The Training on
IT Passport Certification Exams for IT Instructors
24 MAY 2010 AM SESSION

INTRODUCTION

!

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tokyotimes.org

Year	Total	0 – 14 years old	15 – 64 years old	65 years and above	%
2001	127,291,000	18,283,000	86,139,000	22,869,000	17.97
2002	127,435,000	18,102,000	85,706,000	23,628,000	18.54
2003	127,619,000	17,905,000	85,404,000	24,311,000	19.05
2004	127,687,000	17,734,000	85,077,000	24,876,000	19.48
2005					
2006	127,770,000	17,435,000	83,731,000	26,604,000	20.82
2007	127,771,000	17,293,000	83,015,000	27,464,000	21.49
2008	127,692,000	17,176,000	82,300,000	28,216,000	22.10
2009	127,510,000	17,011,000	81,493,000	29,005,000	22.75
2010	127,390,000	16,940,000	81,180,000	29,270,000	22.98

(**Source:** http://www.stat.go.jp/english/data/jinsui/tsuki/index.htm)
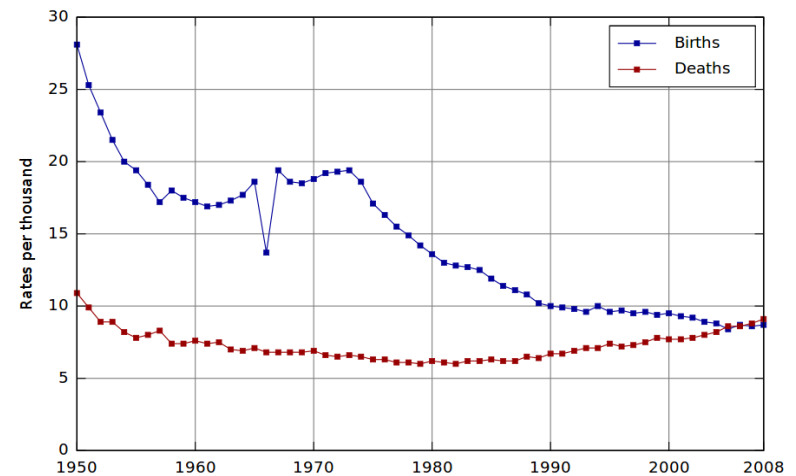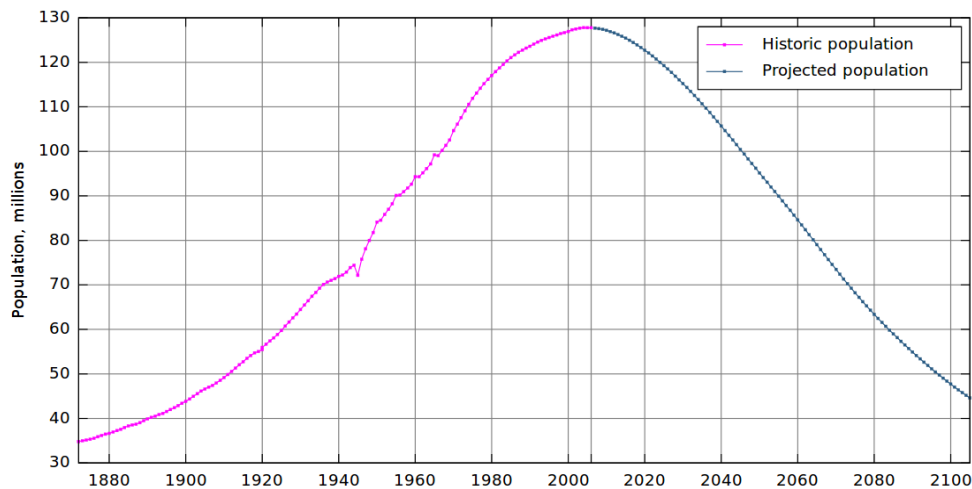

According to a study conducted by the UN Population Division which was released in 2000, for Japan to address its aging population problem thus maintain its worker-to-retiree ratio, it would need to either raise its retirement age to 77 or accept 10 million immigrants annually between 2000 and 2050.

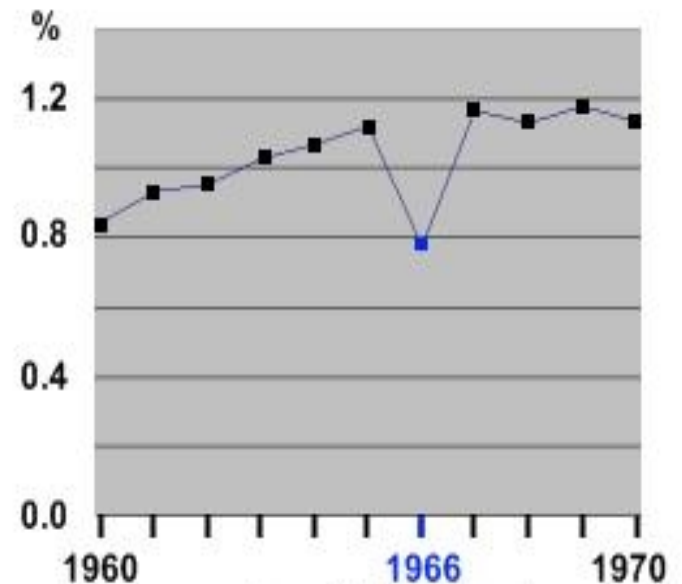(Source: http://en.wikipedia.org/wiki/Aging_of_Japan)

