Strengthening the Vocational Higher Education in Indonesia

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Potential of Economic Growth

Continuously and inclusive high economic development rate

2010

GDP: $ 700 M

GDP/capita $ 3.000 (2012 $ 4200)

Economic Growth Rate = 6%

2025

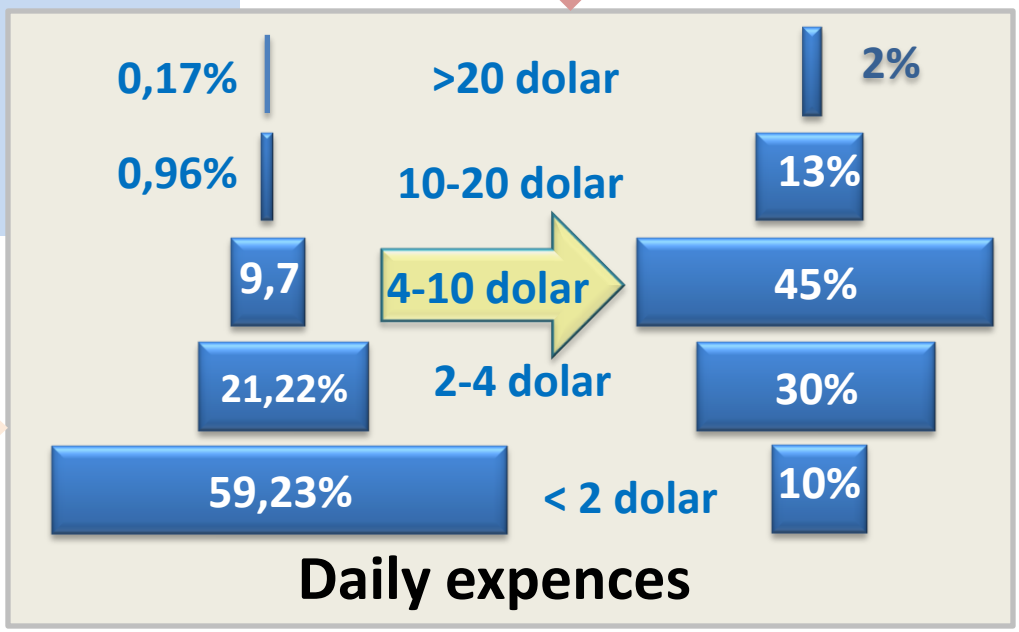
GDP: $ 4~4,5 T

GDP/capita $ 14.250-15.500

2045

GDP: $ 15~17,5 T

GDP/capita $ 44.500-49.000

