

Mobility of Engineers through APEC Engineer Register & International Professional Engineer Agreement

Presented by :

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Mobility of Engineers

Presentation Materials used with permission from :

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Global Mobility of Professional Engineers

- Movement of Globally Engineering Professionals who are capable of Independent Practices
- Examples of Understanding/Agreements for Mobility of Engineering Professionals:
 - ❖ International Professional Engineers Agreement (formerly EMF)
 - ❖ APEC Engineers Register
 - ❖ ASEAN Chartered Professional Engineers Register



Member Economies in APEC, ASEAN and FEIAP

Economy	APEC	ASEAN	FEIAP
Australia	√		√
Bangladesh			√
Brunei	√	√	
Cambodia	√	√	
Canada			
Chile	√		
China	√		√
Chinese Taipei	√		√
Hong Kong	√		√
India			√
Indonesia	√	√	√
Japan	√		√
Korea	√		√
Laos		√	
Malaysia	√	√	√
Vietnam	√	√	

- APEC: Asia Pacific Economic Cooperation
- ASEAN: Association of South East Asian Nations
- FEIAP: Federation of Engineering Institutions in Asia and the Pacific (Membership open to the World)



Economy	APEC	ASEAN	FEIAP
Mexico	√		
Myanmar		√	√
New Zealand	√		
Nigeria			√
Papua New Guinea	√		√
Pakistan			√
Peru	√		√
Philippines	√	√	√
Russia	√		
Singapore	√	√	√
Sri Lanka			√
Thailand	√	√	√
Timor Leste			√
USA	√		√
Netherlands			√
Nepal			√
Rwanda			√
Iraq			√
	21	10	25

- APEC: Asia Pacific Economic Cooperation
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Mobility of Engineering Personnel



International Engineering Alliance -
Four (4) AGREEMENTS
(Mobility of Engineering Personnel)

International Professional
 Engineers Agreement (IPEA)
 - IntPE
 - *(Professional Engineers)*

APEC Engineers Agreement
 (APEC)
 - APEC Eng.
 - *(APEC Professional Engineers)*

International Engineering
 Technologists Agreement (IETA)
 - *(Engineering Technologists)*

International Engineering
 Technicians Agreement (AIET)
 - *(Engineering Technicians)*



IEA - Engineering Education Accords



International Engineering Alliance -
Three (3) ACCORDS
(Benchmarking of Engineering Education)

Washington Accord
- *Engineering Degree Programs*

Sydney Accord
- *Engineering Technology
Academic Programs*

Dublin Accord
- *Engineering Technician
Required Education Base*



APEC Engineers

*Presentation Materials used with permission from : **Dato Ir. Dr. Gue See Sew***
(IPEA Chairman & Past Chairman of APEC Engineer Register)



Asia Pacific Economic Co-operation



Population of APEC is 40% of world population



OBJECTIVES

- 1. Promote Mobility of Qualified Engineers (Professional Engineers) within APEC through mutual recognition of qualifications and experiences.**
- 2. Establish a strong cooperative network among engineering organizations in APEC member economies.**



