul style="list-style-type: none"> - Sales of single items 	<p>Points to Learn</p> <ul style="list-style-type: none"> - Focus on volume market - Research and marketing based on Indian customers - Product planning in line with incomes - Ongoing brand promotion and planned investment in Indian market

<http://trendy.nikkeibp.co.jp/article/column/20101018/1033383/>

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Huawei Mobile Phone Base Station



- Huawei is achieving growth through technical partnerships and by resolving individual issues facing staff responsible for switching equipment in rural China.
- In Africa, it is offering Kenyan carriers power supply solutions, with mobile phone base stations combining solar, wind and diesel power.
- Solutions are designed to maintain power supplies through various means even in markets with inferior power conditions, to prevent base stations from failing and interrupting mobile phone communication.
- Solutions are currently being offered to and used by carriers in various countries, including the UK, Singapore, Abu Dhabi and Japan as well as emerging markets such as Bangladesh.
- Good reputation based on factors such as green innovation and emergency backup power sources
- Reverse innovation

<http://toyokeizai.net/articles/-/8143?page=2>

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Background



- Thailand provides manufacturing facilities for Japanese companies and has become an important market in recent years.
- Toyota has already been operating in Thailand for 50 years.
- At present, more and more small and medium-sized Japanese companies are starting to operate in Thailand.
- Large local companies in Thailand are increasingly operating in other ASEAN countries and China.

- We provide consulting services for local companies in Thailand too, as well as Japanese companies.

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Background: Recent demand for technical human resource development in Thailand



Scale/ Global level	Demand for macro human resource development		Demand for localization		
	Japanese companies	Local companies	Core human resources (future management)	Leaders	Local operators (including staff from surrounding countries)
- Small/medium companies - Immediately after starting operations in Thailand	- Japanese core staff effectively manage local staff	- Simple training starting with basics - Able to train new staff immediately if existing staff leave - Required to speak Thai	(Japanese) - Pre-assignment training in Japan + post-assignment support	(Thai) - Basics of management - Basics of proprietary technologies - Assistance with induction training - Required to speak Thai	(Thai +α) - Basics of proprietary technologies - Assistance with induction training - Required to work in native language
- Established medium companies - Operating in Thailand for around 10 years (but not yet actively expanding into other ASEAN countries)	- Replacement human resources trained immediately if mid-level local staff quit	- Incorporate and combine best aspects of European, American and Japanese management - Expanding business into other ASEAN countries	(Thai) - Basics (e-learning) - Classes (latest examples) - Practical innovation - Only required to speak English	-	-
- Large companies - Operating in Thailand for 15 years or longer - Operating in or actively expanding into entire ASEAN region	- Local staff act independently - Expanding business into other ASEAN countries	-	-	-	-

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Purpose



-This report considered about movement of engineering human resource development in Japanese and local companies which Thailand country and our company is dealing with, skill set which will be required from now on, and education/training method etc. to acquire these.

-This report is helpful for Lessons learned for Human Resource Development in Thailand.

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Method



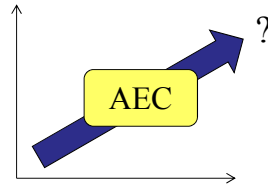
- By taking theoretical future requirements for core human resource development in the technical sector in Thailand...
- And comparing them against trends in actual human resource development at individual companies, based on our experience with consulting, training and business activities in Thailand...
- We can recommend the right approach to improve core human resource development in the future.

2. Trends affecting Thailand and the ASEAN region, and essential core human resource development programs for the future

After AEC

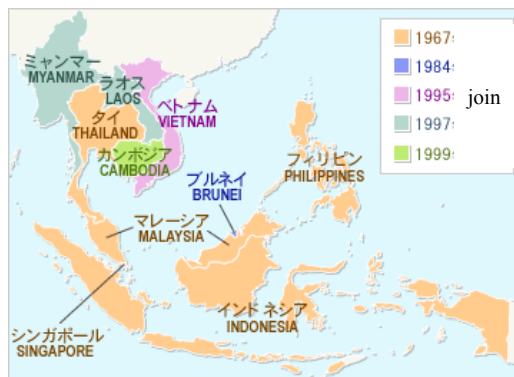


- ASEAN takes a good look at the conclusion of AEC: ASEAN Economic Community
- ASEAN has started an approach to action plans which cross borders.



- ASEAN is good market for Japanese companies.
- But Japanese companies are not good at understanding another countries culture and make the product they want.

What is AEC? AEC members also understand it!



- ASEAN Community has three pillars in ASEAN Development
- ASEAN Political-Security Community
- ASEAN Economic Community
- ASEAN Socio-Cultural Community
- AEC is ASEAN Economic Community.
- AEC is the plan to liberalize tariffs, investments and the flow of people by December 31, 2015.



