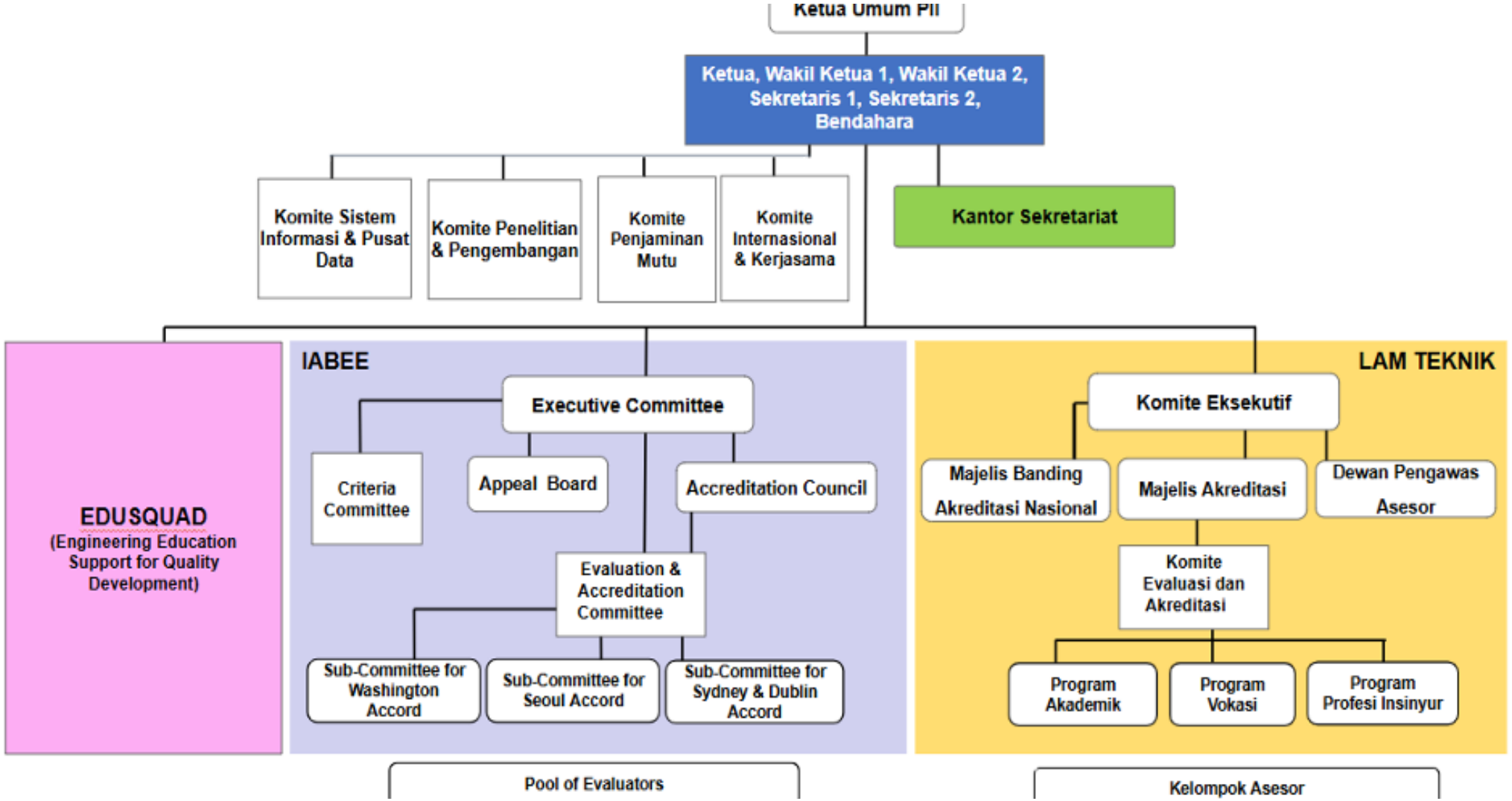
Struktur Organisasi BATAP-PII



Indonesian Accreditation Board for Engineering Education (IABEE)

International-level accreditation for engineering and computing programs in Indonesia