2000

馬

ひのえうま

丙午

The Fire Horse
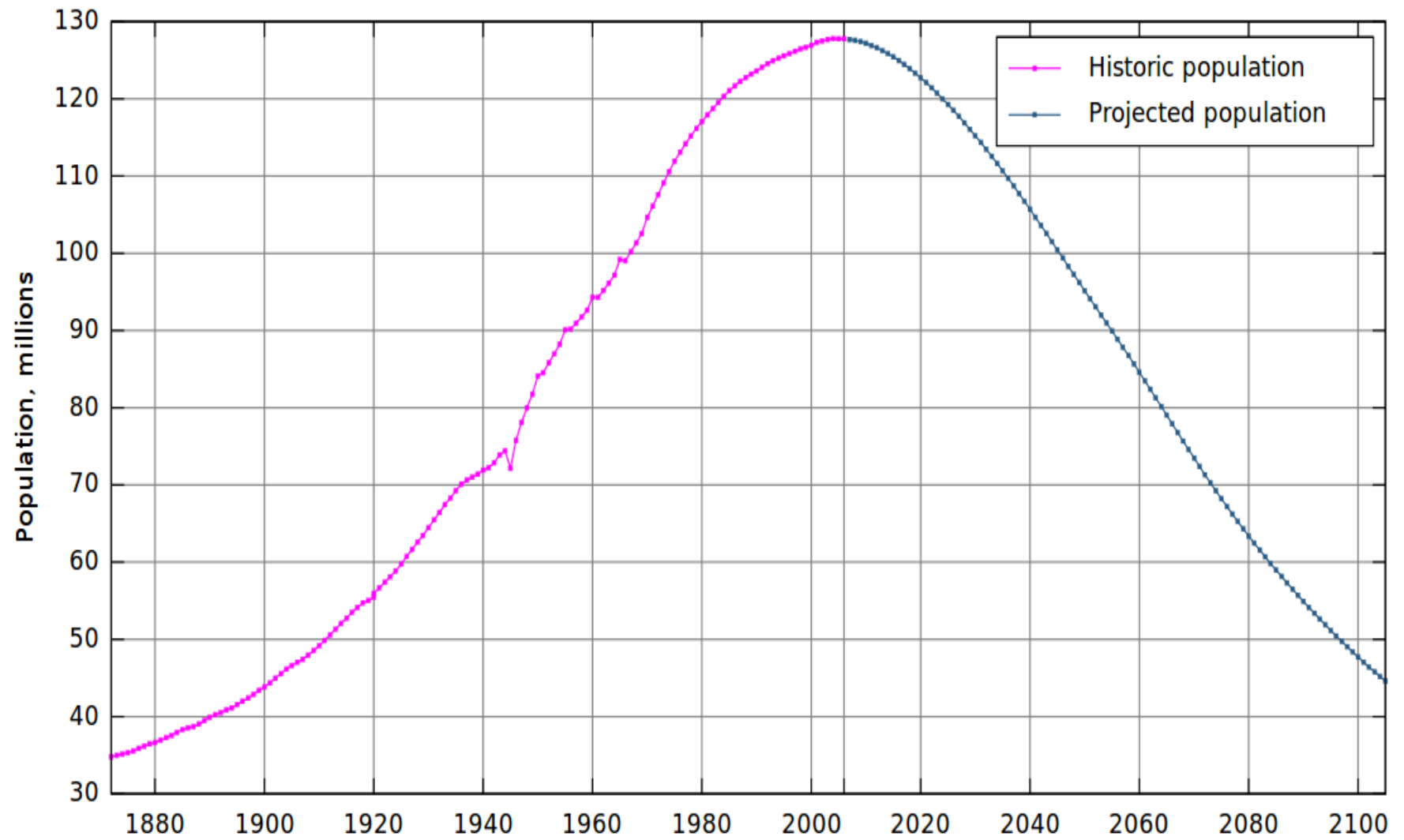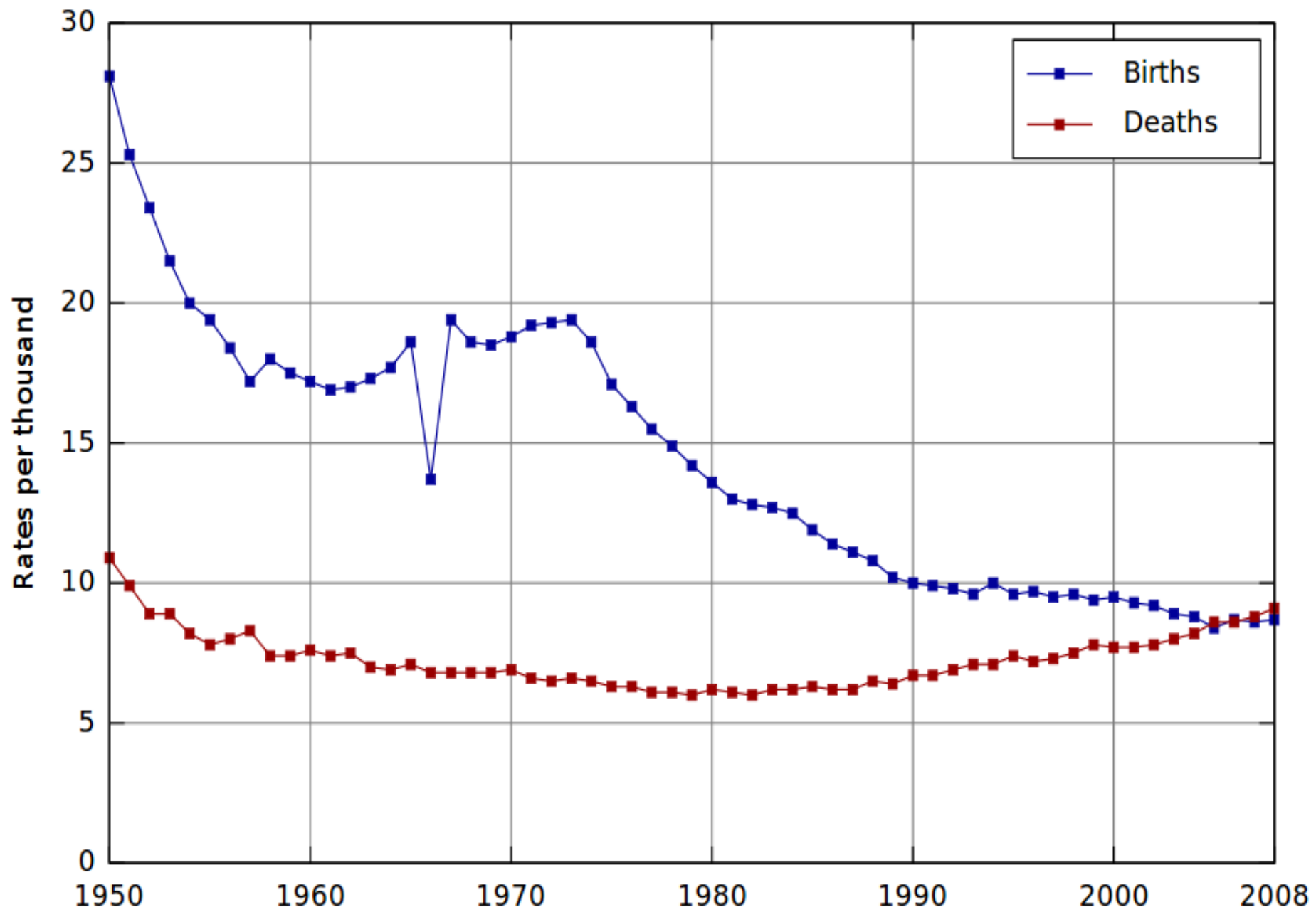
According to the OECD (http://stats.oecd.org/), the annual percentage growth rate in Japan twixt 1960 and 1970 was:

Year	Growth Rate
1960	0.84%
1961	0.93%
1962	0.95%
1963	1.02%
1964	1.06%
1965	1.12%
1966	**0.77%**
1967	1.16%
1968	1.12%
1969	1.17%
1970	1.13%

(Post-war poverty resulted in a steep drop prior to 1960, followed by sustained growth as the country recovered. The rate peaked in the early 70's and has declined ever since. In 2006 the growth rate was zero and it continues to fall. The 2020 rate is projected to be -0.5%.)
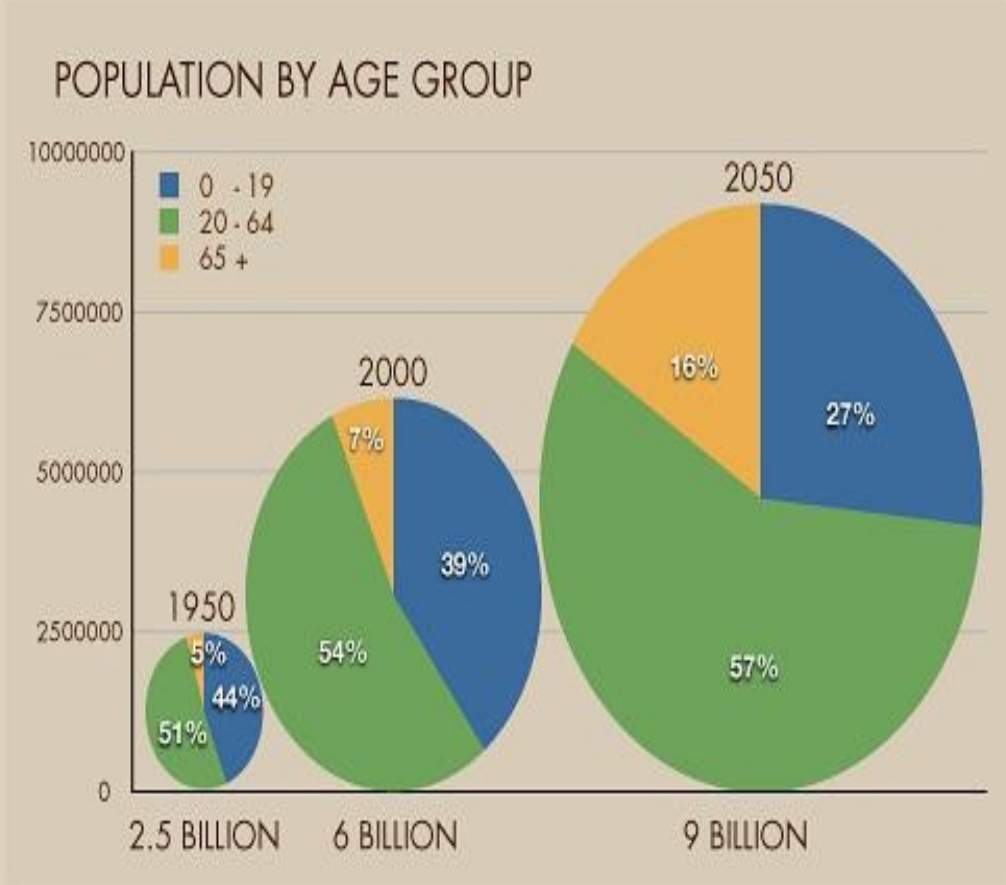
Girls born in 1966 became known as 'Fire Horse Women' and are reputed to be dangerous, headstrong and generally bad luck for any husband. In 1966, a baby's sex could not be reliably detected before birth; hence there was a large increase of induced abortions and a sharp decrease in the birth rate of 1966 in Japan.
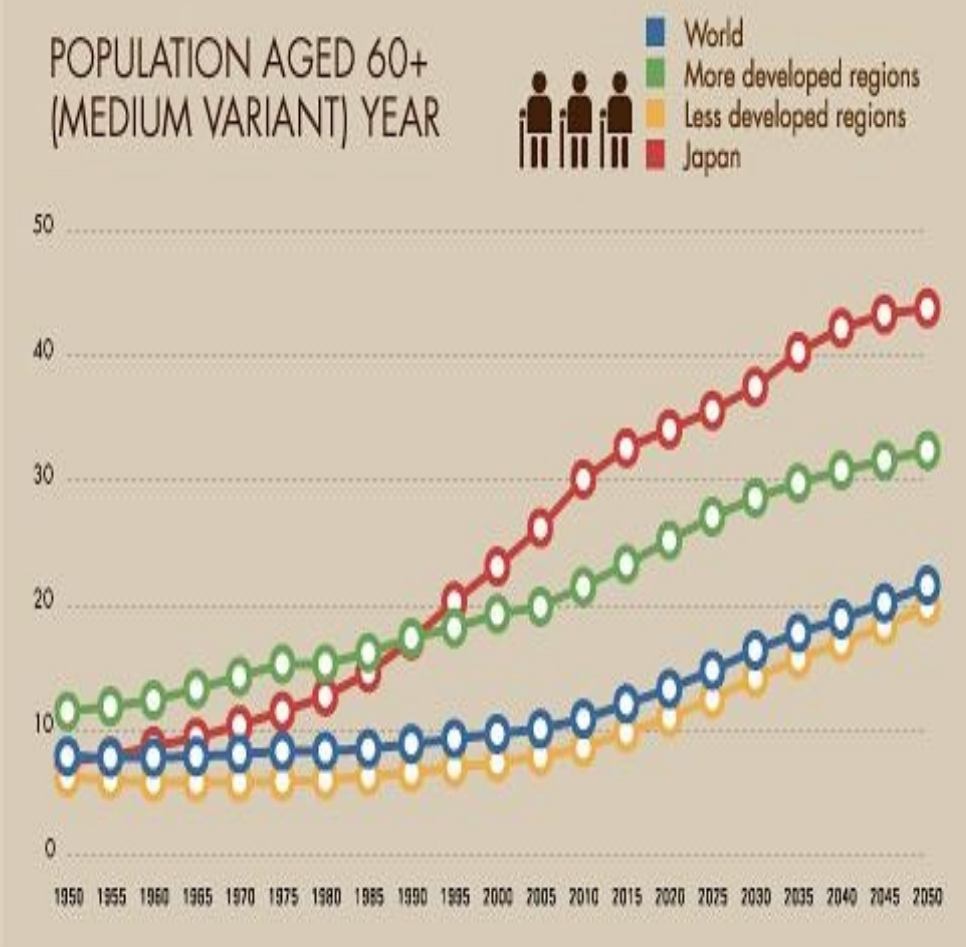
Our Ageing World