What is AEC?



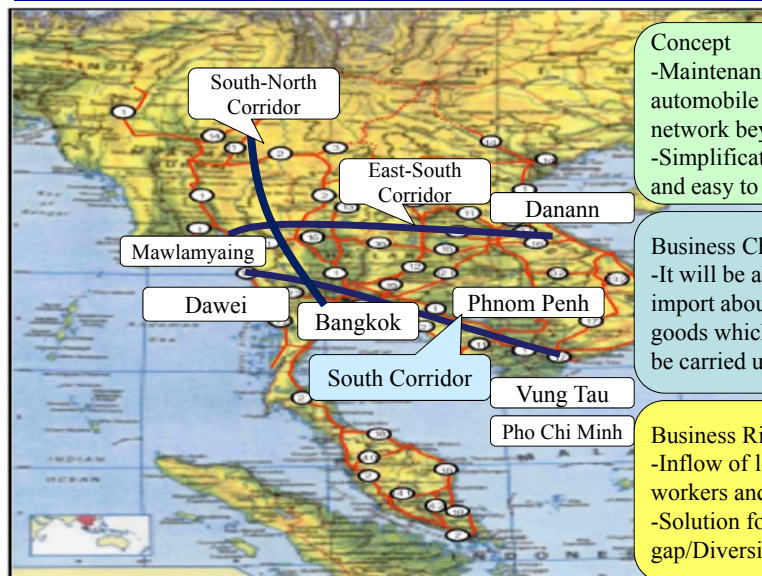
-AEC action plans are stated in Blue Print [1] and more details of infrastructure plans are **Master Plan on ASEAN Connectivity [2]**.

PJT Theme	overall
A. Physical Connectivity	
ASEAN Highway Network	23 designated routes, 38,400km
Singapore-Kunming Rail Link	Railway Construction(-2020)
ASEAN Broadband Corridor	ICT Networks
Malaka-Pekan Baru Interconnection	High Voltage Direct interconnection
West Kalimantan-Sarawak Interconnection	High Voltage Direct interconnection
Roll On/Roll Off Network and short-sea shipping	Research for Roll On/Roll Off (Maritime)

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ASEAN Highway Network



Concept
 -Maintenance of the automobile distribution network beyond a country
 -Simplification of Visa issue and easy to move the people

Business Chance
 -It will be able to export and import about the workers and goods which were not able to be carried until now.

Business Risk/Issue
 -Inflow of lower-paying workers and a product gap/Diversity

Fig. 1A : ASEAN Highway Route Number (MAINLAND)

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Scenery of Dawei Special Economic Zone (205km²)



- Construction which progresses at a quick pace in Early Industry Zone.
- Annual precipitation: 5000mm



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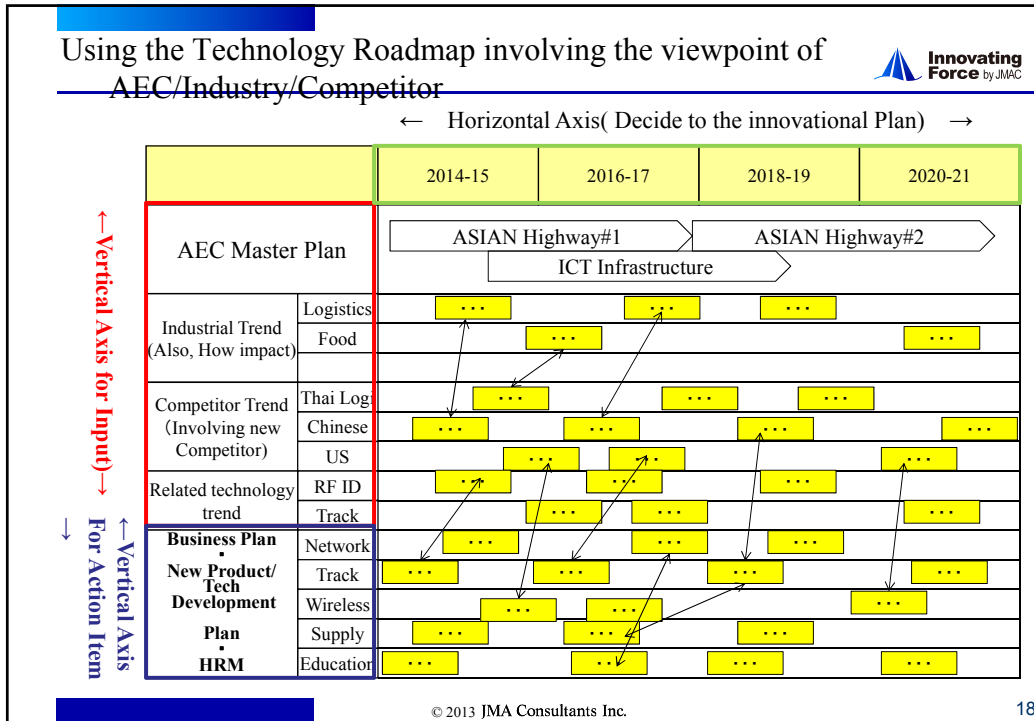
Impact on Japanese maker's product development subsequent to the conclusion of AEC.