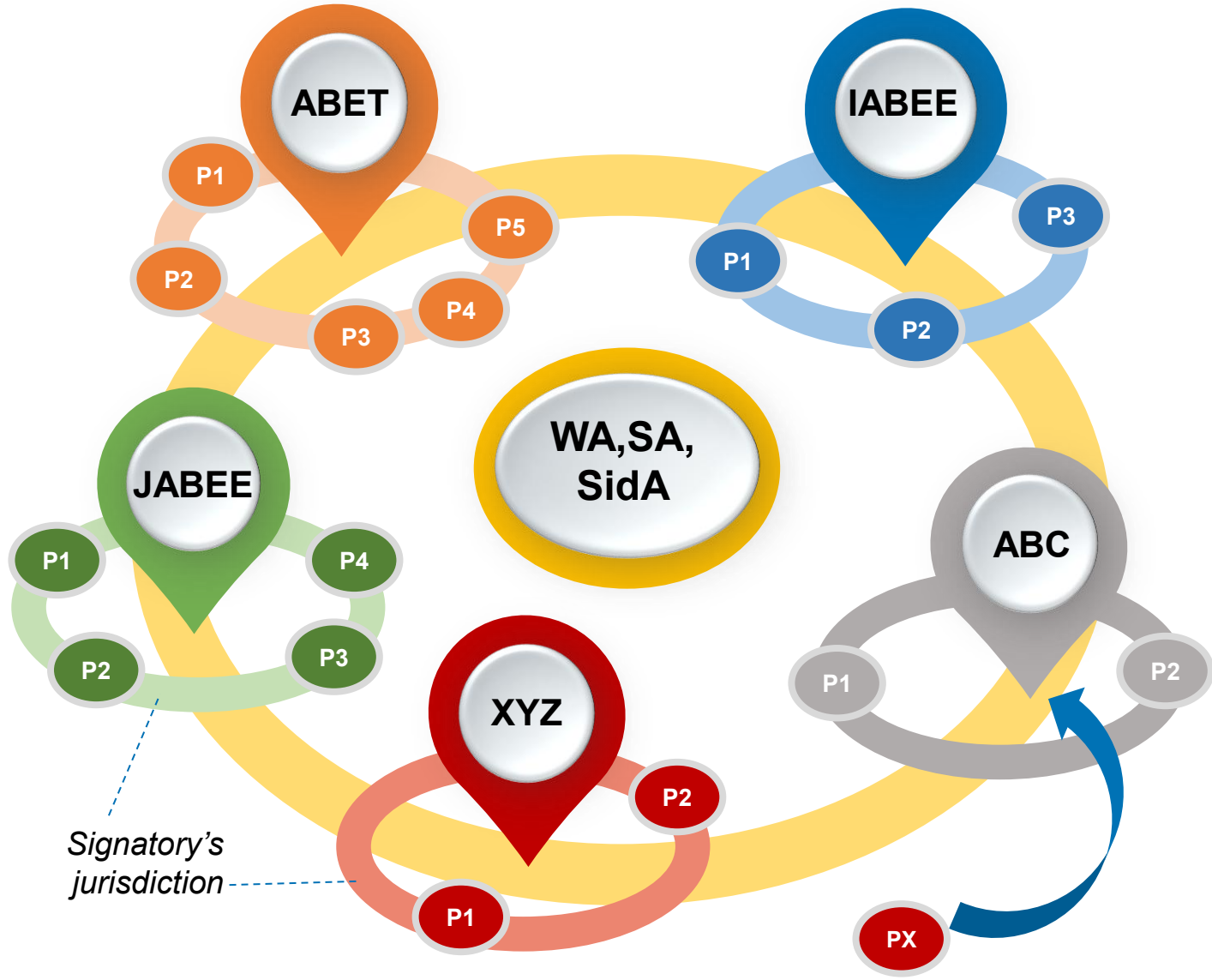
About IABEE

- IABEE is **an accreditation agency** for engineering, computing and technology higher education **programs** in Indonesia
- IABEE accreditation is an **international-level** accreditation and is **voluntary**, unlike the mandatory accreditation by BAN-PT/LAM-PS
- IABEE accreditation is a means to improve **quality** of higher education and **accountability** to the society by implementing **Outcome-based Education**
- **Accreditation Criteria** developed by IABEE follow **substantial equivalency** requirements setup by the **Washington Accord** (for engineering programs), the **Seoul Accord** (for computing programs) and **Sydney Accord** (for technology programs)
- **The Accords** are multilateral agreements **between institutions** responsible for higher education program accreditation that work together to help the mobility of engineering/computing practitioners

International Educational Accords

Substantial Equivalence: the Washington, Seoul, Sidney Accords

- Basis of agreement of the Washington Accord: substantially equivalent accreditation systems leading to recognition of **substantial equivalent of programs** in satisfying academic requirements for the practice of engineering at professional level
- Graduates of accredited programs in any signatory country are recognized by the other signatory countries as **having met the academic requirements for entry** to the practice of engineering



A Program accredited outside member's jurisdiction is not recognized by the WA

The Graduate Attributes

- Graduate attributes form a set of individually **assessable outcomes** that are the components indicative of the graduate's potential to acquire competence to practice at the appropriate level
- Graduate attributes are clear, succinct statements of the expected capability, qualified if necessary by a range indication appropriate to the type of program
- The Graduate Attributes provide a point of reference for Accord's Signatories and Provisional Members to develop outcomes-based **accreditation criteria** of a **substantially equivalent qualification** for use by their respective jurisdictions

Elements of Graduate Attribute Profile for the Washington Accord and Seoul Accord

1. Engineering Knowledge
2. Problem Analysis
3. Design/development of Solutions
4. Investigation
5. Modern Tool Usage
6. The Engineer and Society
7. Environment and Sustainability
8. Ethics
9. Individual and Team Work
10. Communication
11. Project Management and Finance
12. Life-long Learning

1. Academic Education
2. Knowledge for Solving Computing Problems
3. Problem Analysis
4. Design/Development of Solutions
5. Modern Tool Usage
6. Individual & Team Work
7. Communication
8. Computing Professionalism and Society
9. Ethics
10. Life-long Learning

The WA Graduate Attributes & IABEE Criteria of Learning Outcomes (a)-(j)

1. Engineering Knowledge (a)
2. Problem Analysis
3. Design/development of Solutions (b)
4. Investigation (c)
5. Modern Tool Usage
6. The Engineer and Society
7. Environment and Sustainability (b)
8. Ethics
9. Individual and Team Work
10. Communication
11. Project Management and Finance
12. Life-long Learning

a. Kemampuan **menerapkan pengetahuan** matematika, ilmu pengetahuan alam dan/atau material, teknologi informasi dan keteknikan **untuk mendapatkan pemahaman menyeluruh tentang prinsip-prinsip keteknikan**.

b. Kemampuan **mendesain komponen, sistem dan/atau proses** untuk memenuhi kebutuhan yang diharapkan di dalam **batasan-batasan realistis**, misalnya hukum, ekonomi, lingkungan, sosial, politik, kesehatan dan keselamatan, keberlanjutan serta untuk mengenali dan/atau memanfaatkan potensi sumber daya lokal dan nasional dengan wawasan global.