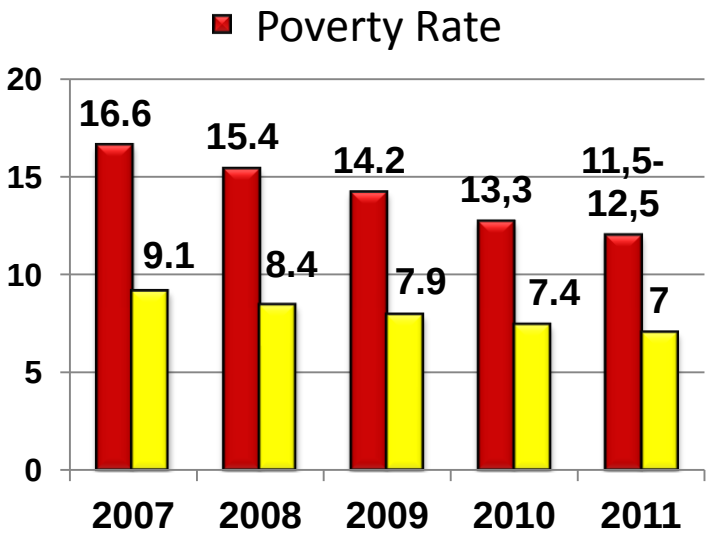


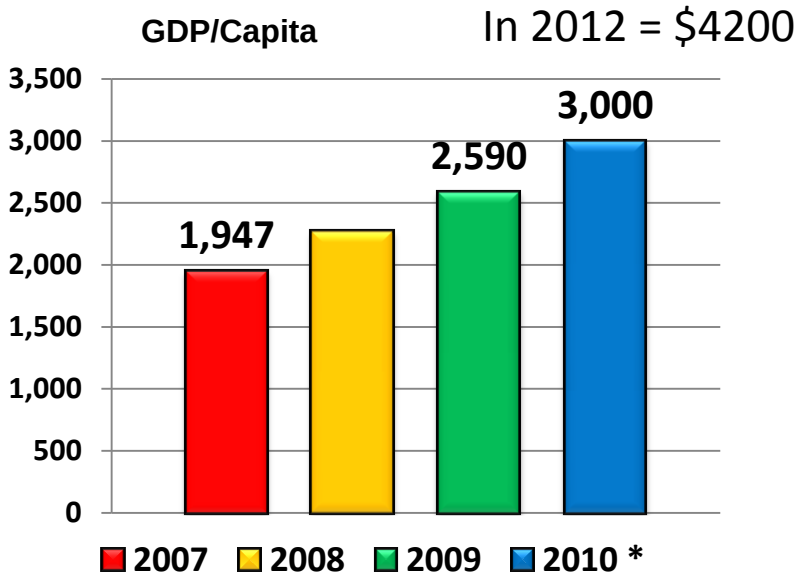
3 Main Capitals of Economic Grpwth

1. Natural Resources

- ✓ *Geothermal (no.1 in the world)*
- ✓ *Coal (no.2 in the world)*
- ✓ *Tin, Nickel (no. 2 and 4 in the world)*
- ✓ *Palm Oil, rubber, Cacao (no.1, 2, 2 in the world)*
- ✓ *Etc.*

2. Experience



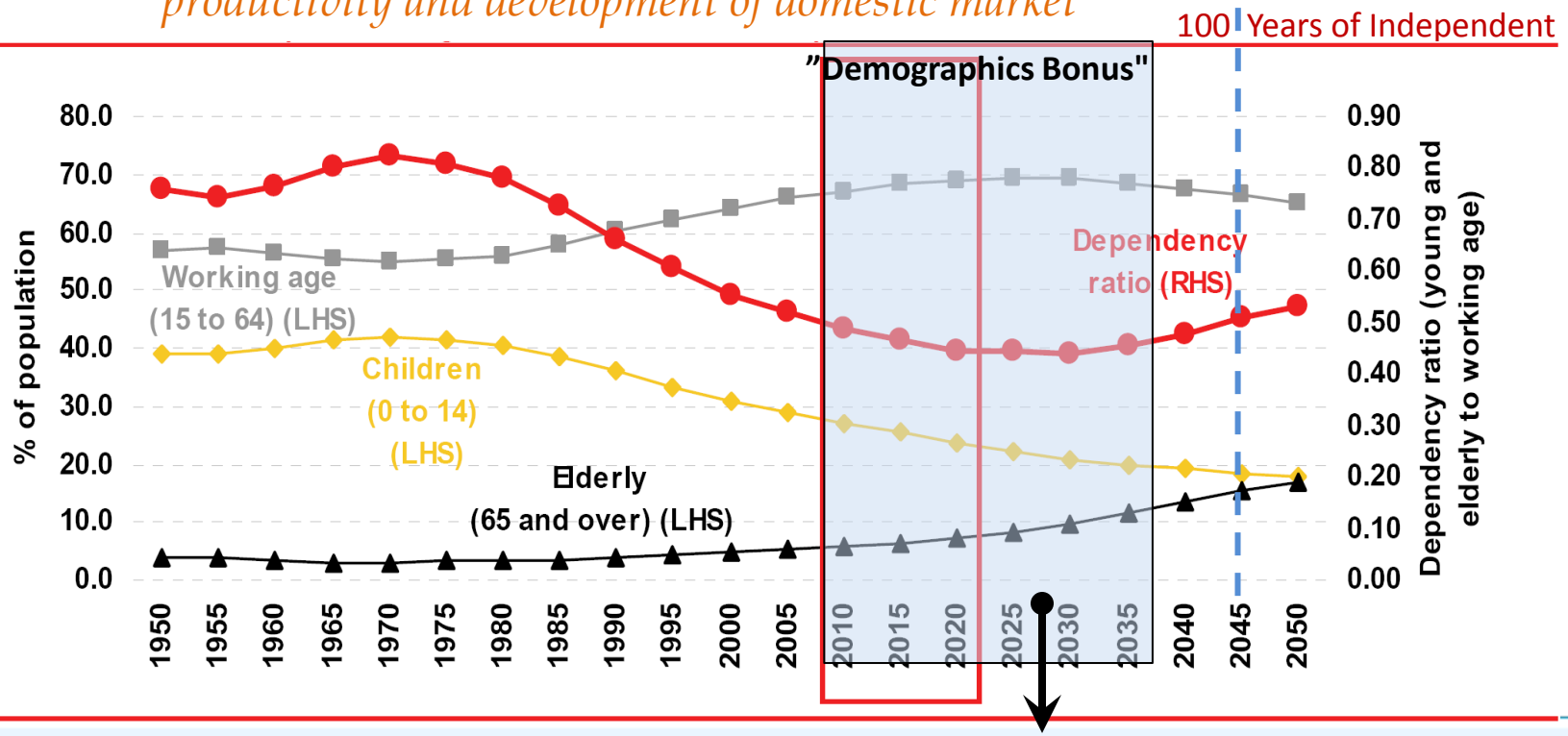


3. Human Resources

Human Resources Capital

(Sumber: Menko Perekonomian, 2011)