- Recently, Japanese companies have accelerated an advance into ASEAN actively seeking business opportunities. :China+1
- Thailand major industries: Automobile and Foods
- From now, There will be big influence from AEC and Thailand+1 for all industries.
- So, Japanese industries must think about ASEAN development, people, market, culture and so on.

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AEC Connectivity Master Plan / Industry Matrix (Examples)




The following examples illustrate the impact on individual industries and scope for new business expansion, based on the AEC Connectivity Master Plan and an industry matrix. Core human resources will require the necessary skillset to independently manage new businesses and organizations such as these.

	Automotive	Food	Electronics	Medical	Logistics
ASEAN Highway Network	- Vehicles and parts with superior reliability at high speeds	- Increased food imports and exports throughout region	Charging stations for electric vehicles	- Patients able to visit hospitals with specialist capabilities in other countries	- Establishment of temperature controlled depots
Singapore-Kunming Rail Link	- Option to manufacture railway parts + increased reliability/durability	- Freezing technologies - Halal certified products	- Railway vehicle plants - Hybrid trains		- Increase in shipping by rail - Rail-related employment
ASEAN Broadband Corridor	- Automatic control using navigation systems, GPS and ITS	- Access to data on stock levels in rural areas/food warehouses	- Design, manufacture and procurement of parts for mobile phone base stations, and transmission and multiplex equipment	- Remote medical systems - Cloud systems - Big data analysis	Real-time access to warehouse data
Malaka-Pekan Baru Interconnection	- Construction of industrial estates	- Construction of factories to ensure food supplies in areas surrounding industrial estates	- Development and manufacture of solutions for substations - Opportunities as part of substation construction work	- Increased installation of CT, MRI and other such medical systems	- Shipping via hybrid/electric vehicles
West Kalimantan-Sarawak Interconnection	- Increased demand for hybrid/electric vehicles				
Roll On/Roll Off Network and short-sea shipping	- Vehicles able to easily board small ships - Shipping parts by sea	- Development of frozen and refrigerated food market	- Hybrid ships		- Shipping of frozen and refrigerated food

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HRM needs in Thailand Future

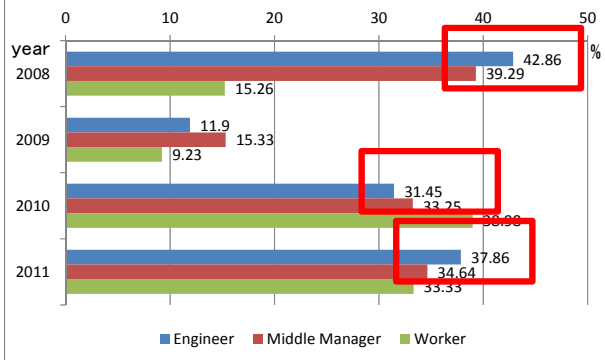


- A low unemployment rate (1% or less)
- The employment of an engineer is difficult.
- A high quality technician's shortage

So, necessity of the Training program for

- Engineer
- Middle Manager
- Next Core!!


Difficulty of adoption in Thailand



Year	Engineer (%)	Middle Manager (%)	Worker (%)
2008	42.86	39.29	15.26
2009	11.9	15.33	9.23
2010	31.45	33.25	36.98
2011	37.86	34.64	35.33

-APIR-GRIPS Research Project(2013)
 -JETRO: The Japanese corporate activity survey in Asia and Oceania
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Required Skillset and Training Program for Core Human Resources at Large Companies



Innovation

Technology Roadmap

↕

AEC / Industry Matrix

↕

Mid-term Business Plan


Skillset of Engineering Core Human Resources


Training Program


- Basics (Distance/e-learning)
- Classes (latest examples)
- Practical innovation
- Training provided in English