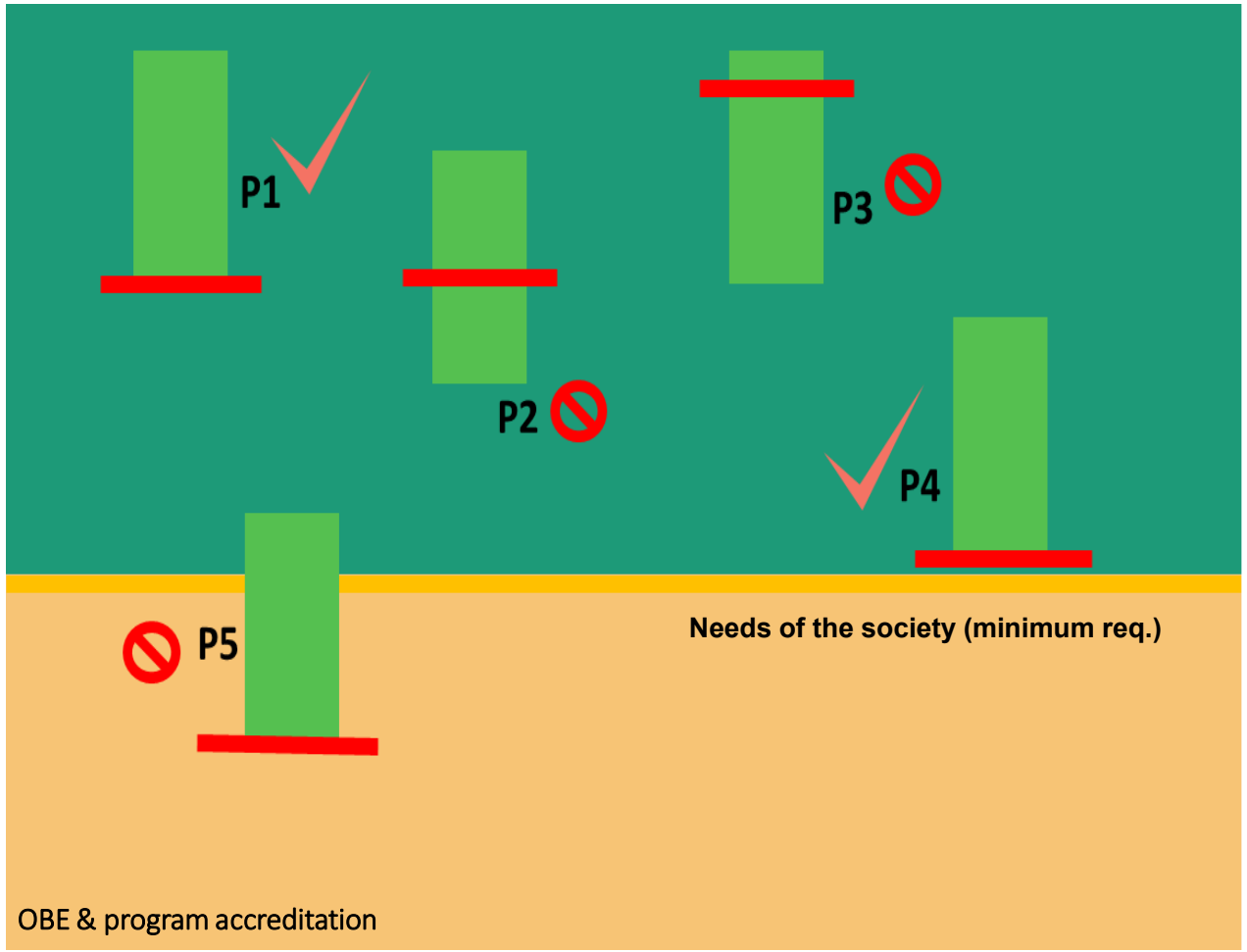
c. Kemampuan mendesain dan melaksanakan **eksperimen laboratorium** dan/atau lapangan **serta menganalisis** dan **mengartikan data** untuk memperkuat penilaian teknik.

The WA Graduate Attributes & IABEE Criteria of Learning Outcomes (a)-(j)

1. Engineering Knowledge (a)
2. Problem Analysis (d)
3. Design/development of Solutions (b)
4. Investigation (c)
5. Modern Tool Usage (e)
6. The Engineer and Society (i)
7. Environment and Sustainability (b)
8. Ethics (i)
9. Individual and Team Work (h)
10. Communication (f)
11. Project Management and Finance (g)
12. Life-long Learning (j)

d. Kemampuan **mengidentifikasi, merumuskan, menganalisis dan menyelesaikan** permasalahan kompleks keteknikan.
e. Kemampuan menerapkan metode, keterampilan dan **piranti teknik** yang modern yang diperlukan untuk praktek keteknikan.
f. Kemampuan **berkomunikasi secara efektif** baik lisan maupun tulisan
g. Kemampuan **merencanakan, menyelesaikan dan mengevaluasi tugas** didalam batasan-batasan yang ada.
h. Kemampuan **bekerja dalam tim** lintas disiplin dan lintas budaya.
i. Kemampuan untuk **bertanggung jawab kepada masyarakat dan mematuhi etika profesi** dalam menyelesaikan permasalahan teknik.
j. Kemampuan memahami kebutuhan akan **pembelajaran sepanjang hayat**, termasuk akses terhadap pengetahuan terkait isu-isu kekinian yang relevan.

Outcomes-based Accreditation



P? Study Program

Accredited

Program's Learning Outcomes

Not accredited

Graduates

The Washington Accord covers 4-year undergraduate engineering degree programs under **Outcome-based Education** approach

- OBE is an educational theory that bases each part of an educational system around goals (outcomes)
- By the end of the educational experience, each student (graduate) should have achieved the goals (the outcomes) → Assessment is a part of OBE
- There is no single specified style of teaching or assessment in OBE; instead, classes, opportunities, and assessments should all help students achieve the specified outcomes.
- The role of the faculty adapts into instructor, trainer, facilitator, and/or mentor based on the outcomes targeted

Principles of IABEE Accreditation

- ✓ Voluntary, **internally driven** (program attitude towards quality); and therefore accreditation is not the purpose, rather a means for improvement
- ✓ Accreditation is based on **Learning Outcomes**, which is self-determined by the program according to the vision, identity and uniqueness, resources, and user needs; and therefore accreditation is not to rank nor to compare among programs
- ✓ International **equivalency** (IEA graduate attributes)
- ✓ **Third-party** evaluation (independent, autonomous, NGO)
- ✓ **Accountable** to society (**outcome-based**, answering the need of stakeholders)

The Significance of IABEE Accreditation

- ❑ **For students and graduates:**

  Gain **education basics** that meet global standards, in line with science and technology development, support career and professional success, and wider employment opportunities

- ❑ **For programs and education institutions:**

  By voluntary nature, programs demonstrate a **commitment** to provide quality education and global recognition.