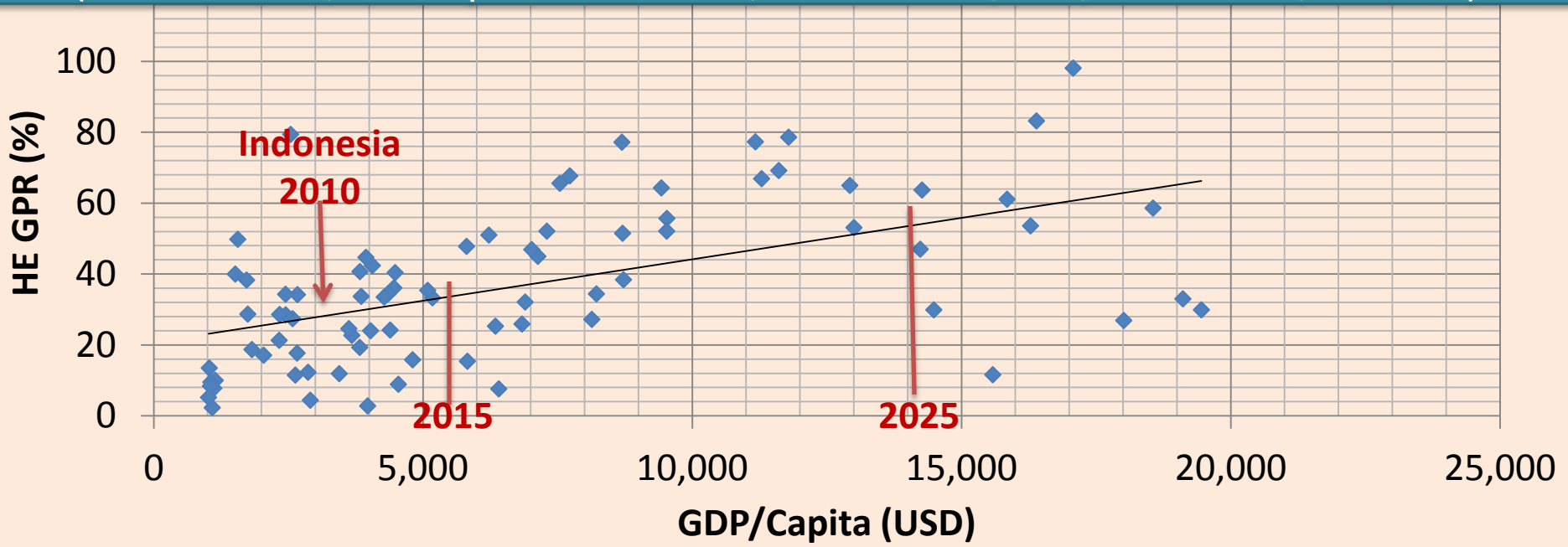
Demographics Bonus: *.. Is fundamental capital for increasing economic productivity and development of domestic market*



Dependency Ratio decreasing (2010-2040):
Productive ages increasing (*Demografic Dividen*), opportunity to boost productivity increasing, increasing the prosperity. But, if we fail to manage this opportunity, will become *Demographic Disaster*.
The keyword is the quality human resources : Education and health.

GDP/Capita vs. HE Gross Participation Rate (GPR)

(Sumber: WEF, GCI Report 2010-2011, Worl d Bank, BPS, Kemdiknas, Kemkeu)