Operation

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Required Skillset and Training Program for Core Human Resources at Large Companies (Examples) (Preliminary assignment: [Distance/e-Learning] Logical Thinking Course)			
		Details	
1 st session	- Understanding Management Expectations - Creating a Healthy Sense of Urgency	■ Management expectations - Breaking down and understanding expectations	
		■ Outline of innovative initiatives in best practice - Samsung, Huawei, Haier, Ericsson, Terumo, Komatsu, Daikin Industries, Ajinomoto, etc.	
2 nd session		■ Summary of points to learn from best practice (Assignment: Gather information on your own company/division's mid-term plan)	
		■ Summary and presentation of your own department's initiatives under your company/division's mid-term plan	
3 rd session	- Business Strategy 1	■ Summary of innovation priorities (Assignment: Business Strategy Course)	
		■ Business strategy basics - SWOT, business models, new businesses	
4 th session	- Business Strategy 2	■ Case study: Planning a business model (Assignment: [Distance Learning] Marketing Course)	
		■ Customer focus and marketing - Defining your customers, identifying potential demand, marketing products/technology	
		■ Business planning based on AEC trends	
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Required Skillset and Training Program for Core Human Resources at Large Companies (Examples)			
		Details	
5 th session	- Business Strategy 3	■ Technology strategy basics - Technology stock-taking and technology roadmaps	
		■ Formulating a technology roadmap based on trends at major customers (Assignment: [Distance Learning] Accounting Course)	
6 th session	- Knowing Your Finances	■ Finance and accounting as a key part of management - Management priorities in terms of finance and accounting, analyzing the current standing of your own company/division	★ Meeting between 6 th and 7 th sessions, to report back to management
		■ Summary of your company/division's financial priorities	
7 th session	- Cross-Divisional Innovation and Location Strategy	■ Exploring products, technologies and operations on a cross-divisional basis - Utilizing your customer base and the results of technology stock-taking	
		■ Location strategy - Perspectives on consolidating facilities in different locations	
8 th session	- Global Focus	■ Exploring consolidation of your company/division's facilities and related priorities	
		■ Key points for promoting globalization - Diversity, global human resource development, change of mission	
9 th session	- Alliances and Outsourcing	■ Case study: Global roadmaps	
		■ Key points for forming alliances and outsourcing operations - Patterns and key points when forming alliances/outsourcing operations, ODM/EMS management, case study	
10 th session	- Conclusion	■ Case study: Alliances and outsourcing	
		■ Individual team reports, practice and advice - Evaluation from both top management and frontline perspectives	
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**Progress with Curriculum at Individual Companies
(Including Preparations)**

	Details	Category	Company A	Company B	Company C
Creating a Sense of Urgency	Understanding best practice	Business	✓	✓	✓
	Your role and value	Management	✓	✓	✓
Business Strategy	Business strategy basics	Business	✓	✓	✓
	Customer focus and marketing	Innovation	✓	✓	✓
	AEC business planning	Innovation		✓	
	Technology strategy basics	Business	✓		
Knowing Your Finances	Finance and accounting as a key part of management	Management	✓	✓	✓
Cross-Divisional Innovation and Location Strategy	Exploring cross-divisional operations Location strategy	Business	✓	✓	
Global Focus	Promoting globalization	Business	✓	✓	✓
Alliances and Outsourcing	Forming alliances and outsourcing operations	Business	✓	✓	✓
Conclusion	Proposing innovations to top management	Independence	✓	✓	✓
Distance Learning/ E-learning	Business Strategy	Business	✓	✓	✓
	Accounting	Business	✓	✓	✓
	Marketing	Innovation	✓	✓	✓

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3. Consideration

- Key differences from core human resource development programs at Japanese companies include the following.
 - Training provided in English
 - Training curriculum relevant to AEC
 - Emphasis on innovation
- Until now, Japanese companies have tended to use the following approach to local core human resource development.
 - Training members of staff able to speak Japanese in Japan
 - Getting a local training organization to train other members of staff in Thailand

This program is highly regarded because it involves providing training in English at your own company, meaning that Japanese members of staff can also understand.

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4. Conclusion



- Core human resources at each company are expected to acquire the following:
 - Business skills
 - Management skills (Also, Technology Management)
 - Innovation skills
 - Independence
- The training program is designed to teach the basics through distance learning/e-learning, introduce examples of best practice through classes and case studies, develop a healthy sense of urgency, and enable participants to undertake innovative activities within their own company/division, through an effective combination of classes and practical tasks.

4. Conclusion



- This presentation has reported on progress with the training of local core human resources working for Japanese companies in Thailand, as part of a recently launched initiative at our branch in Thailand.
- Looking ahead, training local resources in the attractive ASEAN region and Thailand will remain a key priority, from the standpoint of both markets and manufacturing facilities.
- We intend to continue with research into training local core human resources in the ASEAN region and Thailand in the future.
- We also intend to carry out comparative research into effective training for core human resources in individual countries.

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