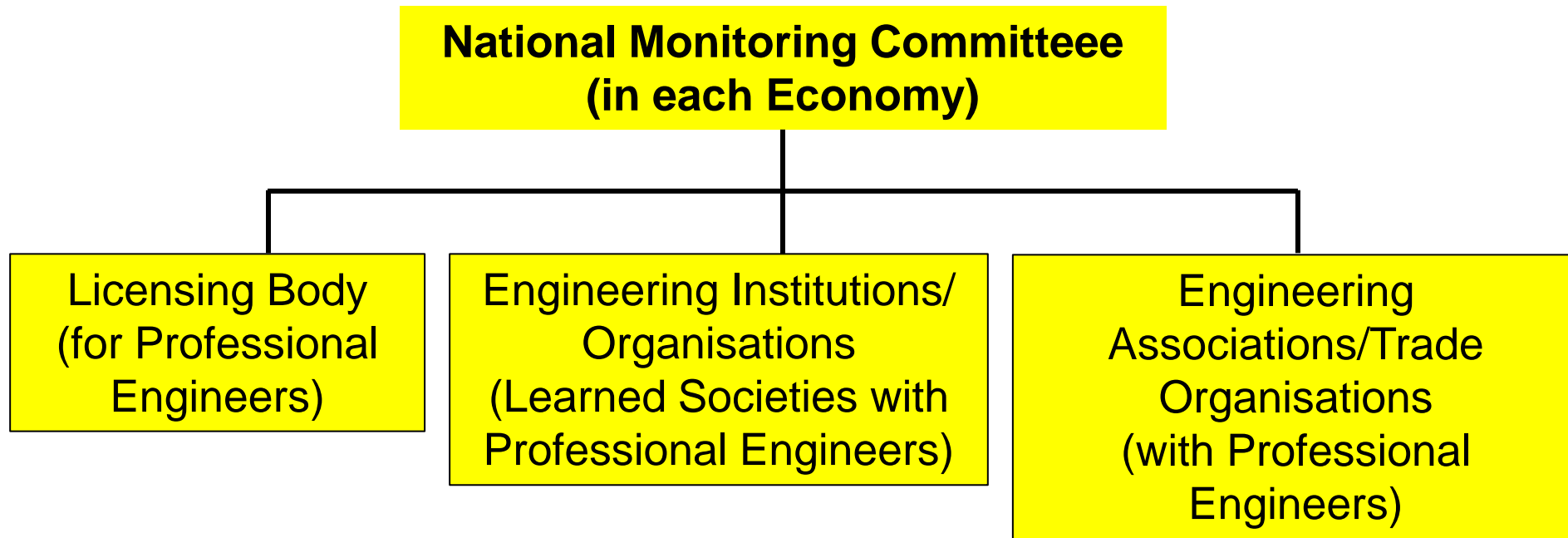
How to be Members of Agreement

Members are typically **UNCONTESTED** *authorities, agencies or institutions* :-

- 1) which control or are representative of the engineering profession and;
- 2) which have statutory powers or recognised professional authority for admission to the practicing engineering community within the jurisdiction (e.g. country, economy, geographic region).
- 3) In some jurisdictions and some agreements, a Member may be an **overarching committee** with a defined constitution that oversees or monitors registration, licensure or equivalent recognition schemes operated by other entities or a national organization representative of a federation of professional authorities.
- 4) Applications for Membership are not accepted from individuals.