- ❑ **For industry, government and stakeholders:**

  Opportunity to provide **feedback** on employment needs, facilitate professional **mobility**, more **accountable** to the community.

IABEE Accreditation Criteria

To be accredited, a program shall meet

- Accreditation Criteria
  - Common Criteria
  - Criteria Guide
  - Discipline Criteria (Chapters of PII)
- Rule and Procedure of Evaluation and Accreditation

The Central Role of Criteria in IABEE Accreditation

- As a reference for Program to conduct self-evaluation
- As a reference for IABEE evaluators to review Program's Self-Evaluation Report
- As a basis for IABEE to award accreditation status

The Accreditation Criteria: Common Criteria

1

1. Autonomous Professional Profile (APP) as Program Educational Objective
2. APP Publicity & Review System
3. Program Learning Outcomes ("CPL")

2

1. Curriculum & Syllabus
2. Faculty: quality, quantity, role in student learning
3. Students & Academic Atmosphere
4. Facility: adequacy, proper & safe operations
5. Institutional Responsibility

3

1. Effective Assessment of Learning Outcomes
2. Assurance of LO Attainment by Graduates

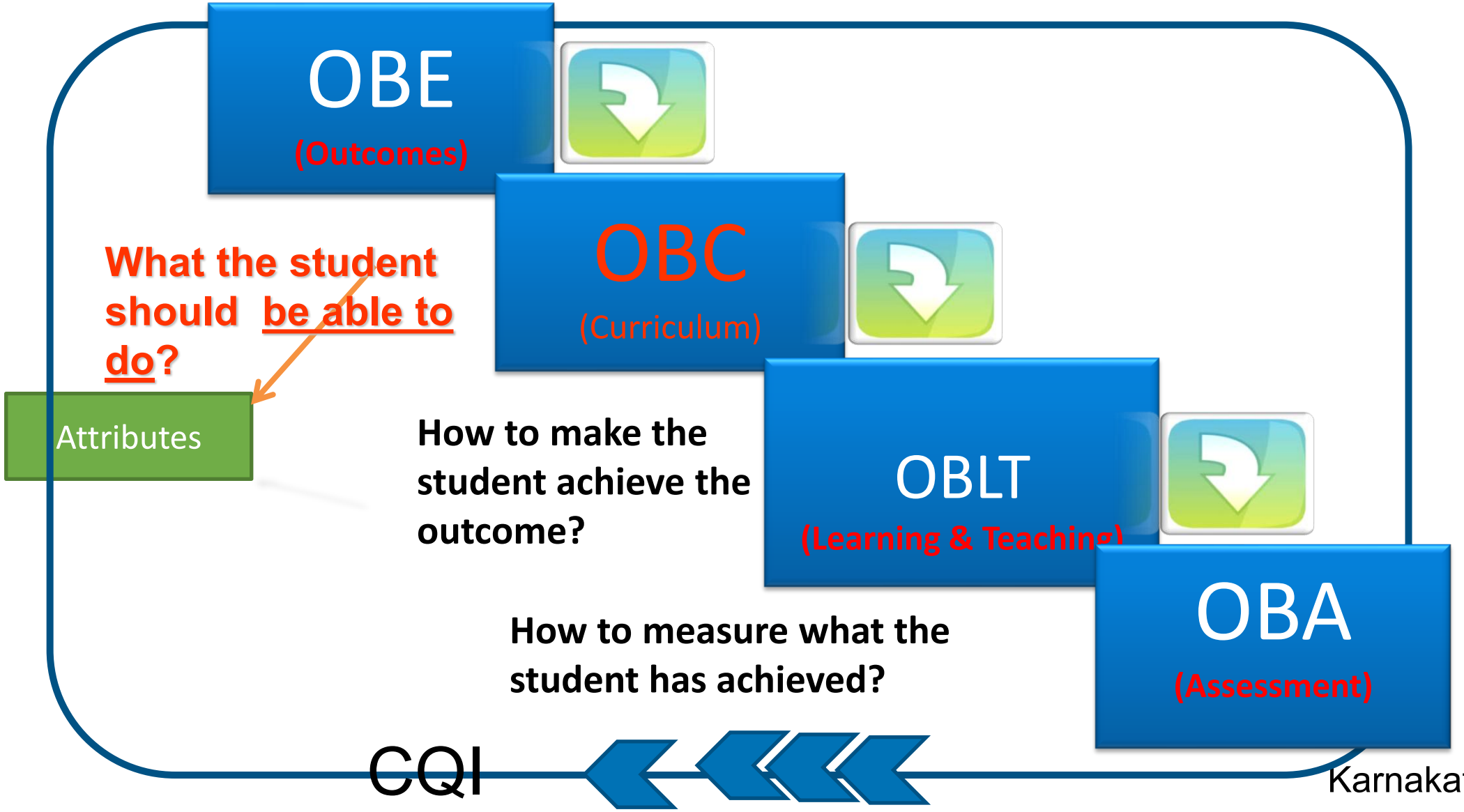
4

1. Continual Improvement based on LO Assessment
2. Maintenance & Access of Documents & Records

Common Criteria & Criteria Guide are available for download from https://iabee.or.id/en/accrediation/accreditation-criteria/common-criteria/ and https://iabee.or.id/en/accrediation/accreditation-criteria/criteria-guide/

12

Outcome Based Education



Tingkatan implementasi OBE

OBE	CP	Kurikulum	Rencana asesmen	Asesmen CP	CQI
Level 1					
Level 2					
Level 3					
Level 4					
Level 5	AKREDITASI INTERNASIONAL				

(Arifin, 2018)

KepMen : Akreditasi Internasional

KEPUTUSAN MENTERI PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
REPUBLIK INDONESIA
NOMOR 385/P/2021
TENTANG
KRITERIA DAN PROSEDUR
PENGAKUAN LEMBAGA AKREDITASI INTERNASIONAL

MENTERI PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
REPUBLIK INDONESIA,

Menimbang : a. bahwa program studi setelah mendapatkan akreditasi dari lembaga akreditasi mandiri atau Badan Akreditasi Nasional Perguruan Tinggi dapat mengajukan akreditasi

Menetapkan : KEPUTUSAN MENTERI PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI TENTANG KRITERIA DAN PROSEDUR PENGAKUAN LEMBAGA AKREDITASI INTERNASIONAL.

