

7th International Skills Forum

Anticipating and Preparing for Emerging Skills and Jobs

12–14 December 2017

Asian Development Bank, Manila, Philippines

**Empowerment through the Center of Technology :
Increasing Student Competitiveness**

Zainal Arief

Politeknik Elektronika Negeri Surabaya (PENS)

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.





7th International Skills Forum

Anticipating and Preparing for Emerging Skills and Jobs

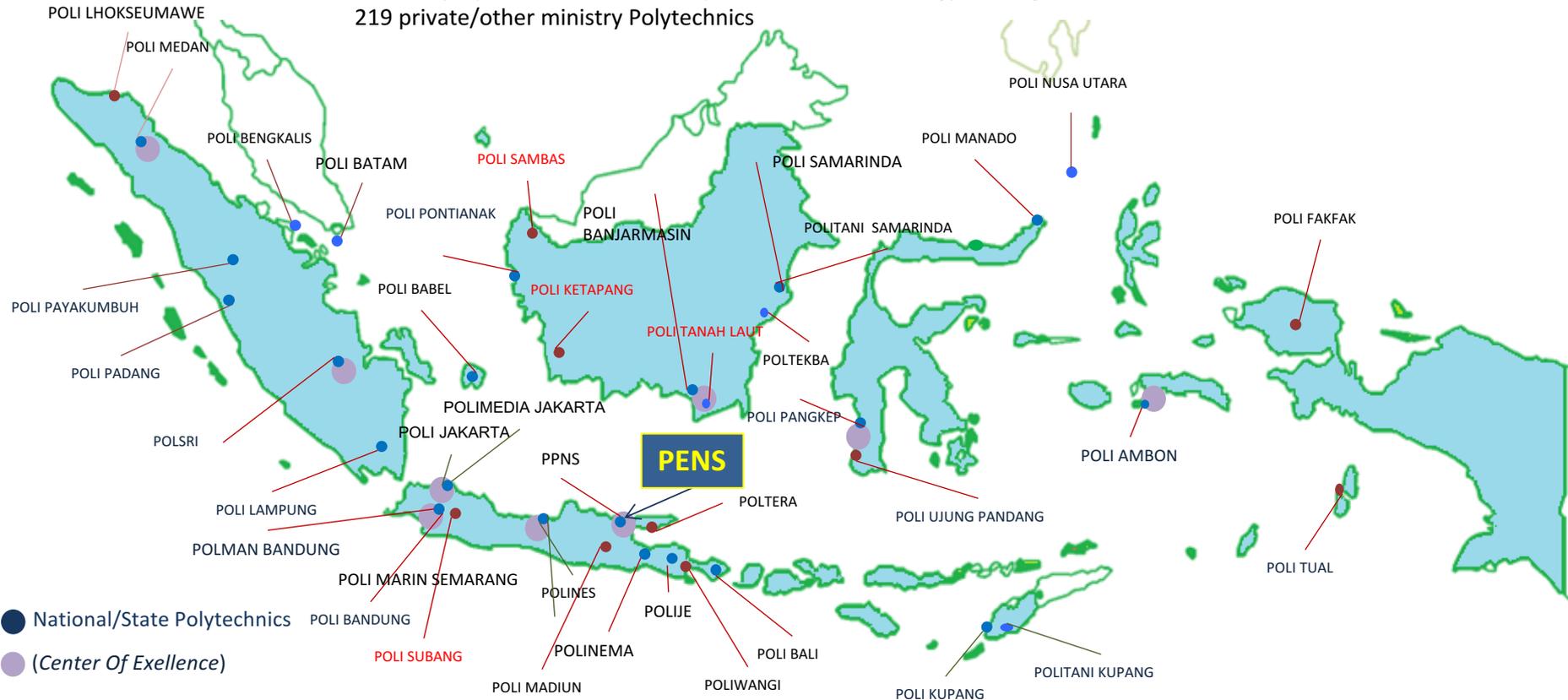
12-14 December 2017 • Asian Development Bank, Manila, Philippines



Vocational Higher Education Development

Guarantee the development and supply of vocational education access in Indonesia

43 state polytechnic under Ministry of Research Technology and Higher Education
219 private/other ministry Polytechnics





7th International Skills Forum

Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



PENS Education Development phase

Politeknik Elektronika & Telekomunikasi, in short: PET (1988 to 1992), by Grant from Japanese Government

Electronic Dept
Telecommunication Dept

Politeknik Elektronika Surabaya, (1992 to 1996) Politeknik Elektronika Negeri Surabaya (PENS) (1996)

Electronic Dept
Telecommunication Dept
Electrical Dept

Strengthening Education: by 2nd Grant from Japanese Government

Opening D4 program

Applied Master program 2012

- Electrical Eng.
- Informatic & Computer Eng.