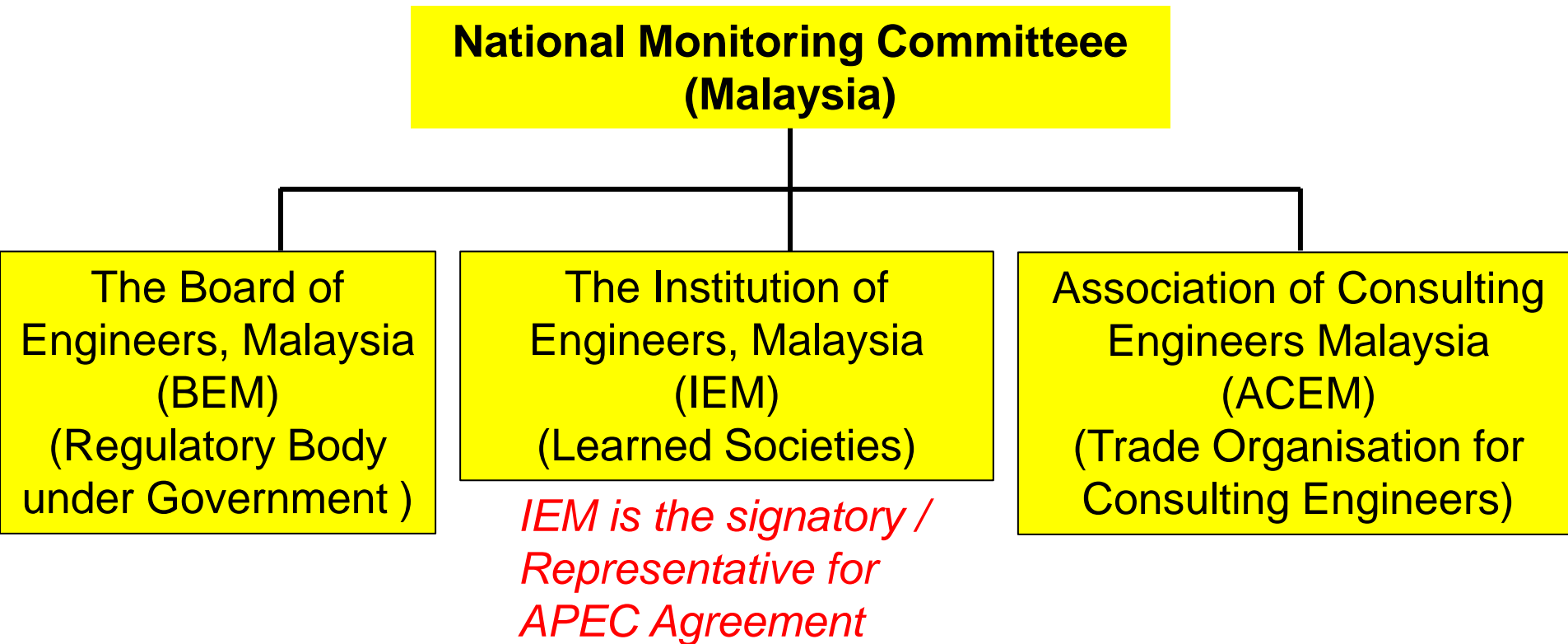


Typical National Monitoring Committee Organisation Structure (in Each Economy)



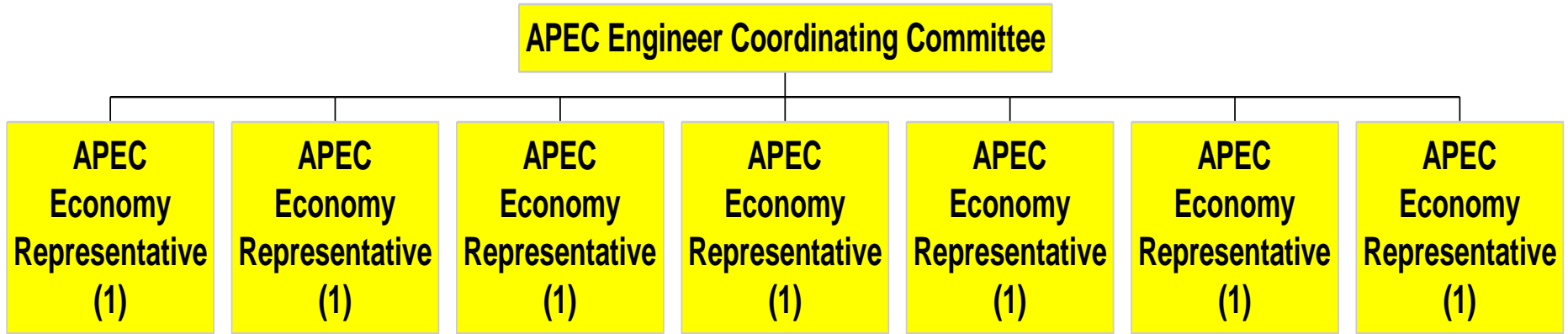
Note : Number of Organisations is up to each economy

Example : National Monitoring Committee (NMC) in Malaysia



APEC Agreement in International Engineering Alliance (IEA)