Every month, more than a million people turn 60.

The world is ageing rapidly. The number of people aged 65 and over will double as a proportion of the global population, from 7% in 2000 to 16% in 2050. By then, there will be more older people than children (aged 0–14 years) in the population for the first time in human history.

POPULATION BY AGE GROUP

Legend:
- 0 - 19
- 20 - 64
- 65 +

1950 — 2.5 BILLION: 44%, 5%, 51%
2000 — 6 BILLION: 39%, 7%, 54%
2050 — 9 BILLION: 27%, 16%, 57%

POPULATION AGED 60+ (MEDIUM VARIANT) YEAR

Legend:
- World
- More developed regions
- Less developed regions
- Japan

Ageing affects all societies - high-income as well as low and middle-income societies - but at a different pace.

The same demographic ageing process that unfolded over 115 years in France, took only 26 years in Japan and will be 21 years in Brazil.

2. Japan "shares" its ITEE (IT Engineers Examination) Standards with Asian countries...

October 2000

economic ministers of ASEAN, together with the People's Republic of China, the Republic of Korea, and Japan convened in Chiang Mai, Thailand and agreed to promote a program to recognize **Common Skills Standards in the IT field** across Asia.

↓

November 2005

Information Technology Professional Examination Council (ITPEC) was established by representatives from Japan, Philippines, Malaysia, Mongolia, Myanmar, Thailand, and Vietnam.

↓

as of November 2007

JITEC-IPA of Japan has signed mutual recognition agreements with eleven partners across Asia.

This mutual recognition of a Common Skill Standards for IT Engineers is intended to *facilitate cross-border cooperation and exchange of IT human resources in the region*.
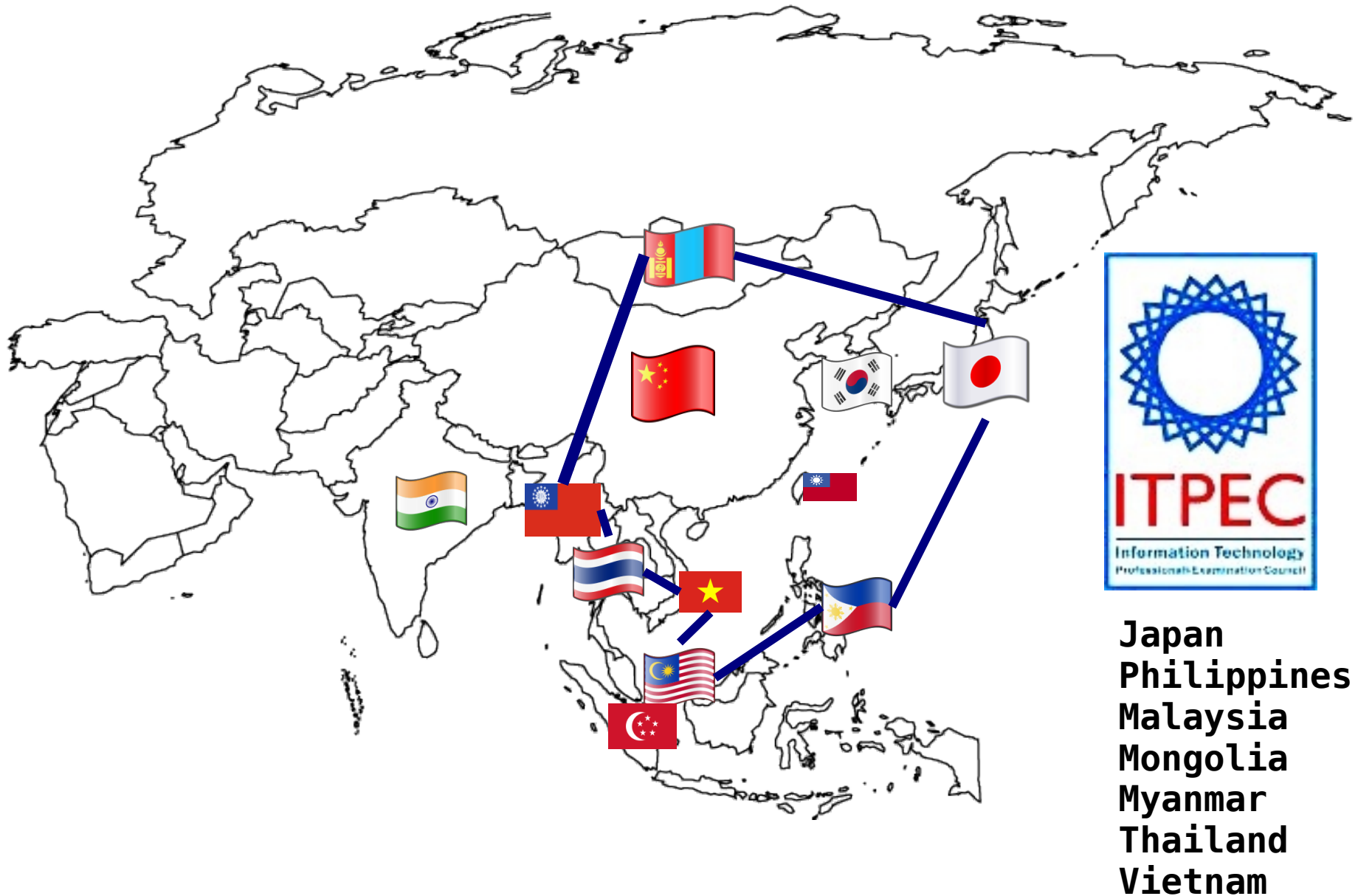
(Source: **http://www.jitec.jp/2_01english/03mutualrecognition.html**)

Japan
Philippines
Malaysia
Mongolia
Myanmar
Thailand
Vietnam

(Source: http://www.jitec.jp/2_01english/03mutualrecognition.html)

5. Why PHILNITS Certification?

• PHILNITS Certification is JITEC-IPA Japan ITEE Certification (IT Engineer Examinations) and ITPEC Certification

• Japanese companies recognize ITEE Certifications and <u>certificate is recognized in seven (7) countries including Japan</u>

• PHILNITS Certified IT Engineers are given <u>preference to training programs in Japan</u> or in the Philippines conducted by the Association of Overseas Technical Scholarship (AOTS), Center of the International Cooperation for Computerization (CICC), etc.