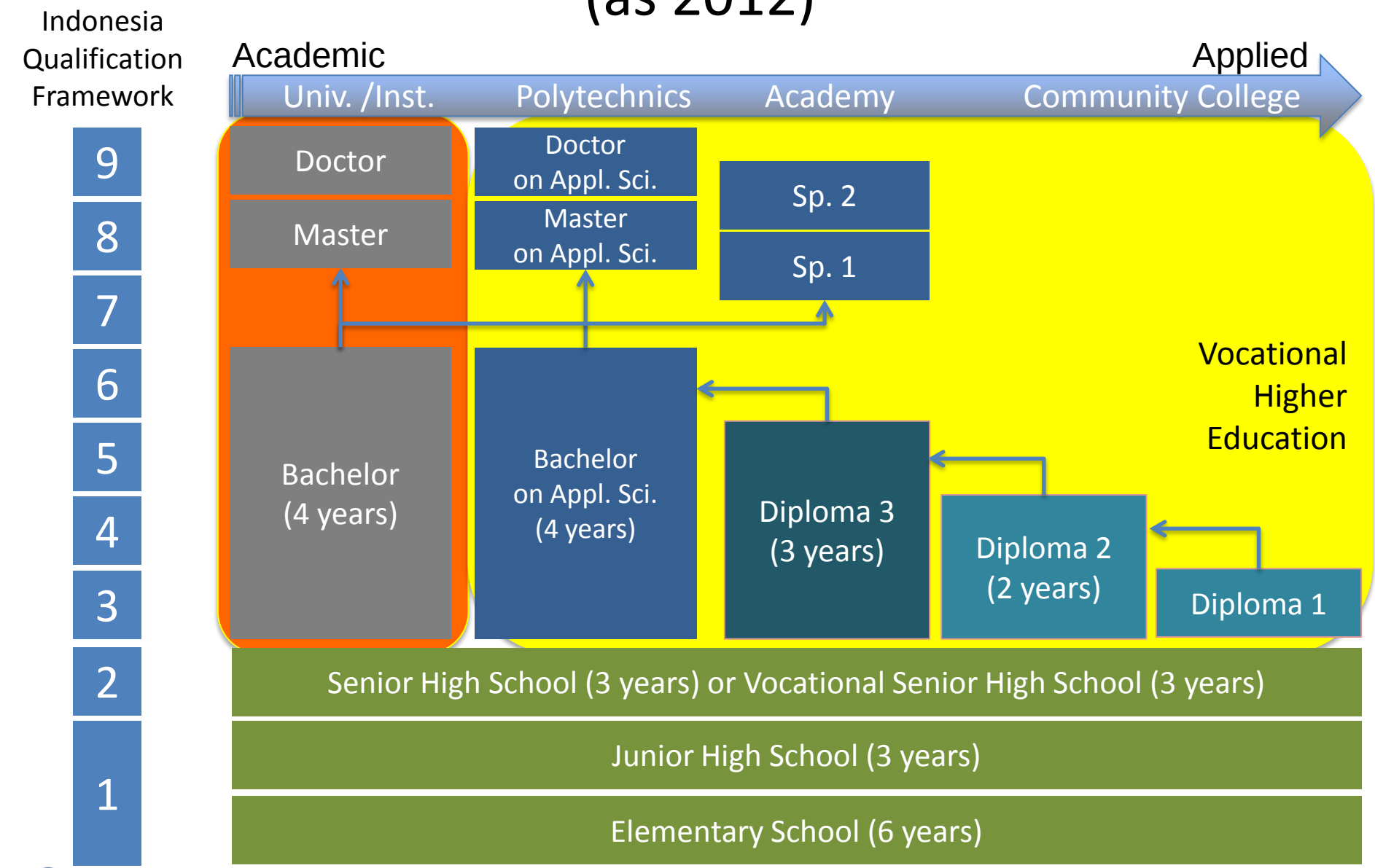
Indonesia Higher Education Development Target

Years	2010 (Ref.)	2015	2025
GDP/Capita (USD)	3.000	5.300	14.000
HE GPR (%)	26,34	33	53
Population (Ages 19-23)	19.844.485	21.269.480	20.218.780
HE Student	5.226.450	7.018.928	10.715.953
Addition of Student Number	-	1.792.478	3.697.025
Education Budget (Rp)	225 T	576 T	1.360 T
Addition of Budget (Rp)	-	351 T	784 T