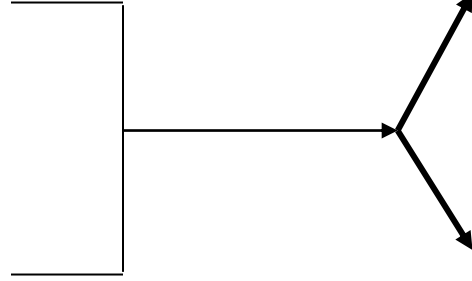
ORGANISATION STRUCTURE (MAIN)



MUTUAL EQUIVALENCE FRAMEWORK

Adjustments As Required by Host Jurisdiction

- Code Knowledge
- Law / Ethics of Jurisdiction
- Customs & Practices
- Liability Protection



APEC Engineer

Host Jurisdiction Permit to Practice (Sponsored)

Host Jurisdiction Permit (License) to Practice (Independent)

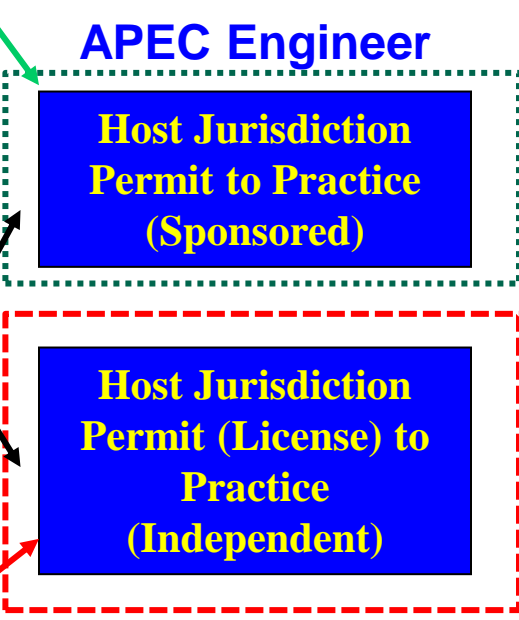


MUTUAL EQUIVALENCE FRAMEWORK

Adjustments As Required by Host Jurisdiction

- Code Knowledge
- Law / Ethics of Jurisdiction
- Customs & Practices
- Liability Protection

On actual Mobility to other economy : This is easier to achieve and should be the main target for all economies



On actual Mobility to other economy : This is very challenging and not yet common as each economy has it's own rule and regulations hindering this process.



INTERNATIONAL **PROFESSIONAL ENGINEERS** **AGREEMENT (IPEA)**

Presentation Materials used with permission from : Dato Ir. Dr. Gue See Sew
(IPEA Chairman & Past Chairman of APEC Engineer Register)

IPEA AGREEMENT



AGREEMENTS

THE INTERNATIONAL PROFESSIONAL ENGINEERS AGREEMENT RECOGNISES THE SUBSTANTIAL EQUIVALENCY OF STANDARDS ESTABLISHING THE COMPETENCY OF PROFESSIONAL ENGINEERS FOR INDEPENDENT PRACTICE

Previously known as the Engineers Mobility Forum (EMF), the International Professional Engineers Agreement (IPEA), is a multi-national agreement between engineering organisations in the member jurisdictions which creates the framework for the establishment of an international standard of competence for professional engineering, and then empowers each member organization to establish a section of the International Professional Engineers Register.

The standard of competence applied is the same as for the APEC Engineer agreement. Most of the APEC agreement members are also members of the IPEA agreement, but the latter is truly global so that countries such as the United Kingdom, Ireland and South Africa have become members of IPEA even though they cannot join the APEC agreement.



International Professional Engineers Agreement

Purpose

- Facilitate international mobility of Professional Engineers.
- Establish a de-centralised International Register of Professional Engineers.
- Promote best practice.
- Continue mutual monitoring.
- Understanding existing barriers to mobility and develop strategies to assist Governments and licensing authorities to manage the barriers.
- Encourage Governments and licensing authorities to \ adopt the IPE Agreement.

STANDARD

- Which one best suit your Economy or Region?