KESATU : Menetapkan kriteria lembaga akreditasi internasional yang diakui oleh Menteri sebagai berikut:

a. telah mengakreditasi paling sedikit satu program studi yang diselenggarakan oleh perguruan tinggi yang termasuk dalam 50 (lima puluh) perguruan tinggi terbaik dunia berdasarkan peringkat dari Times Higher Education World University Rankings dan/atau QS World University Rankings; atau

b. telah mendapat pengakuan dari lembaga registrasi internasional atau supranasional, kesepakatan internasional *(accord)*, atau organisasi profesi internasional.

KEDUA : Lembaga akreditasi internasional sebagaimana dimaksud dalam Diktum KESATU harus memenuhi persyaratan:

a. memiliki tata kelola kelembagaan yang baik berdasarkan prinsip-prinsip organisasi modern antara lain independen, bebas dari konflik kepentingan, akurat, objektif, transparan, dan akuntabel;

b. menerapkan prosedur dan standar yang mengacu kepada kerangka kerja penjaminan mutu *(quality assurance framework)* tertentu untuk memastikan mutu dapat tercapai sesuai dengan maksud dan tujuan yang ditetapkan dalam disiplin ilmu tertentu, oleh kelompok kepakaran yang memiliki otoritas keilmuan, serta sesuai konteks Indonesia;

c. menggunakan metodologi asesmen dan kriteria berbasis capaian (*outcome-based assessment*) yang merujuk pada capaian pembelajaran berbasis disiplin ilmu yang disepakati atau setara internasional; dan

d. telah aktif melakukan akreditasi di luar yurisdiksi negaranya sendiri bagi lembaga akreditasi internasional yang berasal dari negara selain Indonesia.

KEPUTUSAN MENTERI PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
REPUBLIK INDONESIA
NOMOR 236/O/2024
TENTANG
LEMBAGA AKREDITASI INTERNASIONAL

MENTERI PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
REPUBLIK INDONESIA,

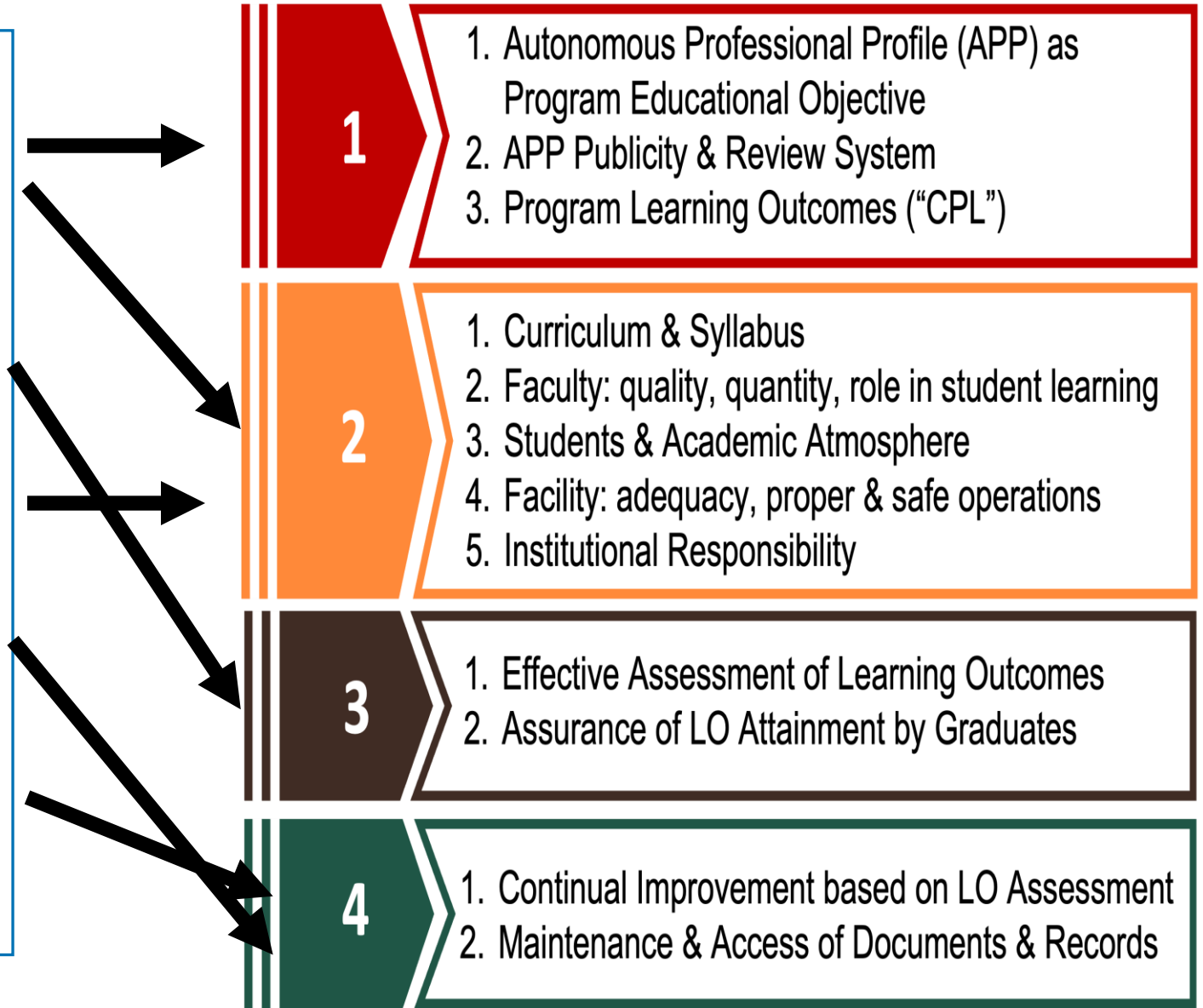
Menimbang : a. bahwa dalam rangka menindaklanjuti pengajuan usul pengakuan lembaga akreditasi internasional, telah dilakukan penilaian terhadap pemenuhan persyaratan dan kriteria lembaga akreditasi internasional;

b. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a, dan untuk melaksanakan ketentuan Pasal 86 Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 53 Tahun 2023 tentang Penjaminan Mutu Pendidikan Tinggi perlu menetapkan Keputusan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi tentang Lembaga Akreditasi Internasional;

No.	Nama Lengkap Lembaga	Singkatan	Cakupan Bidang Ilmu
1.	*Accreditation Board for Engineering and Technology*	ABET	Teknik, Teknologi, Rekayasa, Informatika dan Komputasi
2.	*Indonesian Accreditation Board for Engineering Education*	IABEE	Teknik, Teknologi, Rekayasa, Informatika dan Komputasi
3.	*Japan Accreditation Board for Engineering Education*	JABEE	Teknik dan Rekayasa
4.	*Korea Architectural Accrediting Board*	KAAB	Arsitektur
5.	*Institution of Chemical Engineers*	IChemE	Teknik Kimia
6.	*The Royal Society of Chemistry*	RSC	Kimia
7.	*Accreditation Agency for Study Programmes of Engineering, Information Science, Natural Sciences and Mathematics*	ASIIN	Ilmu Informasi, Ilmu Pengetahuan Alam dan Matematika
8.	*Indonesian Accreditation Agency for Higher Education in Health*	IAAHEH	Kedokteran
9.	*Accreditation Agency in Health and Social Sciences*	AHPGS	Ilmu Sosial dan Kesehatan termasuk Kedokteran
10.	*Accreditation, Certification and Quality Assurance Institute*	ACQUIN	Sosial dan Humaniora
11.	*Association of MBAs*	AMBA	Ekonomi, Manajemen, Bisnis, dan Akuntansi

ASIIN Criteria Vs IABEE

1. The Degree Programme: Concept, content & implementation
2. Exams: System, Concept & Organisation
3. Resources
4. Transparency and Documentation
5. Quality Management: Quality Assessment and Development



IABEE Accreditation Criteria

Available **Discipline Criteria** for **ENG (18)**:

- ✓ Chemical, biochemical, biomolecular engineering and similarly named engineering programs
- ✓ Environmental engineering and similarly named engineering programs
- ✓ Ocean engineering and similarly named engineering programs
- ✓ Agricultural and/or biosystem engineering
- ✓ Agroindustrial engineering
- ✓ Biomedical engineering programs
- ✓ Civil and similarly named engineering programs
- ✓ Earth and Energy engineering programs
- ✓ Electrical, computer, communications, telecommunication engineering and similarly named engineering programs
- ✓ Engineering physics and similarly named engineering programs
- ✓ Geodetic, geomatics engineering
- ✓ Industrial engineering and similarly named engineering programs
- ✓ Materials, metallurgical engineering and similarly named engineering programs
- ✓ Mining and similarly engineering programs
- ✓ Mechanical engineering programs
- ✓ Nuclear engineering and similarly named engineering programs
- ✓ Petroleum engineering programs
- ✓ General engineering programs

IABEE Accreditation Criteria

Available **Discipline Criteria** for **ENG-TECH (22)**:

- ✓ Telecommunication Engineering Technology
- ✓ Software Engineering Technology
- ✓ Shipbuilding, Naval Architectural Eng. Tech.
- ✓ **Occupational SHE Technology***
- ✓ Mining Eng. Technology
- ✓ Mechatronics, Robotics Eng. Technology
- ✓ Mechanical Eng. Technology
- ✓ Marine, Maritime, Ocean Structural Eng. Technology
- ✓ Manufacturing Eng. Technology
- ✓ Instrumentation and Control System Eng. Technology
- ✓ Information, Information Security, Cyber Security, Information Assurance Eng. Technology
- ✓ Geomatics, Surveying Eng. Technology
- ✓ Environmental Eng. Technology
- ✓ Engineering Technology General
- ✓ **Electrical, Electronics Eng. Technology***
- ✓ Earth and Energy Eng. Technology
- ✓ Construction Eng. Technology
- ✓ Computer Eng. Technology
- ✓ **Civil Eng. Technology***
- ✓ Chemical, Biochemical, Biomolecular Eng. Technology
- ✓ Automotive Eng. Technology
- ✓ Agricultural and Agroindustrial Eng. Technology

*currently published and piloted in 2023-2024 cycle

IABEE Accreditation Criteria

Available **Discipline Criteria** for **COM (5)**:

- ✓ Computer science / informatics and similarly named programs
- ✓ Information systems and similarly named programs
- ✓ Information technology and similarly named programs
- ✓ Software engineering and similarly named programs
- ✓ Computer systems and similarly named programs

A Quick look on the Common Criteria

All Criteria documents are available for download from IABEE website

- Continual improvements based on LOs evaluation (**4.1**)
- Documents, records, and improvements are maintained (**4.2**)

- LOs attainment is measured (**3.1.**) and assured for the graduates (**3.2.**)

High school graduates

Students & learning implementation

Graduates

Autonomous Professional Profile

- Entry requirements (**2.3**) are defined & announced

- Curriculum (**2.1**)
- Faculty (**2.2**)
- Students & academic atmosphere (**2.3**)
- Facility (**2.4**)
- Institutional responsibility (**2.5**)

- Learning Outcomes are established based on the envisaged APP, Common Criteria requirements (**1.3.1** and **1.3.2**), and Discipline Criteria (**1.3.3.**)
- Performance indicators, assessment plan and method are defined for each LO (**1.3.3.**)

- Envisaged APP is defined as PEO (**1.1**) and informed to all faculty, students, and general public (**1.2.**)

Accreditation types

IABEE offers two types of accreditation, namely **General Accreditation** and **Provisional Accreditation**. Each accreditation type entails specific eligibility requirements for programs to apply.