6. ITEE (Information Technology Engineers Examination)

Examination Categories

Common Career/Skill Framework — Information systems/Embedded systems — Vendor/User — Independent

Level	Common Career/Skill Framework	Examinations
Level 4	Advanced-Level Knowledge/Skills	Advanced-Level Examination: Information Technology Strategist Examination (ST), Systems Architect Examination (SA), Project Manager Examination (PM), Network Specialist Examination (NW), Database Specialist Examination (DB), Embedded Systems Specialist Examination (ES), Information Security Specialist Examination (SC), Information Technology Service Manager Examination (SM), Systems Auditor Examination (AU)
Level 3	Applied Knowledge and Skills	Applied Information Technology Engineer Examination (AP)
Level 2	Fundamental Knowledge and Skills	Fundamental Information Technology Engineer Examination (FE)
Level 1	Fundamental Knowledge Required of All Workers	Information Technology Passport Examination (IP)

(Source: **http://www.jitec.ipa.go.jp/2_01english/02examcategories.html**)

7. ITEE Applications and Successful Examinees

Applicants and Successful Examinees
- Applicants
- Successful Examinees
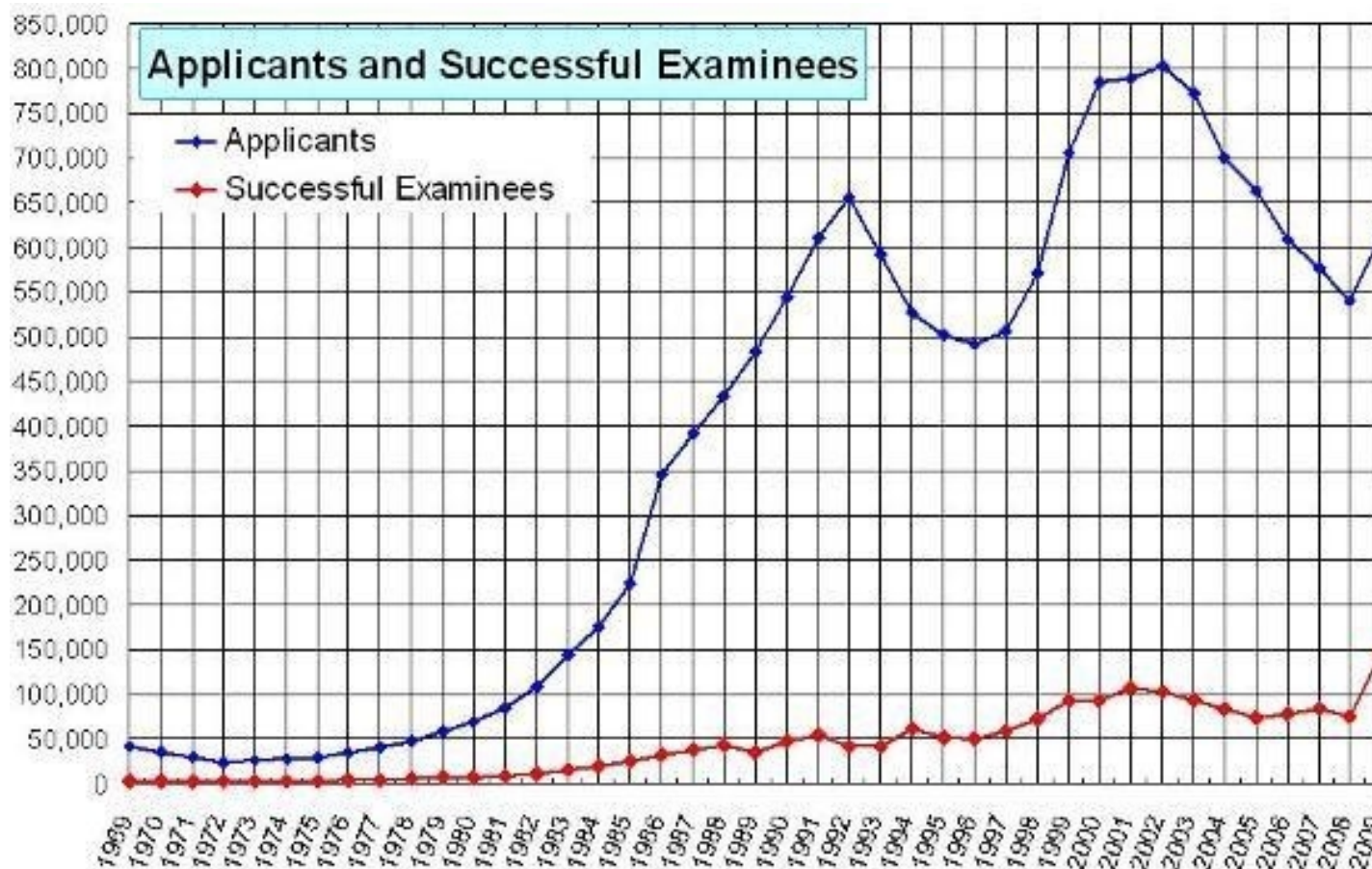
As of April 2010, the examination has been taken by over 15.40 million applicants, approximately 1.7 million of whom passed successfully (11.04%)

April 2009 IT Passport Exams in Japan

Number of Applicants   46,845
Number of Exam Takers   39,131
Number of Successful Applicants   28,540
Examination Passing Rate   72.90%

IPA®
独立行政法人 情報処理推進機構
INFORMATION-TECHNOLOGY PROMOTION AGENCY, JAPAN

8. ITPEC April 2006 – April 2009 FE Statistics

Country	# Examinees	# Certified	% Passed	% Passed to Overall Totals # Examinees	% Passed to Overall Totals # Certified
Malaysia	573	35	6.11	0.29	2.47
Mongolia	403	29	7.2	0.24	2.05
Myanmar	689	41	5.95	0.34	2.89
Philippines	3923	487	12.41	4.02	34.37
Thailand	3530	313	8.87	2.58	22.09
Vietnam	3002	512	17.06	4.22	36.13
Overall Totals	12,120	1,417			

results of the Common Fundamental Examinations for IT Engineers (FE) given in the period April 2006 – April 2009 (figures only as available in ITPEC website: http://www.itpec.org)
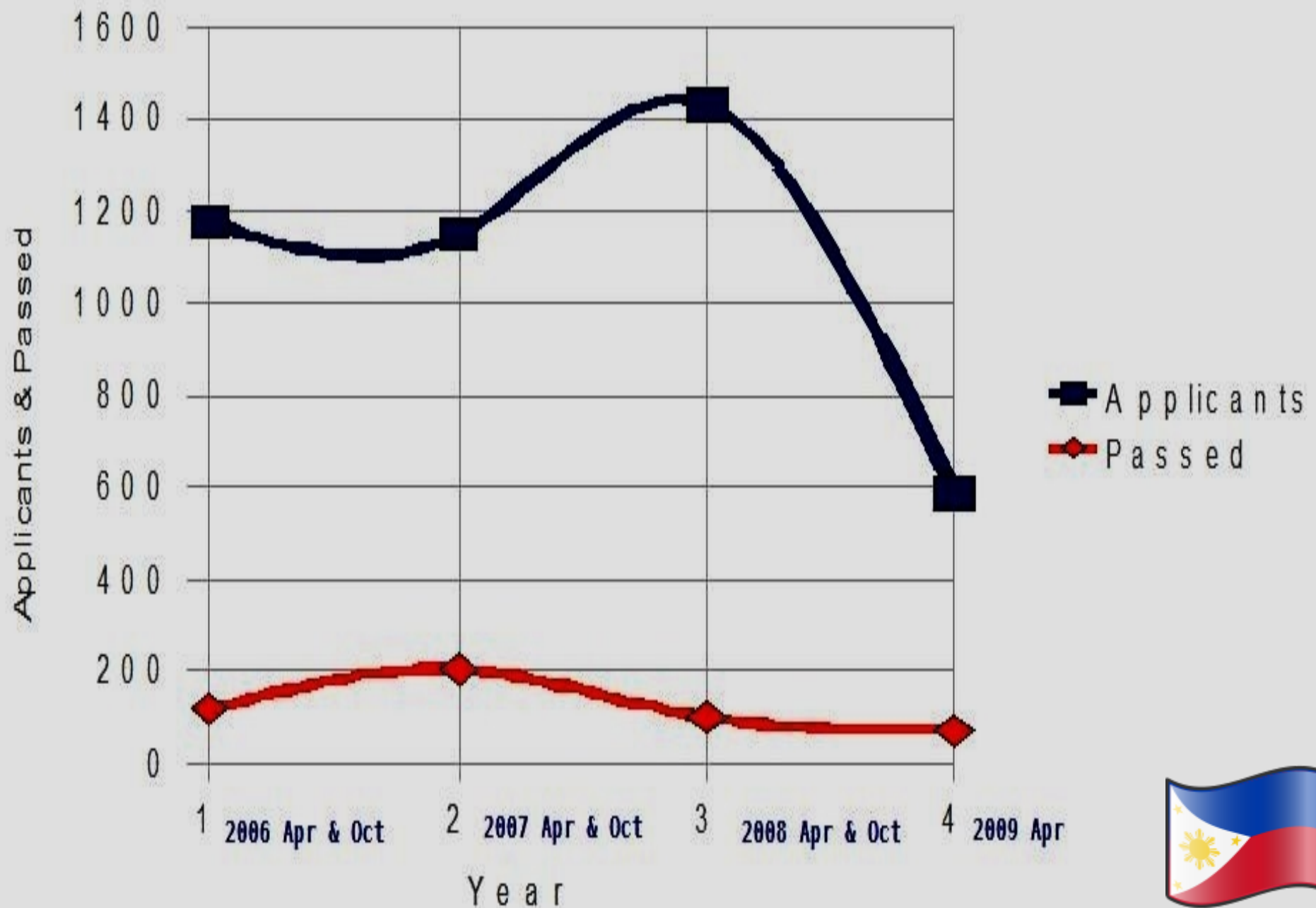
9. ITPEC April 2006 — April 2009 SW Statistics

