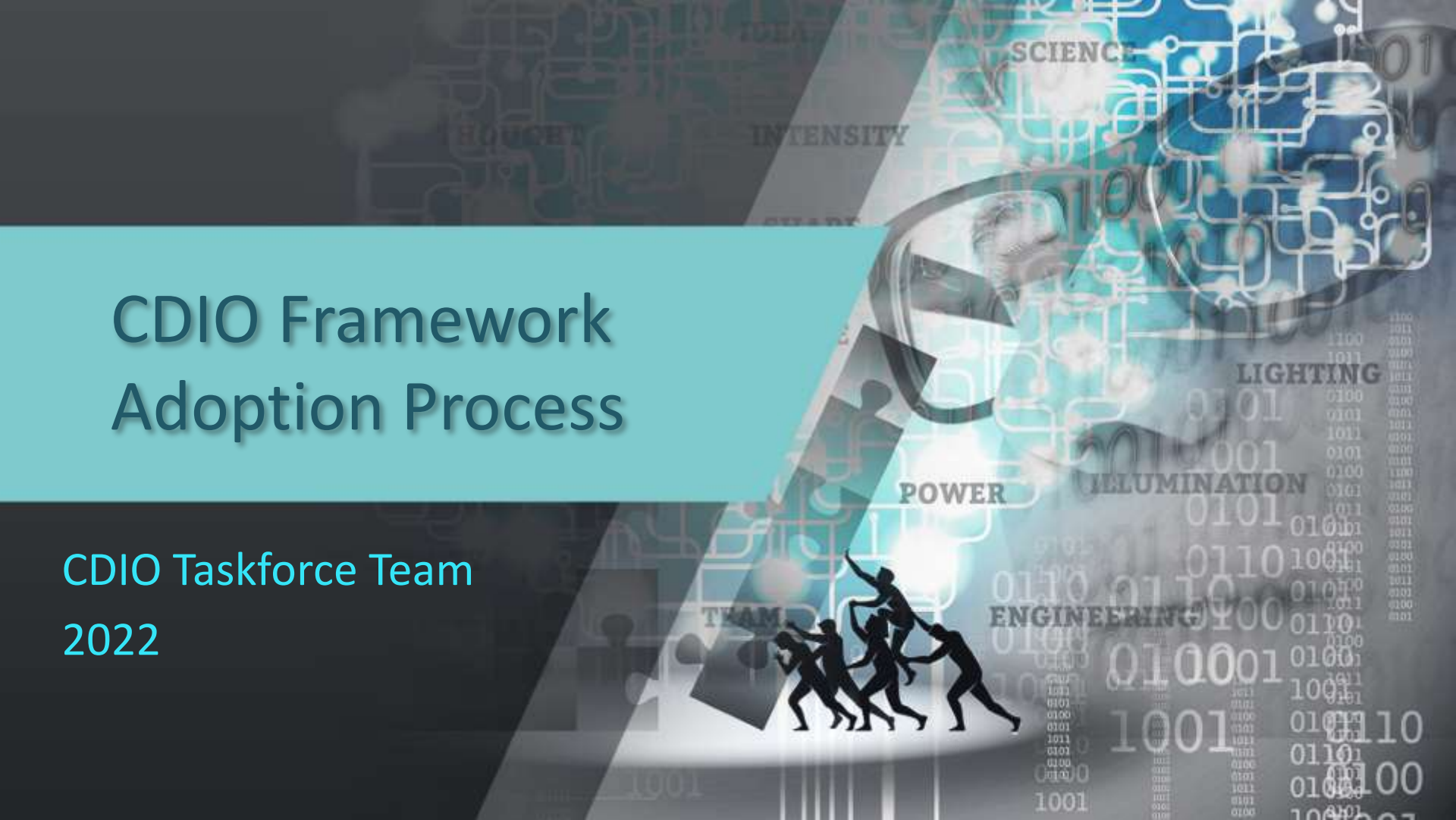


CDIO Framework Adoption Process

CDIO Taskforce Team
2022



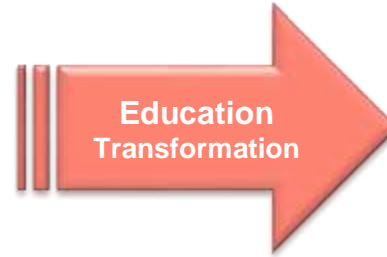
What is CDIO Framework?