- **General Accreditation (GA)** is intended for programs seeking international recognition through IABEE accreditation.
- **Provisional Accreditation (PA)** is intended for programs newly adopting an outcome-based education system and have not yet produced graduates under the system. A program applying for PA will be evaluated to measure its potentials of meeting the Accreditation Criteria within a foreseeable future. PA is an accreditation status that is not recognized at the international level.

Eligibility for Evaluation Process

General Accreditation	Provisional Accreditation
(1) The associated Program Operating Institution (POI) has obtained National Accreditation for Institution status with a minimum rank of “B” or “Baik Sekali”.	(1) The associated Program Operating Institution has obtained National Accreditation for Institution status with a minimum rank of ‘B’ or “Baik Sekali”
(2) The Program has obtained National Accreditation status ranked “A” or “Baik Sekali”	(2) The Program has obtained National Accreditation status at least ranked “B” or “Baik Sekali”
(3) The Program is a bachelor-level program in an engineering or computing discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units.	(3) The Program is a bachelor-level program in an engineering or computing discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units.
(4) The Program is at least in the 4th year of continuous Outcome-Based Education (OBE) implementation.	(4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation.
(5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students.	(5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.
(6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system.	(6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods
(7) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.	
(8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.	

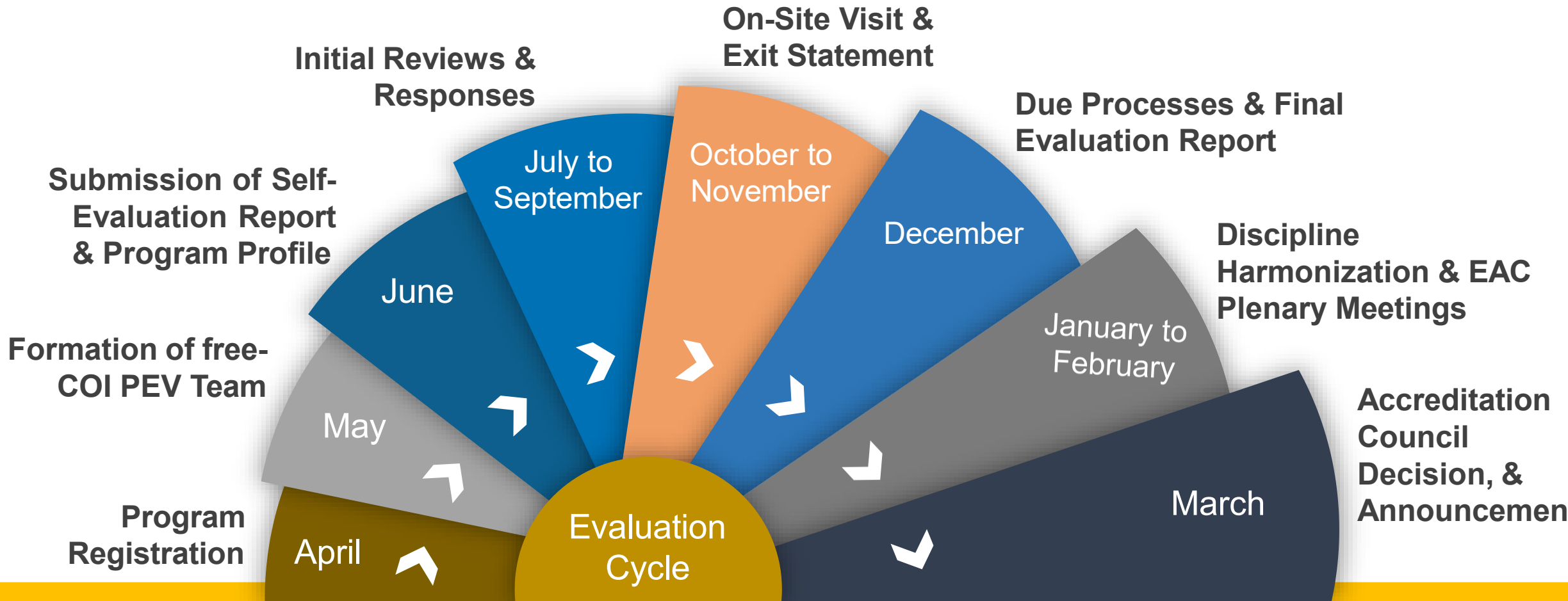
Problematic Cases Toward Not Accredited

The problematic cases due to claimed eligibility that is later proved otherwise during evaluation