| Country	# Examinees	# Certified	% Passed	% Passed to Overall Totals # Examinees	% Passed to Overall Totals # Certified
Malaysia	-	-	-	-	-
Mongolia	-	-	-	-	-
Myanmar	-	-	-	-	-
Philippines	44	17	38.64	2.90	58.62
Thailand	105	3	2.86	0.51	10.34
Vietnam	437	9	2.06	1.54	31.03
Overall Totals	586	29			

results of the Common Software Design and Development Engineers Certification Examinations (SW) given in the period April 2006 — April 2009
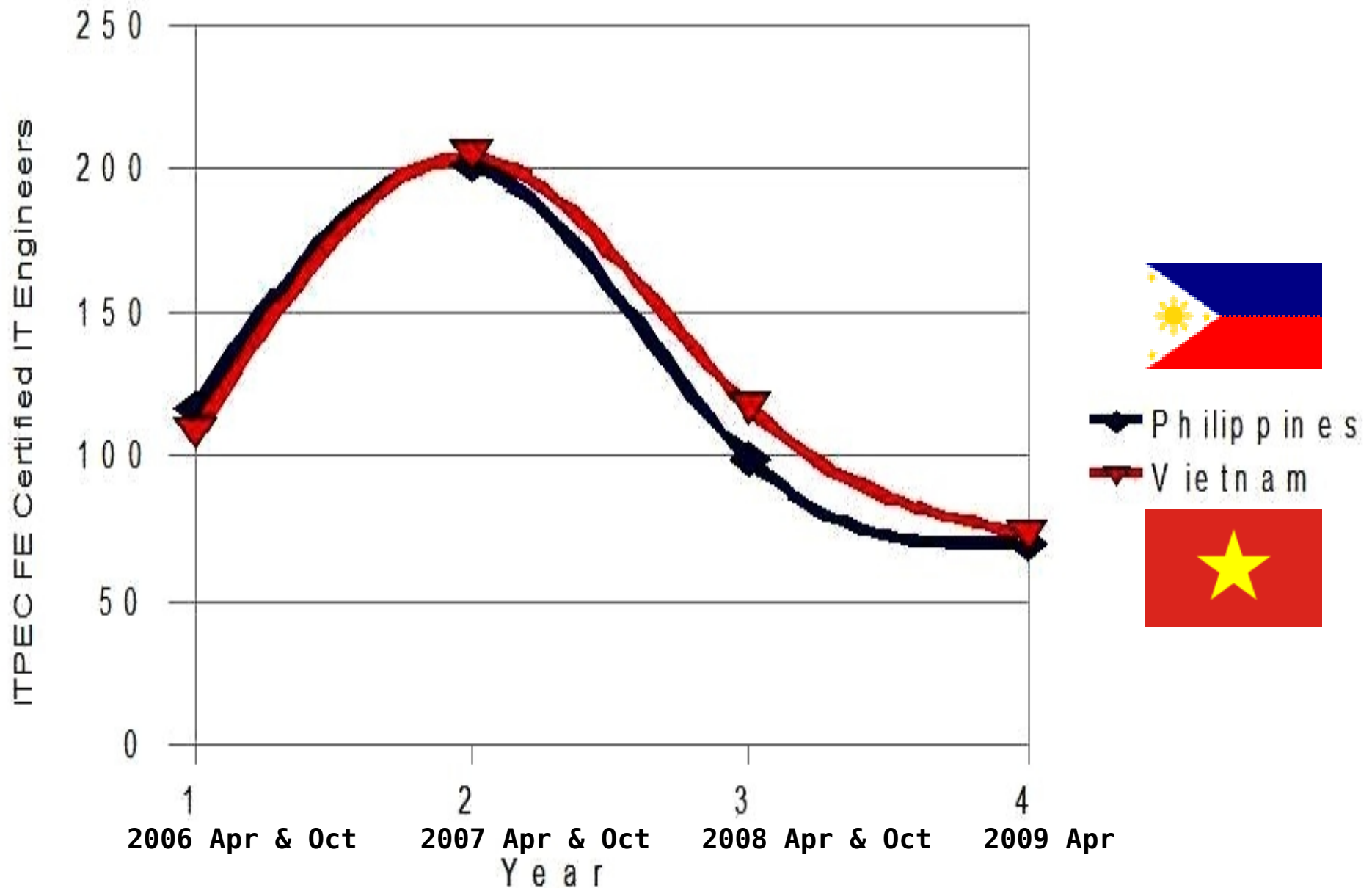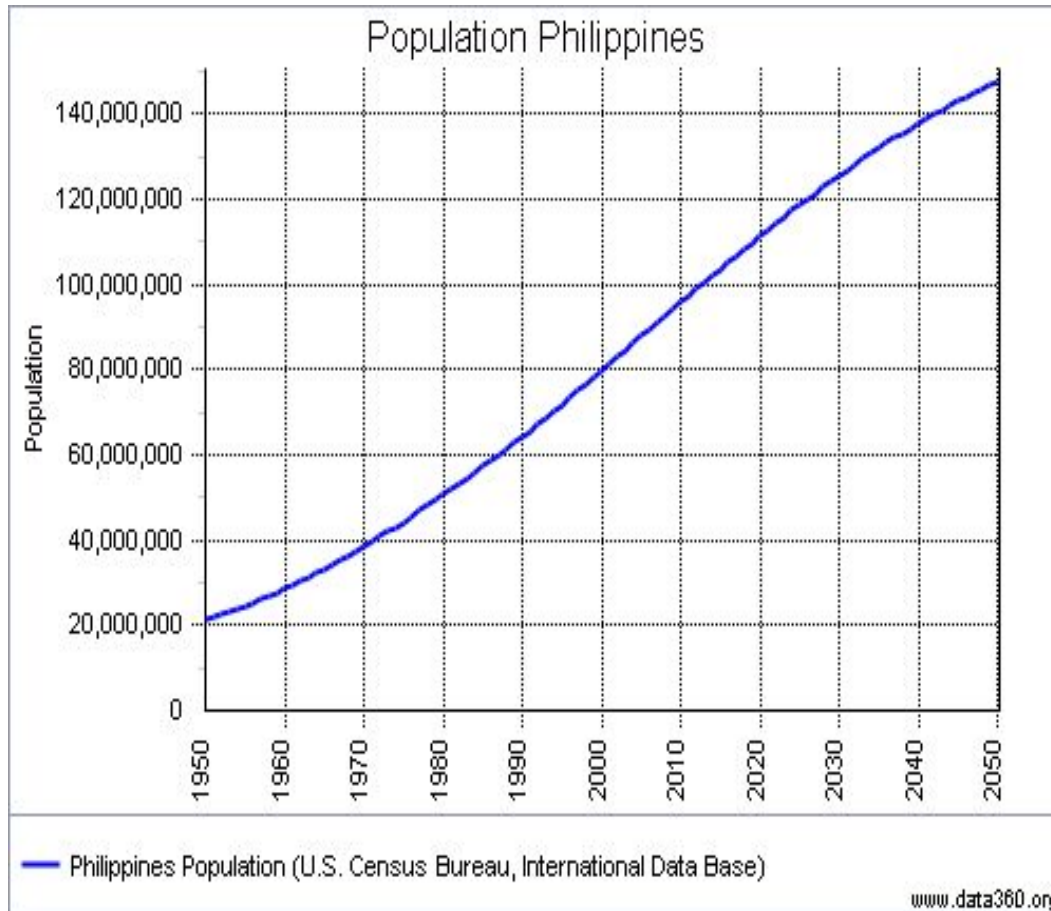(figures only as available in ITPEC website: http://www.itpec.org)
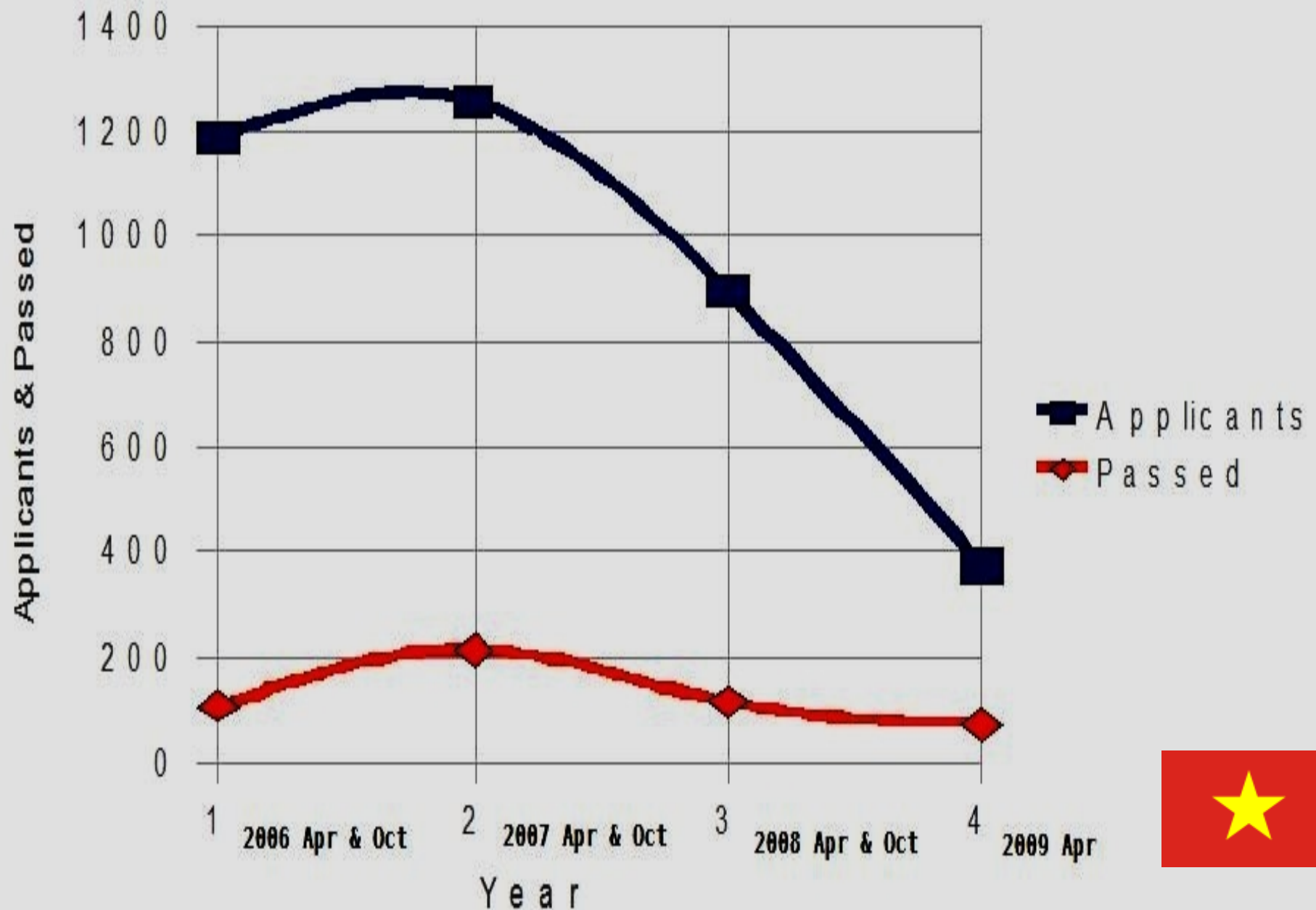
12. ITPEC April 2006 – April 2009 FE Certified IT Engineers – Philippines & Vietnam