The CDIO™ INITIATIVE is an innovative educational framework for producing the next generation of engineers. The framework provides students with an education stressing engineering fundamentals set in the context of Conceiving — Designing — Implementing — Operating (CDIO) real-world systems and products.



First year
Vocational Student

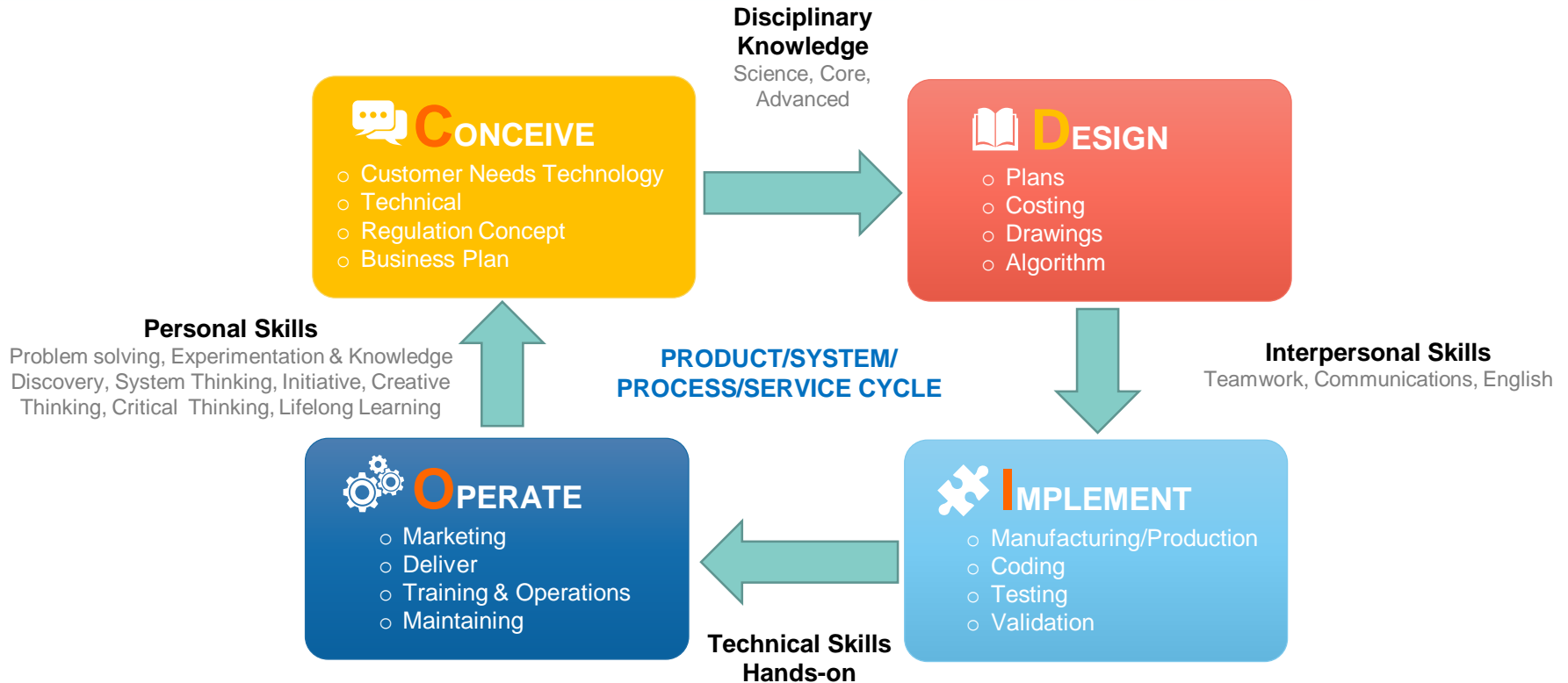
- **Not sure of the purpose** of studying vocational education.
- Have a mindset that vocational education is **difficult and complex**.
- **Not sure to stay** in this field after graduation.