Proposing Applied Doctoral program 2020

National/International recognition

1st phase 1988-1998
Strengthening D3 program

2nd phase 1999-2008
Strengthening D4 program

3rd phase 2009-2018
Graduate program

Continuous Industrial/Institutional networking program



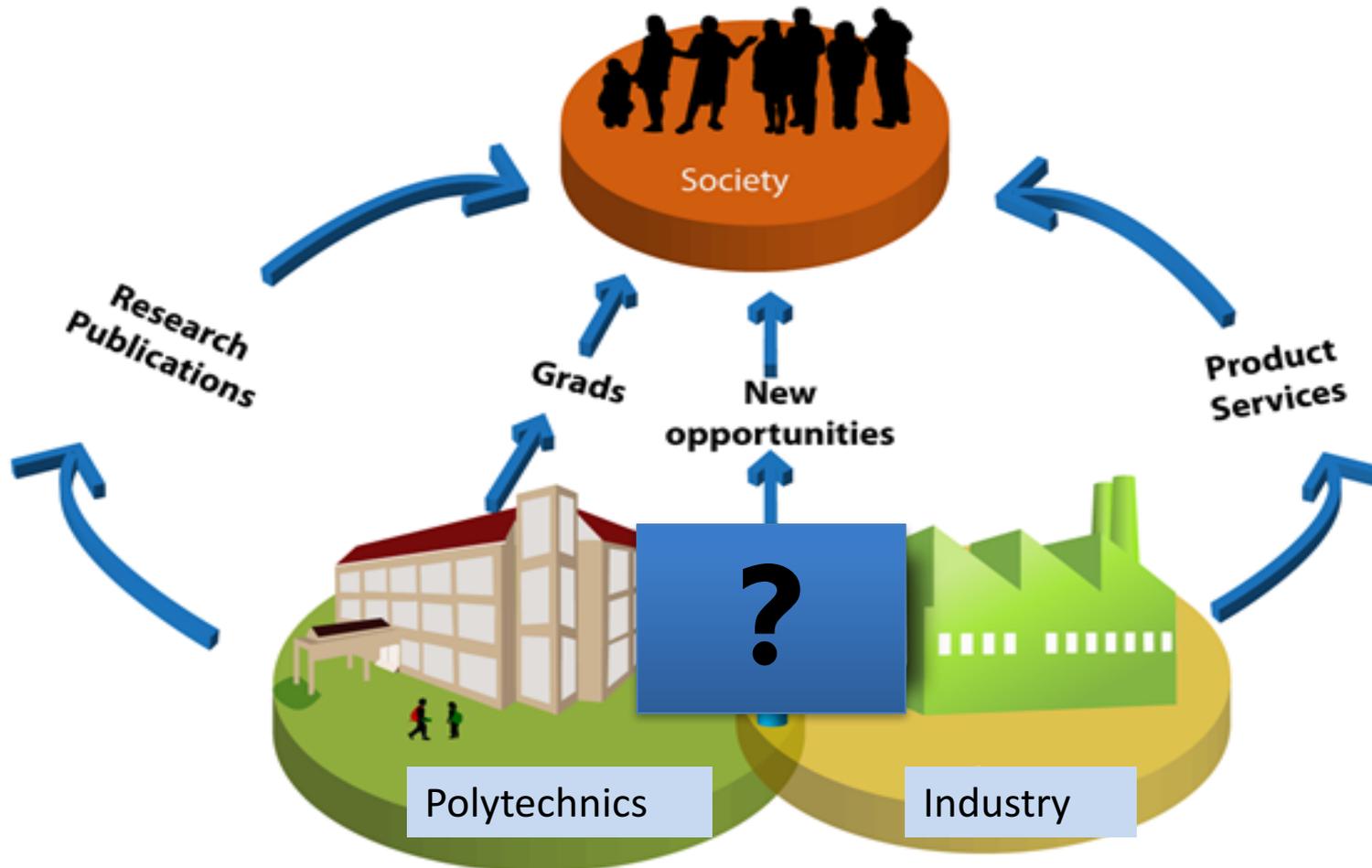


7th International Skills Forum Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



Collaboration for value added





7th International Skills Forum

Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



Important factor of Vocational Education: Strengthening Industrial Networking

Synchronization to close the gap

Polytechnics/
college



- Recruitment program
- Internship program
- Joint research program
- Teaching factory*
- Tracer study*
- Lecture guest*
- Curriculum collaboration*