We are a young and growing population and highly competent in **English** language.

Population Philippines

Philippines Population (U.S. Census Bureau, International Data Base)

www.data360.org

Population   **#12 in the world**
TOTAL   **97,976,603**
0 - 14 yrs old   **35.2%**
15 - 64 yrs old   **60.6%**
65 and over   **4.1%**

(**https://www.cia.gov/library/publications/the
-world-factbook/geos/rp.html**)

Year 2040 est
TOTAL   **141,700,000**
0 - 14 yrs old   **23.1%**
15- 64 yrs old   **67.1%**
65 and over   **9.7%**

(**https://www.census.gov.ph/pressrelease/2006/
...**)

Distribution comparable to <u>1983
Population of Japan (119,483,000)</u>
0 – 14 (22.52%); 15 – 64 (67.71%);
65 & over (9.77%)

Books and reference materials in IT Technology are written mostly in the English language.

Country	Area	Population
Philippines	300,000	99,900,177
Malaysia	329,847	26,160,256
Mongolia	1,564,116	3,086,918
Myanmar	676,578	53,414,374
Singapore	697	4,701,069
Thailand	513,120	66,404,688
Vietnam	331,210	89,571,130
South Korea	99,720	48,636,068
Australia	7,741,220	21,515,754
Canada	9,984,670	33,759,742

Source: https://www.cia.gov/library/publications/the-world-factbook/
(Population Estimates July 2010)
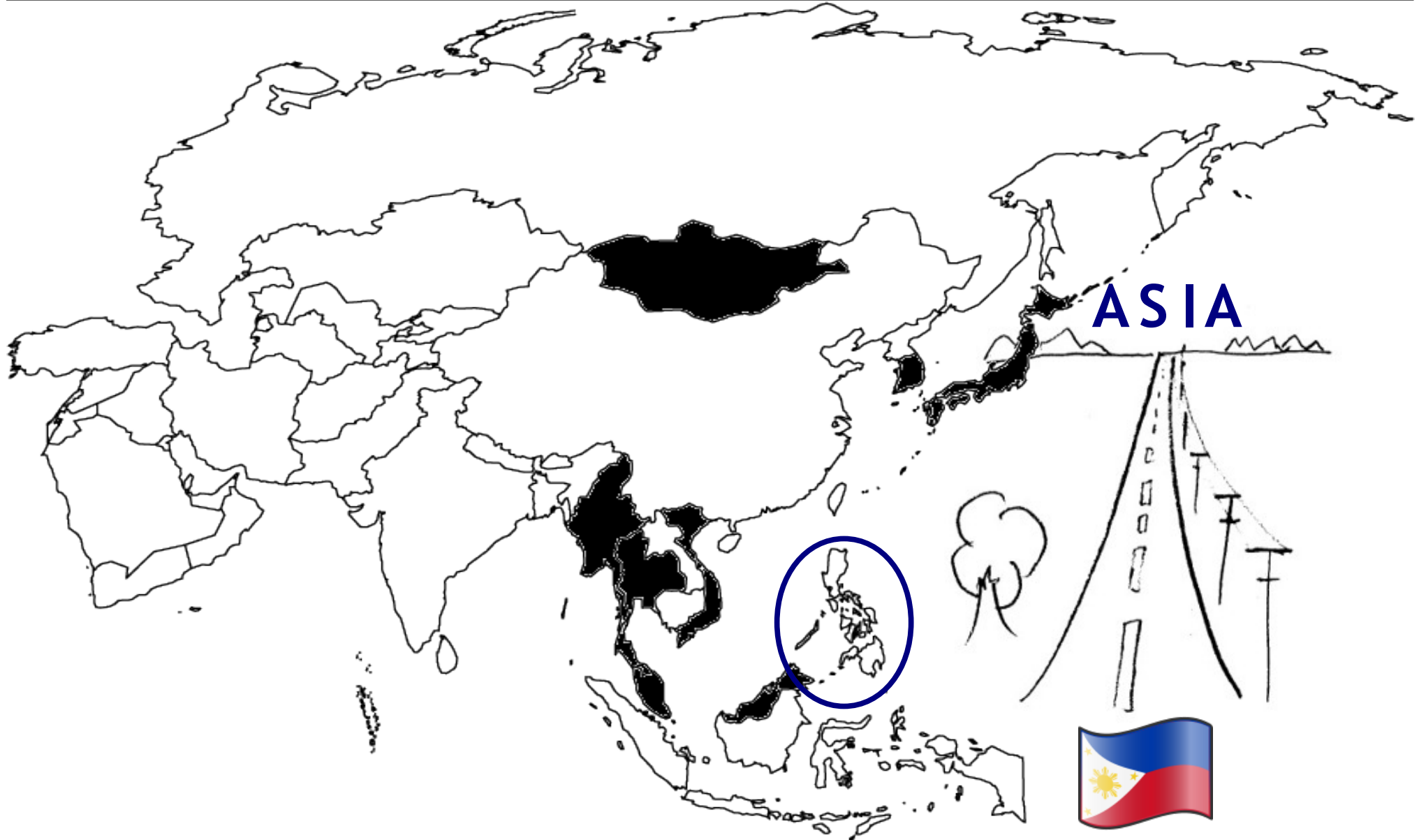
to secure our rightful place in Asia in producing more <u>ITPEC Certified IT Engineers</u>...

IT Passport Certification Exams

Self-Introduction...