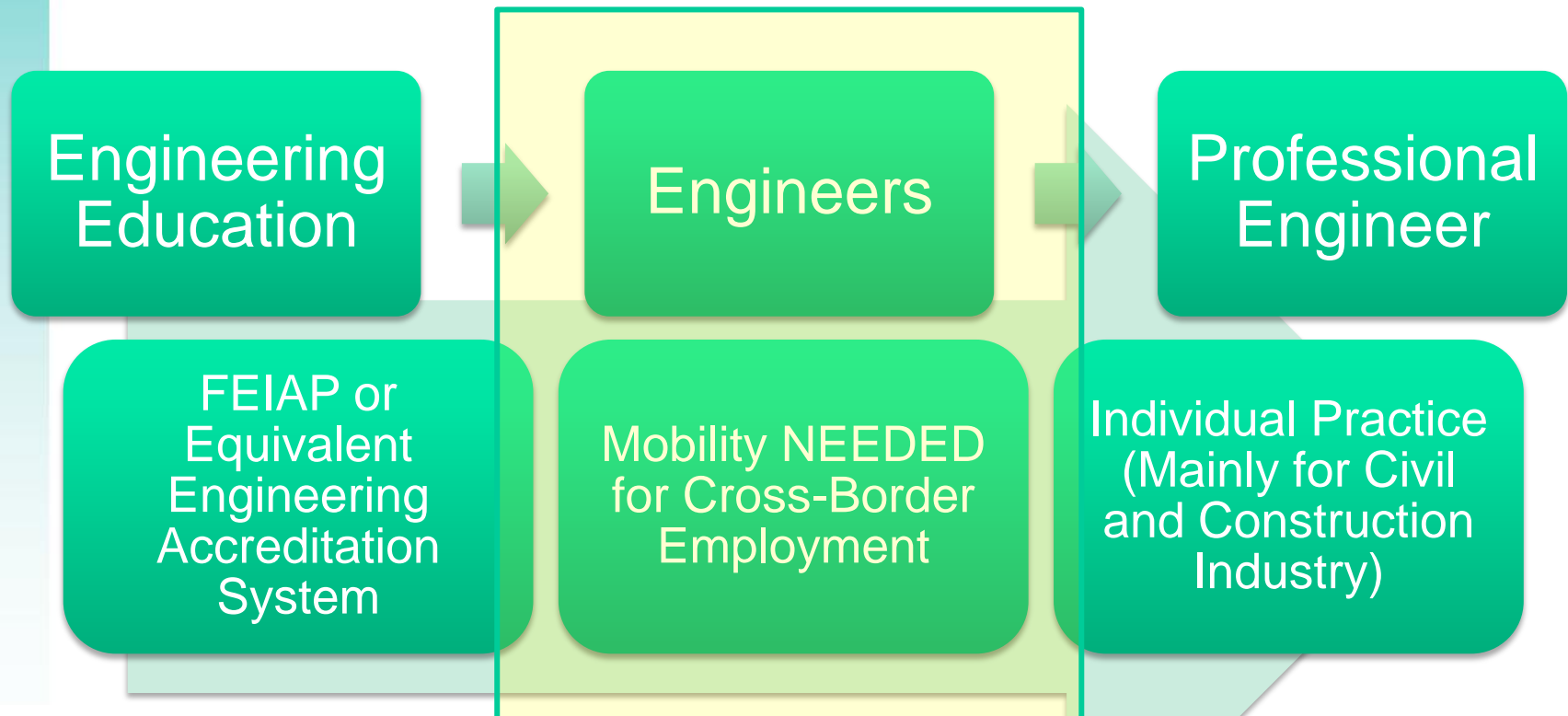
PUBLIC TRANSPORT IN CAMBODIA FOR UP TO 30 PERSONS





Which Standard to Follow ?