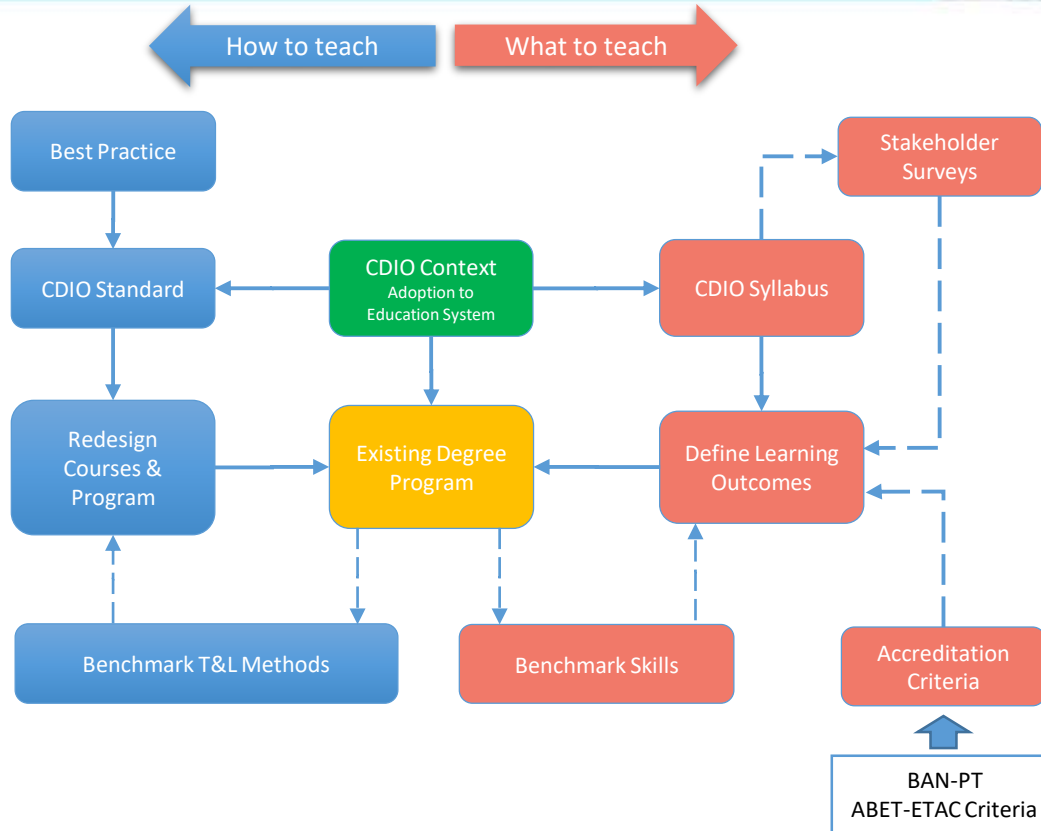
Graduates with modern skills

- **Can Do** Hands-on: possesses both theory and practice.
- **Can Be** Innovative, able to work in multidisciplinary teams
- **Can Serve** Socially and Environmentally in a purposefully manner.