Give a brief introduction of yourself stating among others:

✔ Name
✔ Company or Institution
✔ Position, Duties, and Responsibilities
✔ Area of Specialization (ex. what you teach)
✔ Expectations of the Training Program
✔ Other information about yourself you want to share

Training on
IT Passport Certification Exams
for IT Instructors

Philippine National IT Standards Foundation
Makati City, Philippines
24 May – 28 May, 2010

1. What this Training IS and what it IS NOT...

✗ not a training to teach Corporate Activities, Legal Affairs, Accounting, Project Management, Mathematics, Statistics, Computer Science, etc. to students who will take the IT Passport Certification Exams

✔ a training on what the IT Passport Certification Examination is, the expected skills and knowledge areas required, the manner questions are formulated in the exams, to IT Instructors who will prepare their students for the IT Passport Certification Exams

2. After this TRAINING we expect...

✔ you understand what the IT Passport Certification Examinations, its relations to the ITSS (Skills Standard for IT Professionals) and ITEE (IT Engineers Examination) and its relevance to your students in IT

✔ you will have sufficient understanding on the expected skills and knowledge items required for one to successfully pass the IT Passport Certification Exams

✔ you can utilize the provided IT Passport Preparation Book and the Practice Exams to create your own IT Passport Preparation Training Course (Curriculum) and Training Road Map that you can use in preparing your students for the actual exams

3. Training Schedule...

	MORNING SESSION	AFTERNOON SESSION
DAY 1	INTRODUCTION	INDIVIDUAL Exercise
DAY 2	STRATEGY	GROUP Exercise and Presentation
DAY 3	MANAGEMENT	GROUP Exercise and Presentation
DAY 4	TECHNOLOGY	GROUP Exercise and Presentation
DAY 5	SUMMARY	GROUP Exercise and FINAL Presentation

A. Short Lectures

B. Group Discussions

C. Group Presentations

20 MINUTES

The IT Passport Certification Examinations

1. What is IT Passport Certification Exams?

⭐ it is Level 1 in the ITEE (Information Technology Engineers Examinations) equivalent to ITSS (Skills Standard for IT Professionals) Level 1, published by the Ministry of Economy, Trade, and Industry (METI) of Japan

		ITSS			**ITEE**
High level IT human resource	Super high	Level 7	Internal high-end player and world class player	Deliverables (Performance) based ↓ Work experiences and interview	
		Level 6	Internal high-end player		
	High	Level 5	Intra-firm high-end player		
		Level 4	High level knowledge and skill	Determined by the examination and work experiences	
Middle		Level 3	Applied knowledge and skill	Skill (Capability) based ↓ Pass fail examination	Applied Information Technology Engineer Examination (AP)
		Level 2	Fundamental knowledge and skill		Fundamental Information Technology Engineer Examination (FE)
Entry		Level 1	Required minimum basic knowledge		Information Technology Passport Examination (IP)

Level	Definition
Level 7	World-class, high-end player with advanced knowledge and skills: Defined as human resources recognized throughout the world who have experience and achievements in successfully leading development, restructuring of business operations, and marketing of industry leading services.
Level 6	Domestic-level, high-end player with advanced knowledge and skills: Defined as human resources widely recognized inside and outside their organizations who have professional experience and achievements not only within their organizations but also in the industry.
Level 5	In-house, high-end player with advanced knowledge and skills: Defined as professionals who have rich experience and achievements to lead their organizations.
Level 4	Defined as professionals with advanced knowledge and skills who are able to perform tasks and deliver work instructions based on experience and achievements as well as to formulate the experience required for professionals as formal knowledge to develop younger people.
Level 3	Defined as human resources with practical knowledge and skills who are able to perform all required tasks on their own.
Level 2	Defined as human resources with basic knowledge and skills who are able to perform tasks with a certain degree of difficulty or part of the required tasks on their own.
Level 1	Defined as human resources with the minimum knowledge and skills required for people involved in information technology who are able to perform tasks under guidance.

… IT Passport Certification Exams is …

★ a means to test the minimum "**basic knowledge**" for individuals as IT Professionals, whether they have the basic knowledge of information technology that all business workers should commonly possess;

★ a means to test whether individuals can perform assigned tasks under the direction of higher-level professionals regardless of the specialty fields
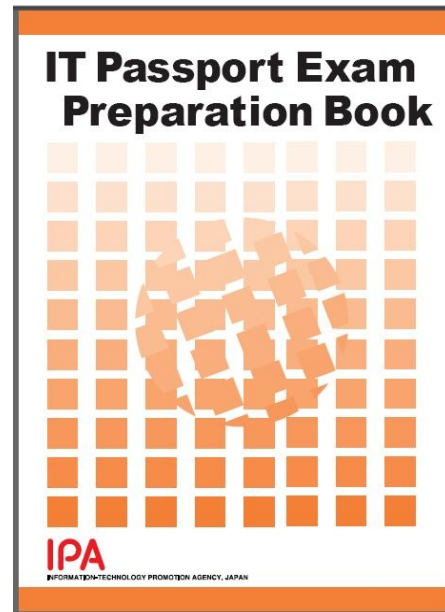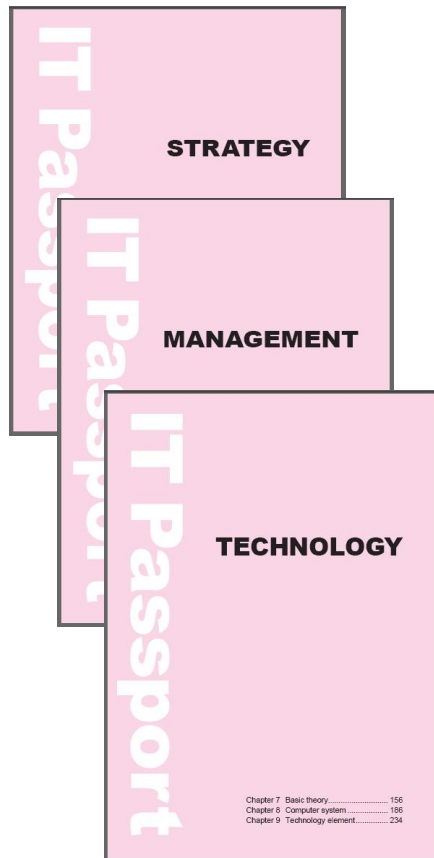
ITPEC
IT Passport
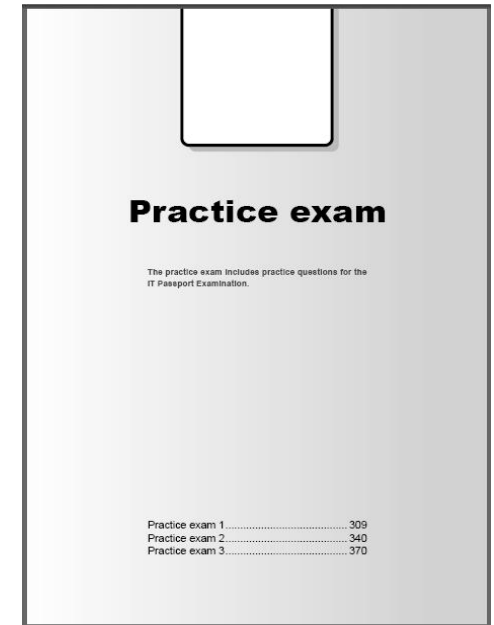Certified*

➡

ITSS
Level 1
Capable
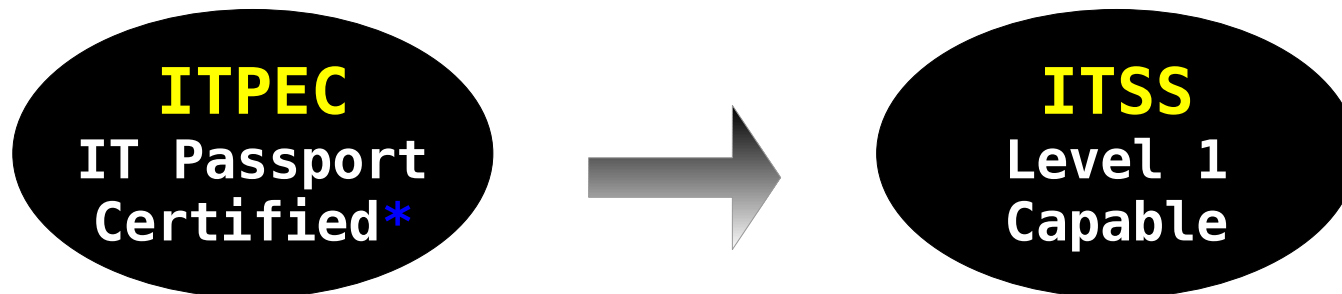
* being adopted by ITPEC

2. Configuration of the Exams

Exam Duration	165 minutes
Exam Type	Multiple-choice (1 out of 4 choices) (1) Short question type (1 exam question contains 1 question) (2) Medium question type (1 exam question contains 4 questions. The questions examine knowledge and understanding from several viewpoints with regard to a single situational setting).
Number of Questions	100 questions, answers required for all questions (1) Short question type: 88 questions (2) Medium question type: 12 questions (3 exam questions consisting of 4 sub-questions each)
	Number of Questions per Field	Questions are asked according to the following ratio with regard to the 3 fields comprising the scope of questions: (1) Strategy field: about 35% (2) Management field: about 25% (3) Technology field: about 40%
Point Allocation	1,000 total points
Grading Method	According to raw points (points are allocated for each question, and allocated points for correct answers are totaled)
Pass criteria	A pass is granted when both (1) and (2) below are satisfied: (1) Total points (totaled from each field): more than 60% of maximum points (2) Points in each field: more than 30% of the maximum points in each of the 3 fields.