**partially supported by ADB*

Industrial/employer/
market demands



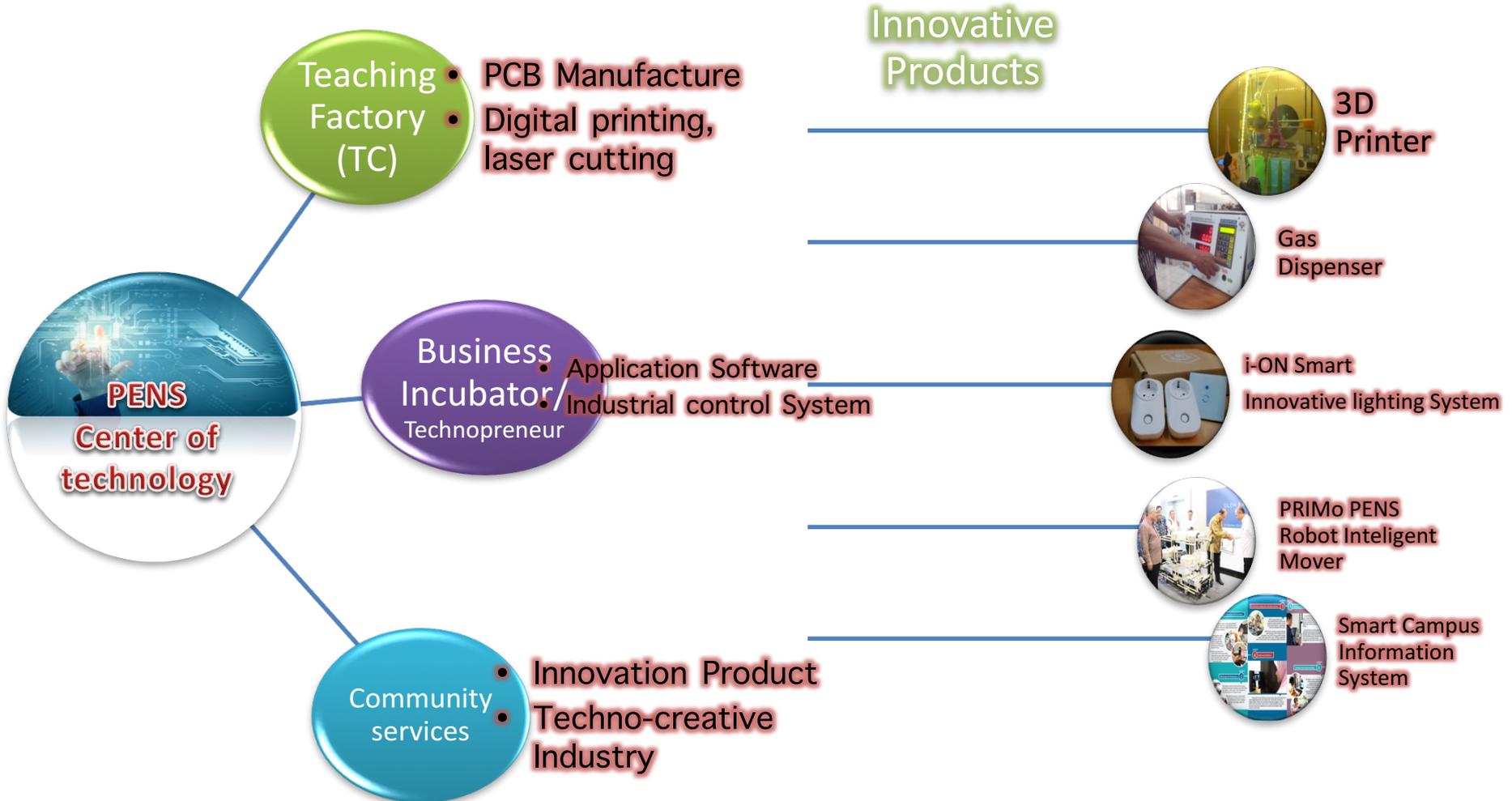


7th International Skills Forum Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



PENS Center of technology





7th International Skills Forum Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



COT Hand over by ADB President & DG of DGLSA MORTHE At PENS, on February 2017

Opening meeting and discussion



3D Printing



PCB Manufacture



Ion Smart Appliance control



Launc of CoT



Door stop by Pers





7th International Skills Forum

Anticipating and Preparing for Emerging Skills and Jobs

12-14 December 2017 • Asian Development Bank, Manila, Philippines



Conclusion



Impact

- Polytechnic education contributes to national socio economic development

Outcome

- Good and potential networking with stake holder
- Increased good facility and equipment for students experiments
- Holistic and integrated education system
- Good governance of business incubator

Output

- Increased Third party involvement in CoT
- Good competitiveness of students
- **Competence student**

obstacle

- Still need an additional equipment for best product
- Long way procurement process