Product Lifecycle



CDIO Approach



What : CDIO Syllabus

- Disciplinary Knowledge
- Personal Skills
- Interpersonal Skills
- CDIO Skills

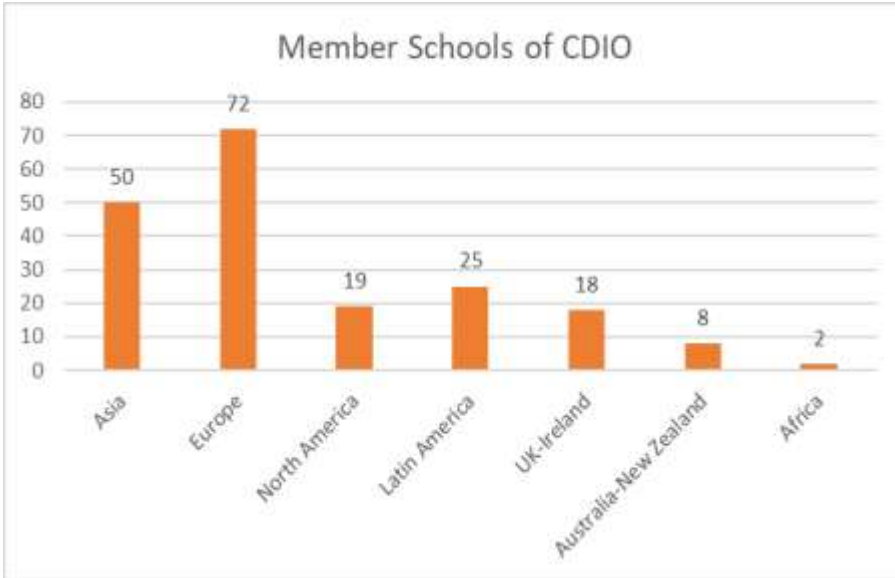


How : 12 Standards

- Curriculum