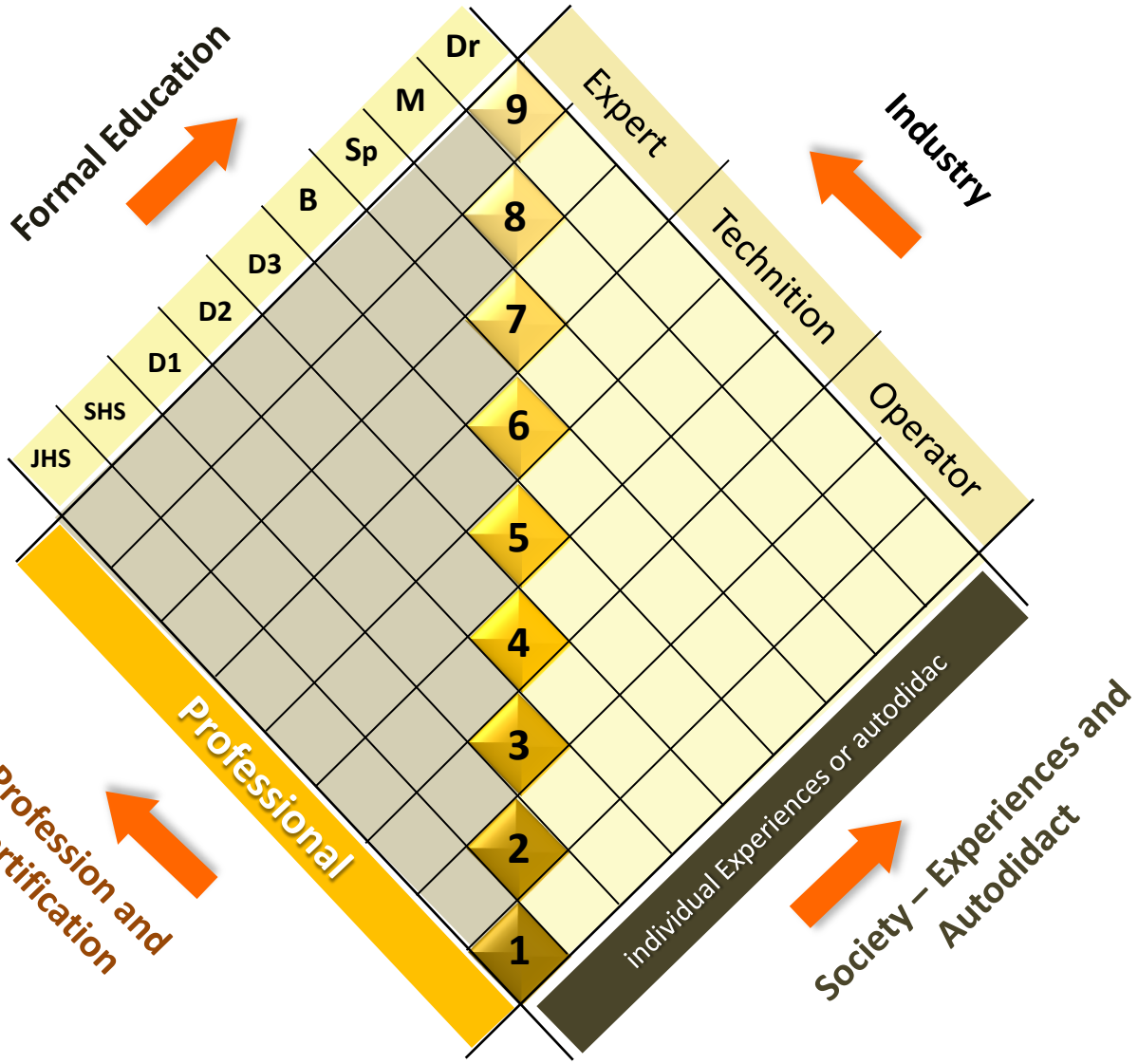
Shifting Paradigm of the needs of HE

No	Needs	Solution
1	Education with emphesize on skills and know how	Strengthten all level of vocational higer education.
2	Flexible HE services	multi entry-multi exit
3	Broader opportunity for all citizen to access HE (equitable)	Scholarship for poor student
4	An increasing in the availability and affordability of HE, widely spreaded and flexible to meet the needs of society.	Development of *Community Colleges*
5	The importance of research and comunnity services as coherent portion of HE.	Standard process and output of research and community services
6	Efficient and effective quality assurance systems	Tiered and regularity of data for quality assurance.
7	.....	.....