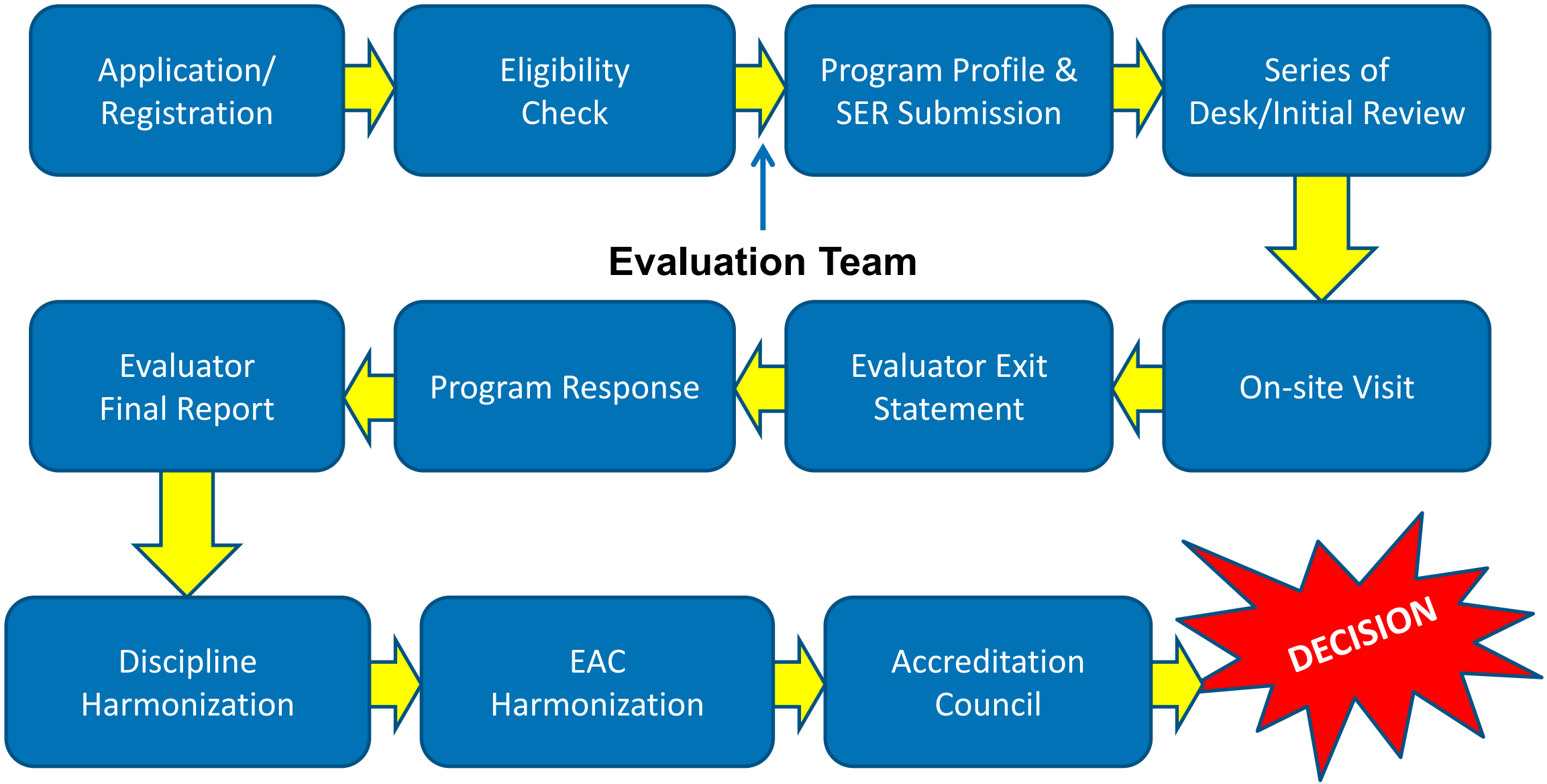
1. Math and Natural Science curriculum criteria
2. Major design (capstone) project experience
3. Program's learning outcomes assessment
4. Safety issues on all facilities
5. Does not understand and follow IABEE accreditation procedure

Program Evaluation
Procedures

Evaluation for PA | Evaluation/re-evaluation for GA | Interim Evaluation with Visit | Interim Evaluation without Visit



Evaluation for Accreditation Procedures



Evaluation & Decision for General Accreditation

No	Kata kunci Kriteria	Nilai
1.1	Formulasi Profil Profesional Mandiri	A/C/W/D
1.2	Publikasi Profil Profesional Mandiri	A/C/W/D
1.3	Formulasi Capaian Pembelajaran Lulusan	A/C/W/D
2.1	Kurikulum	A/C/W/D
2.2	Dosen	A/C/W/D
2.3	Mahasiswa & Suasana Akademik	A/C/W/D
2.4	Fasilitas	A/C/W/D
2.5	Tanggung Jawab Institusi	A/C/W/D
3.1	Penilaian CPL yang Efektif	A/C/W/D
3.2	Pemenuhan CPL oleh Lulusan	A/C/W/D
4.1	Evaluasi & Perbaikan Berkelanjutan	A/C/W/D
4.2	Pemeliharaan Dokumen & Rekaman	A/C/W/D

- Program will be judged against each of these 12 criteria (1.1 to 4.2)
- Four possible judgments for each criterion: (**A**)cceptable, (**C**)oncern, (**W**)eakness, or (**D**)eficiency
- Program will be accredited if there is no **“D”**
- 5-year accreditation (full) will be granted if Program receives **“A”** or **“C”** judgments
- 3-year accreditation (interim) will be granted if Program has **“W”** (improvement report and evaluation required)
- Program granted a “Not-Accredited” status is given a chance to appeal

Evaluation & Decision for Provisional Accreditation

No	Kata kunci Kriteria	Nilai
1.1	Formulasi Profil Profesional Mandiri	Yes/No
1.2	Publikasi Profil Profesional Mandiri	Yes/No
1.3	Formulasi Capaian Pembelajaran Lulusan	Yes/No
2.1	Kurikulum	Yes/No
2.2	Dosen	Yes/No
2.3	Mahasiswa & Suasana Akademik	Yes/No
2.4	Fasilitas	Yes/No
2.5	Tanggung Jawab Institusi	Yes/No
3.1	Penilaian CPL yang Efektif	Yes/No
4.1	Evaluasi & Perbaikan Berkelanjutan	Yes/No
4.2	Pemeliharaan Dokumen & Rekaman	Yes/No

- A program applying for PA will be evaluated to measure its potential of meeting the Accreditation Criteria within a foreseeable future.
- For each criterion a “Yes” or “No” judgement followed by evaluator’s comments shall be made in conclusion, indicating the potential of the program to meet the criterion within 2-4 years.
- Potential programs will be granted a “Provisionally Accredited” status
- Non-potential programs will be given a “Not Accredited” status

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Terima kasih