- T&L methods
- Assessment
- Faculty Competence
- Workspace



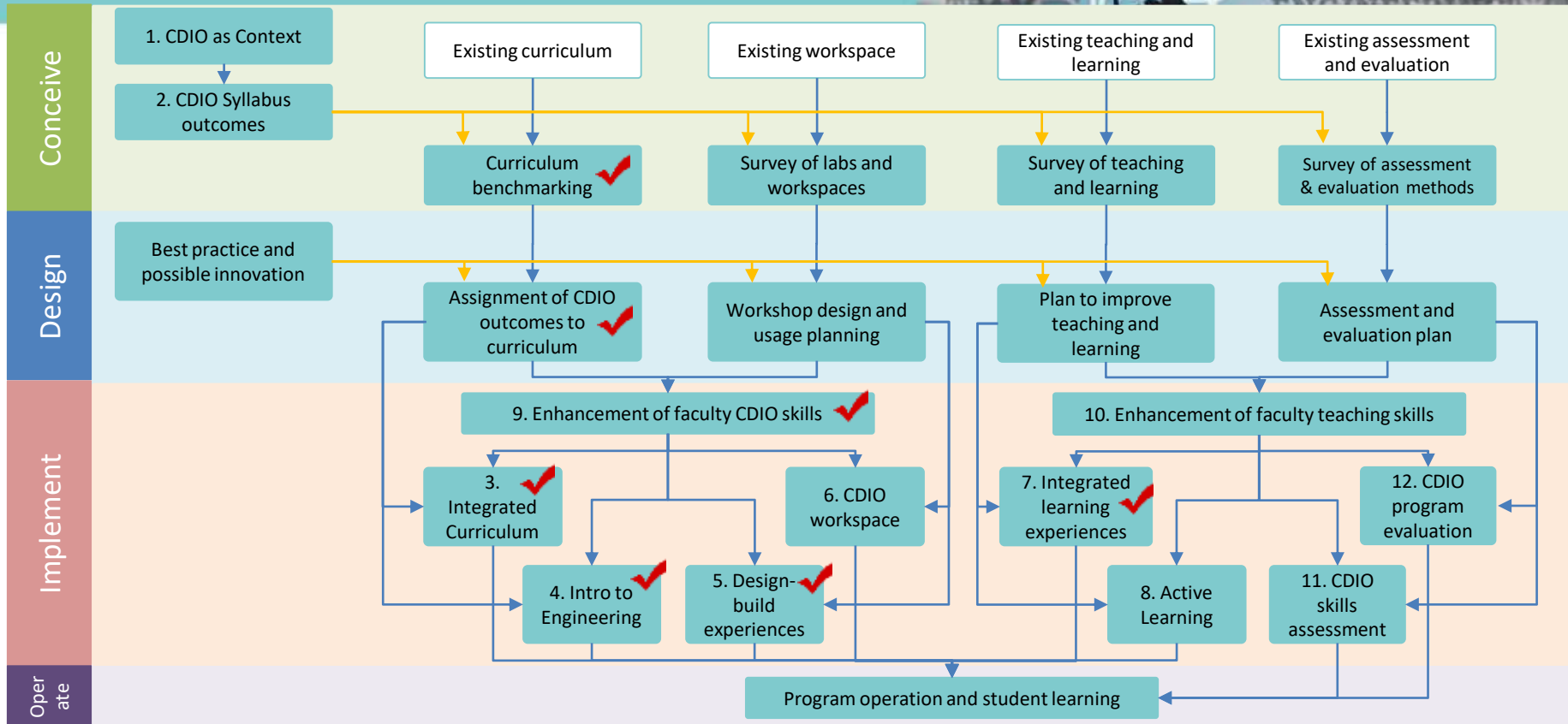
Member Schools



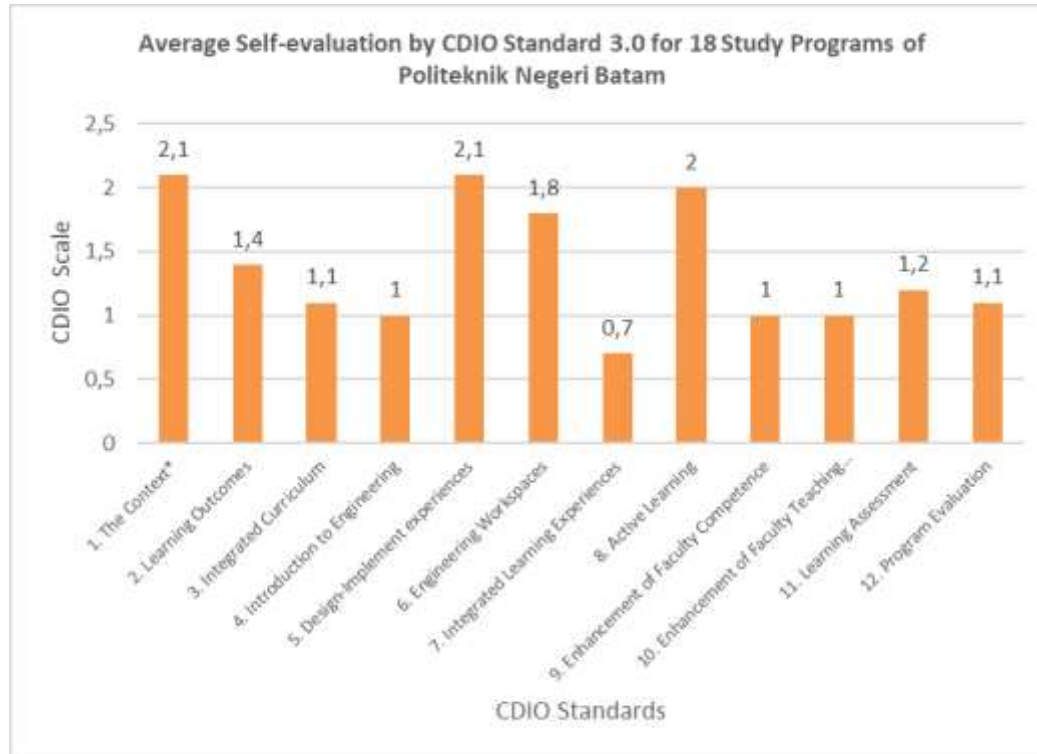
Sep 2022, 194 Universities and polytechnics