Indonesia Higher Education Systems (as 2012)



Indonesia Qualification Framework



Target

Acceleration :

1. HE Gross Partisipation Rate → A
2. Quality and Relevance → M

No	Action Plan	Ref.	Target	
		2010	s/d 2015	s/d 2025
A.1	Development of *Community College* (Unit)	0	269	824
A.2	New Polytechnics (Unit)		54	165
A.3	New University (Unit)		14	44
A.4	Increasing Student Body in Polytechnics	-	90.000	275.000
A.5	Increasing Student Body in Univ/Inst	-	90.000	275.000
A.6	Increasing Lecturer	-	53.000	111.000
M.1	Graduate School in Polytechnics (Unit)	0	10	20
M.2	Research University (Unit)	0	10	20
M.3	Increasing Lecturer with PhD level (%)	-	15%	50%

Case Study:
Electronics Engineering Institute of Surabaya (EEPIS)

Education at EEPIS

Department

Mechanical and Energy Engineering	Electrical Engineering	Information and Computer Engineering	Creative Multimedia Technology
- D4 Mechatronics - D4 Energy Generation - D4 Appl. Material Sc. (2013) Total: 480 students	- D3/D4 Electronics - D3/D4 Telecomm. - D3/D4 Electro-Industry - Master Program (2012) Total: 1470 Students	- D3/D4 Information Eng. - D4 Computer Eng. - Master Program (2012) Total: 750 Students	- D3 Media Broadcasting - D4 Game Tech. (2013) - D4 Multimedia Tech. (2013) Total: 180 Students

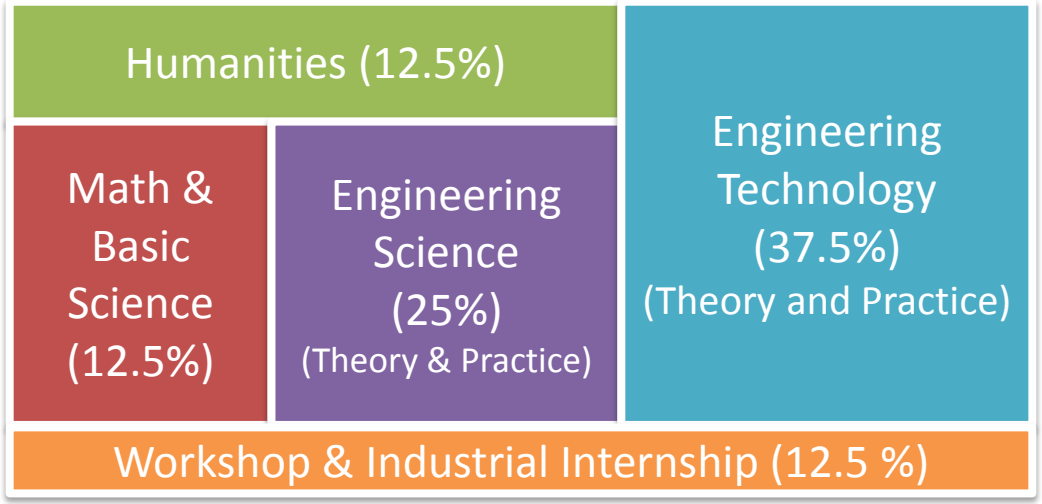
Student Body 2012 : 2880

Student Body Capacity 2013 : 3840 (+ Game, Multimedia Tech. and Appl. Material Sc.)

Note: D4=Bachelor on Appl. Sc.

Engineering Science and Engineering Technology contents depends on each department

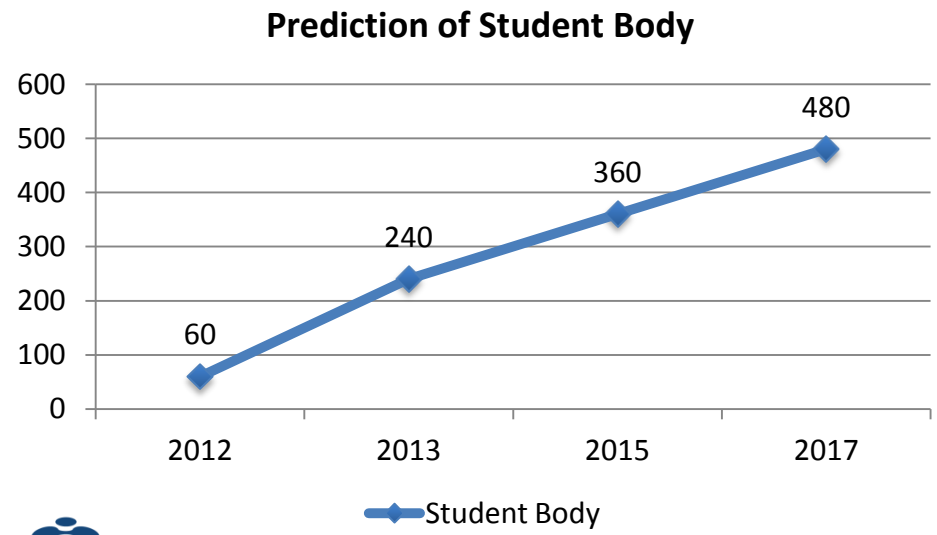
Typical Curricula Framework



Graduate Program (Master on Engineering Technology)