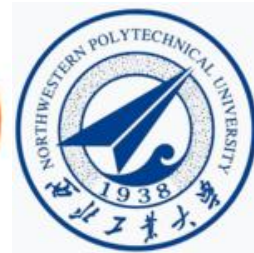
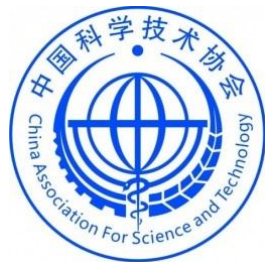
- 1) *APEC and IPEA → Target Professional Engineers.*
- 2) *However we know, many Industries DO NOT NEED Professional Engineers.*



Very Important and Most Widely NEEDED by most of the Developing Economies are Mobility of Engineers



Proposed B&R-FEIAP Engineering Training Centre, Xian China





一帶一路

BELT & ROAD



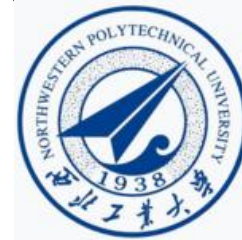


Proposed B&R-FEIAP Engineering Training Centre

FEIAP proposed to work together with Northwestern Polytechnical University (NPU) to set up “B&R-FEIAP Engineering Training Centre” in NPU, Xian.

Host :

西北工业大学



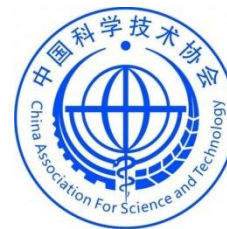
Northwestern Polytechnical University, Xi'an,
Shaanxi Province, CHINA.

西安



Supported by :

中国科学技术协会



China Association for Science and Technology (CAST)



B&R-FEIAP Engineering Training Centre

- **Vision:**

Harmonisation & Standards



Allow mutual recognition of the Engineering Education Programs (Engineer, Engineering Technologist and Technician programs) among Economies in the B&R Initiative region and FEIAP

Facilitate and to promote



Mobility of the Engineers, Engineering Technologists and Technicians among the economies in B&R Initiative region and FEIAP

Train and Provide



Continuous professional development to increase the number of competent Engineers, Engineering Technologists and Technicians who will help the economies to develop into developed nations



B&R-FEAP Engineering Training Centre

• Objectives:

- 1** To have an Engineering Training Centre in Xian, China to achieve the vision set
- 2** To conduct *Engineering Education Accreditation Training*
- 3** Promote of *Mutual Recognition* of Engineering Education Programs
- 4** To promote students exchange program among the Universities
- 5** To promote the mobility of engineering personnel
- 6** To conduct *Professional Development* courses for Infrastructure Dev. & Maintenance
- 7** To promote the networking of the engineering personnel
- 8** To keep up to development of the world on the Engineering Education and Training
- 9** A platform for exchange of academics and engineering students



**Vision and Future Direction :-
Proposed**

**“B&R Engineering Education
Accord”**

**for Mobility of Engineering
Personnel in B&R Initiative Region**



VISION of “B&R Engineering Education Accord”

“Belt & Road (B&R) Engineering Education Accord” is a platform for mutual recognition of engineering workforce that covers :-

- *Engineers,*
- *Engineering Technologists,*
- *Engineering Technician.*



Objectives :-

- 1) *To have a unified & inclusive engineering education accord that promotes mutual recognition of engineering education for engineers, engineering technologists and engineering technicians in Belt & Road (B&R) Initiative Region.*
- 2) *To facilitate the rationalization of the standards of engineering graduates for cross-economy employment.*
- 3) *To enable mobility of engineering workforce among B&R Initiative Region.*
- 4) *To promote understanding of civilization in B&R Economies via cultivation of cultural intelligence in engineering education*



Further Developed to

“FEIAP Engineering Personnel Register”

A platform for mutual recognition of engineering workforce that covers :-

- *FEIAP Engineers,*
 - *FEIAP Engineering Technologists,*
 - *FEIAP Engineering Technician.*
- Those who fulfilled the FEIAP Engineering Education Guidelines or Equivalent Standards.
- Open to all Engineering Personnel who qualify.
- Help in Employment
- NOT Professional Engineers (no duplication)



Thank You

Q&A