CDIO Adoption Process



Self-evaluation by CDIO Standard 3.0



CDIO Framework Implementation Handbook

Activity	Outcome	Remarks	Date
1. CONCEIVE			
1.1 Adoption of CDIO principle as the context of education	Standard 1. The CDIO Context		
1.1.1 CDIO taskforce team formation	Letter of support from Polibatam Director	Director	6 June 2022
1.1.2 CDIO world wide application	Application form	Taskforce Team	9 June 2022
1.1.3 Self-evaluation by CDIO Standards 3.0	Self-evaluation form	Taskforce Team	9 June 2022
1.1.4 Planning for CDIO adoption	CDIO adoption plan	Taskforce Team	9 June 2022
1.2 Internal CDIO Workshop #1: Curriculum Review			20 June 2022
1.2.1 Study of government or accreditation requirements	Accreditation requirements analysis	Taskforce Team, Curriculum Team	
1.2.2 Industry needs survey	Industry needs analysis	Taskforce Team, Curriculum Team	
1.2.3 Scientific and technical advances	Scientific and technical advances analysis	Taskforce Team, Curriculum Team	
1.2.4 Stakeholder survey for student proficiency levels	Student proficiency levels	Taskforce Team, Curriculum Team	26-30 Sep 2022
1.2.5 Redefine Student Outcomes using CDIO Syllabus and CDIO Standards	Standard 2. Learning Outcomes	Taskforce Team, Curriculum Team	
1.2.6 Development of integrated curriculum and course using Implementation Kits (I-Kits)	Standard 3. Integrated Curriculum	Taskforce Team, Curriculum Team	
1.2.7 Development of Introduction to discipline course	Standard 4. Introduction to disciplinary program	Taskforce Team, Curriculum Team	
1.3 Outline the CDIO framework implementation handbook	Handbook outline		
2. DESIGN			
2.1 Internal CDIO Workshop #2: Design-Implement Experiences & Workspace Review			21-22 June 2022
2.1.1 Design-Implement experiences	Standard 5. Design-Implement Experiences	Taskforce Team, Curriculum Team	
2.1.2 Workshop design and usage planning	Standard 6. Learning Workspace	Taskforce Team, Curriculum Team	
2.2 Internal CDIO Workshop #3: Teaching & Learning Review			4-7 Oct 2022
2.2.1 Survey of existing teaching and learning methods	Standard 7: Integrated Learning Experiences	Taskforce Team, Curriculum Team	
2.2.2 Plans to improve teaching and learning methods	Standard 8: Active Learning	Taskforce Team, Curriculum Team	
2.2.3 Development of teaching and learning methods using Instructor Resource Materials (IRM)	Standard 10: Enhancement of Faculty Teaching Competence	Taskforce Team, Curriculum Team	
2.3 Internal CDIO Workshop #4: Assessment & Evaluation Review			4-7 Oct 2022
2.3.1 Survey of existing assessment and evaluation methods	Standard 11: Learning Assessment	Taskforce Team, Curriculum Team	
2.3.2 Assessment and evaluation plans	Standard 12: Program Evaluation	Taskforce Team, Curriculum Team	
2.4 CDIO Asian Regional Meeting	Standard 9. Enhancement of Faculty Competence	Taskforce Team, Head of Study Program	11-13 Oct 2022
2.5 Soft launch of Polibatam CDIO framework implementation handbook (Beta version)	Polibatam CDIO Handbook (Beta version)	Taskforce Team	26 Oct 2022
3. IMPLEMENT			
3.1 Workspace construction	CDIO workspace operation	Taskforce Team, Head of Study Program	1-5 Nov 2022
3.2 Dissemination of CDIO program to lecturers and students	Lecturers and students voices	Taskforce Team, Head of Study Program	16 Nov 2022
3.3 Active learning implementation through Project-based Learning pilot project	Automated Guided Vehicle for warehouse management system	Lecturer, Students	22 Aug - 14 Nov 2022
3.4 Learning assessment	Outcome Based Education review	Lecturer, Curriculum Team	21 Nov 2022
3.5 Video documentation	Project-based learning activity video documentation	Lecturer, Students	22 Aug - 14 Nov 2022
4. OPERATE			
4.1 Ongoing delivery of education			
4.1.1 Students & lecturer feedback	Process feedback	Taskforce Team, Curriculum Team	7 Dec 2022
4.1.2 Project-based Learning key partners Focus Group Discussion	Partner feedback	Taskforce Team, Curriculum Team	15 Dec 2022
4.2 Launching of Polibatam CDIO framework implementation handbook	Polibatam CDIO handbook First Edition	Taskforce Team	16 Dec 2022
4.3 Dissemination of CDIO program to others polytechnic	PPNS	Taskforce Team	17-18 Dec 2022

CDIO Taskforce Team

No	Nama	Jabatan	Tugas
1	Ahmad Riyad Firdaus	Penanggungjawab	Reviu dan bertanggungjawab terhadap panduan pendidikan berbasis kerangka CDIO Polibatam
2	Hendawan Soebhakti	Ketua	Koordinasi tim dan Menyusun panduan pendidikan berbasis kerangka CDIO Polibatam
3	Evalita Br. Sembiring	Anggota	Administrasi, Menyusun dan review panduan pendidikan berbasis kerangka CDIO Polibatam
4	Senanjung Prayoga	Anggota	
5	Ahmad Hamim Thohari	Anggota	
6	Dian Mulyaningtyas	Anggota	Menyusun panduan pendidikan berbasis kerangka CDIO Polibatam
7	Sugeng Riadi	Anggota	
8	Erikson Togatorop	Anggota	



THANK YOU