Mechanical and Energy Engineering	Electrical Engineering	Information and Computer Engineering	Creative Multimedia Technology
2015	- Device and Sensors - Mobile Comm. Eng. - Power Eng. - Biomedical Eng. - Mechatronics Eng.	- Sig. Vis. & Graph. - Comp. Real-time Sys. - db and Knowledge - Network and Web	2017

2012



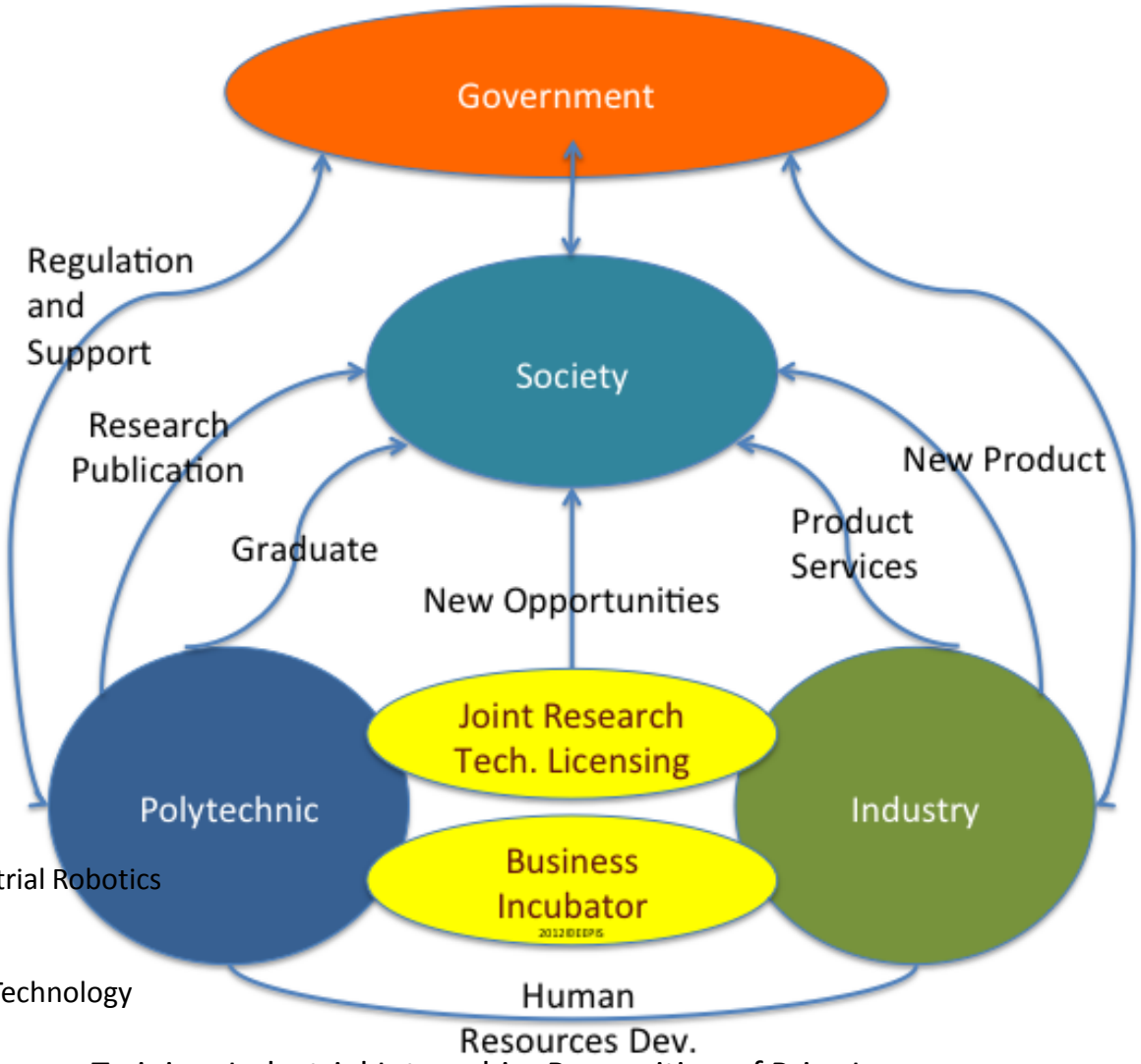
Humanities (12.5%)

Engineering Science (25%)
(Theory & Practice)

Engineering Technology (30%)
(Theory and Practice)