3. Materials provided in this Training

STRATEGY

MANAGEMENT

TECHNOLOGY

IT Passport Exam Preparation Book

IPA
INFORMATION-TECHNOLOGY PROMOTION AGENCY, JAPAN

-and-

Practice exam

The practice exam includes practice questions for the IT Passport Examination.

IT Passport Preparation Book
✔ IT Passport Strategy
✔ IT Passport Management
✔ IT Passport Technology

IT Passport Practice Exams
✔ Practice Exam 1
✔ Practice Exam 2
✔ Practice Exam 3

IT Passport
Preparation
Book and
Practice Exams

Analyze

Implement — Evaluate — Design

Develop

IT Passport
Preparation
Training Course

Short
Course

Introduction to IT 1
[A111]

Introduction to IT 2
[A112]

Introduction to Personal
Skills
[A121]
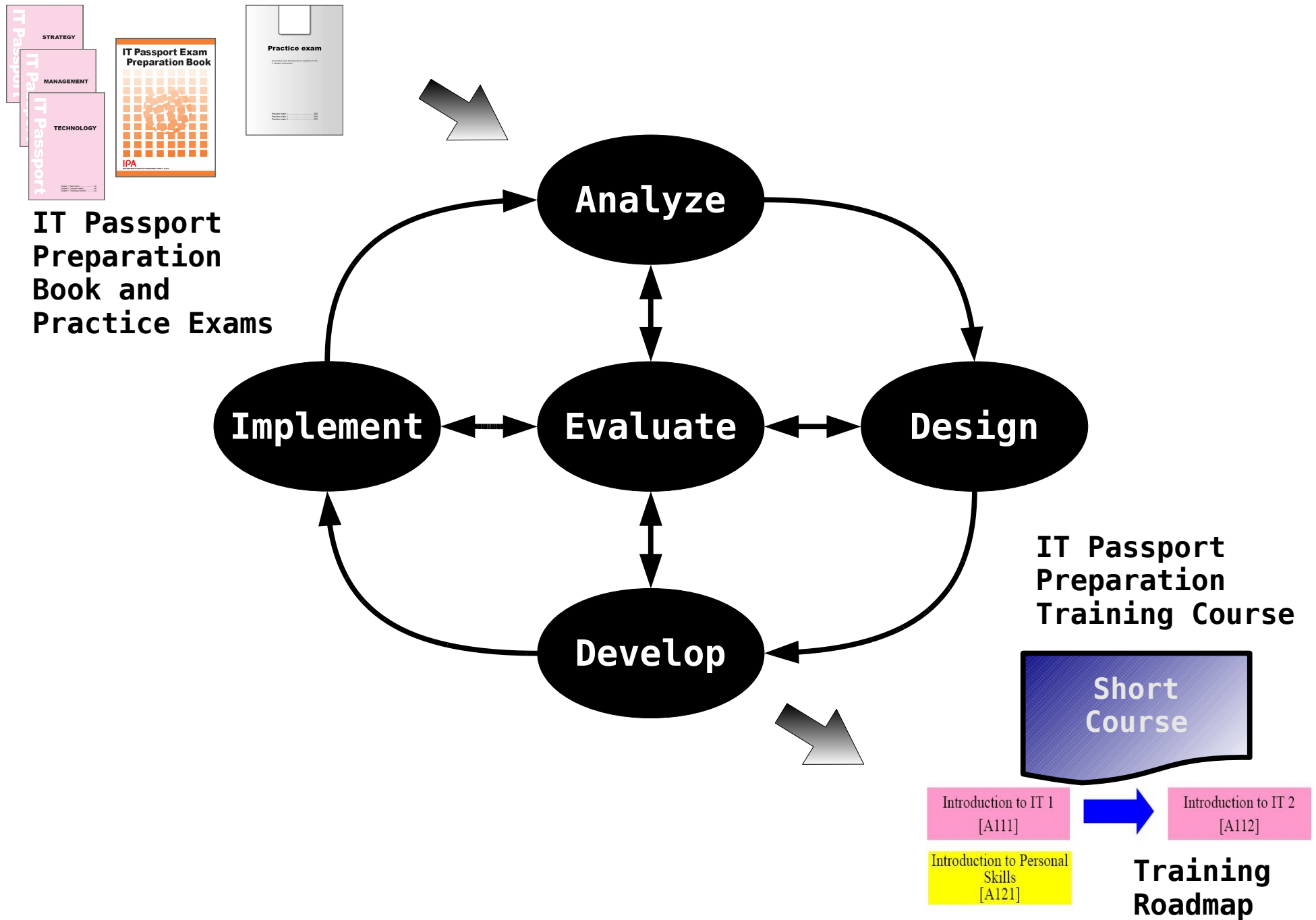
Training
Roadmap

5. Creating an IT Passport Preparation Training Course using the IT Passport Preparation Materials....

❶ **ANALYSE**

✸ using the IT Preparation Book

✔ find important keywords and phrases
✔ establish the expected <u>Skills</u> and the corresponding <u>Knowledge</u> items
✔ determine relevant items as subjects, detailed topics, prerequisites among others

(refer to the Scope of Questions, Overview of the Exams, IT Passport Exams Preparation Book as guide)

✸ using the Practice Exams

✔ learn the manner and style questions are constructed in relation to what are being asked from the examinees and how answer options are formulated

2 **DESIGN**

✯ using the results obtain during analysis
create a blue print or model of your IT
Passport Preparation training course

✯ your blue print or model should specify
among others

  ✔ prerequisites if any
  ✔ learning objectives stating what your students
  are expected to accomplish after the training as
  well as the learning steps
  ✔ performance tests (practice exams) to ascertain
  competence level attained by your students

   (when creating practice exams, refer to the results of
  your analysis on question formulation. this way, your
  students will be familiar with the questions in the actual
  IT Passport Certification Exams)

✮ arrange your learning objectives in proper sequence you see best and meaningful for your students. you may consider arrangement:

✔ according to <u>increasing complexity</u> (from SIMPLE TO COMPLEX)

✔ according to their <u>relative importance</u>

✔ according to <u>familiarity of topics</u> (from KNOWN TO UNKOWN)

✔ according to <u>dependency relationship</u> between objectives

✔ according to <u>common elements</u> found in certain objectives (they should be as close as possible so that maximum learning can take place)

✔ according to <u>cause and effect</u> relationship between two or more objectives

③ DEVELOP

⭐ using results obtain in the design, create a diagram to show sequence of the learning objectives, and create lesson plan based on the learning objectives (sample below)

Database Technology 1	
Learning Goal	Explain the method of data modeling and database normalization

Contents	1. Database
	
	    1) The concept of modeling
	    2) The concept of analysis and design for data
	       - Database normalization
	
	2. Exercise [Database normalization method]

Training Method (Estimated Time)	Lecture (70 minutes) Exercise (20 minutes)
Relationship to Major/Middle Category of Common Career/Skill Framework	Technical Element - Database
Other special notes	

4 **IMPLEMENT**

✹ create a Training Management Plan to implement your Training Course which should contain the following:

✔ complete description of the training course

✔ qualifications of trainee students

✔ directions for administering the training and scoring practice exams

✔ directions for guidance, assistance, and evaluation of the trainees

✔ list of all the topics (subjects) to be instructed, training road map (sequence)

✔ copy of training materials which should include among others the IT Passport Preparation Book, Practice Exams

5 **EVALUATE**

✮ perform evaluation during the analysis, design, development, and implementation phases to determine how you can improve your IT Preparation Training Program

✮ your evaluation may either be:

✔ **Formative** also known as <u>internal</u> that <u>focuses on the process</u> which permits you and your students to monitor how well the learning objectives are met and to address deficiencies if any

✔ **Summative** also known as <u>external</u> that <u>focuses on the outcome</u> which can be done by administering a complete IT Passport Preparation Exams

"much of the foundation of the field of instructional design was laid in World War II, when the U.S. military faced the need to rapidly train large numbers of people to perform complex technical tasks, from field-stripping a carbine to navigating across the ocean to building a bomber"

(http://en.wikipedia.org/wiki/Instructional_design)

CATEGORIES

1	STRATEGY
2	MANAGEMENT
3	TECHNOLOGY

TASKS

A	➤ determine Skills and Knowledge Areas required in the category ➤ set where possible learning objectives in each knowledge area ➤ arrange either the knowledge areas or learning objectives in a particular sequence
B	▪ find key terms or key phrases in the category writing down their definitions and or meanings
C	➤ create questions with corresponding answer options for the category

LUNCH BREAK

The Training on
IT Passport Certification Exams for IT Instructors
24 MAY 2010 PM SESSION

IT Passport Certification
Mock Exams
1:00pm - 3:45pm