Innovation and product oriented research (32.5%)
(Idea, design, engineering, experiment, prototyping)

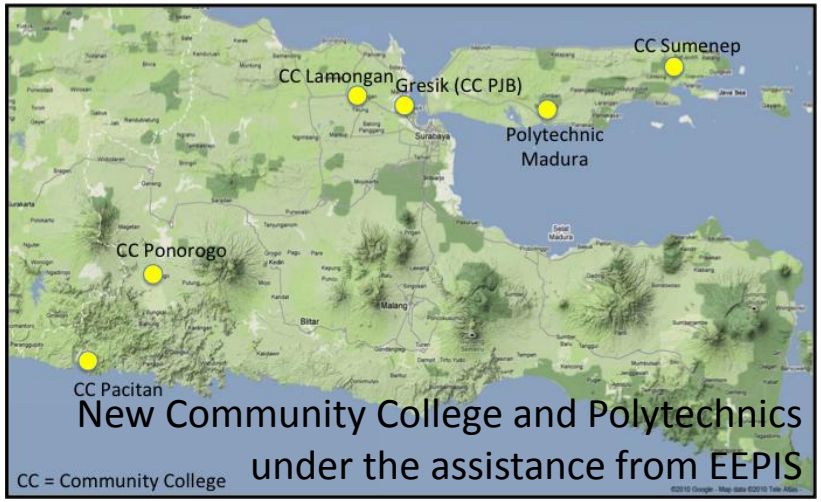
University-Industry Cooperation at EEPIS

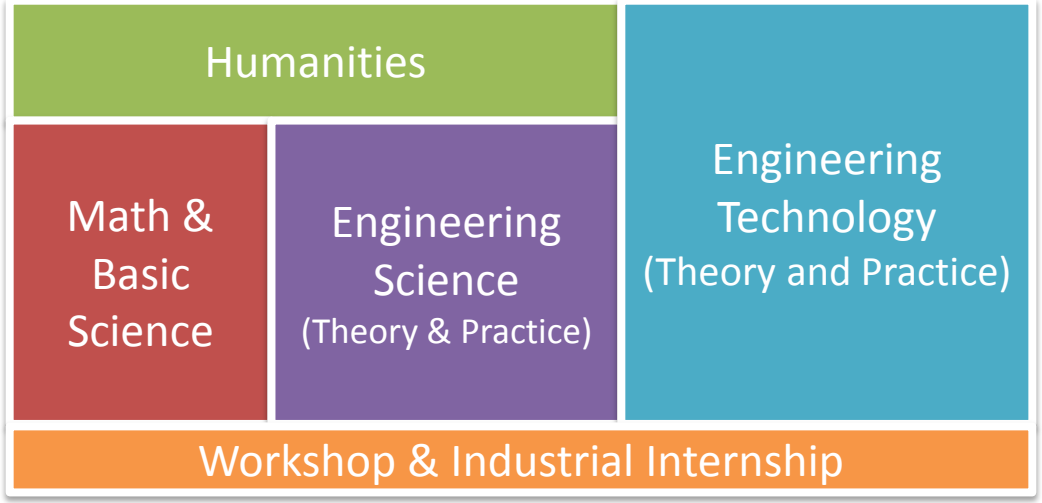


Research Center at EEPIS:
- Hazard and Disaster
- Educational and Agro-industrial Robotics
- Smart Devices and Sensors
- Ubiquitous Services
- Energy and Transportation Technology
- Defense Technology
- Creative Industry

Community College

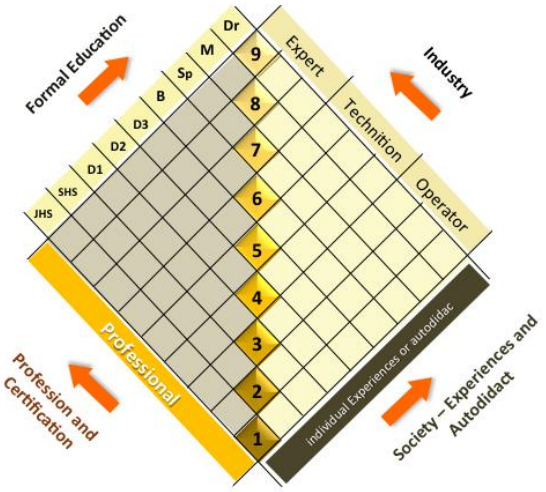
- Community College is the real contributor on the expansion of oportunity to obtain HE. Affordable, available in every districs and close to student's residence.
- Community College very helpful in providing special course training, enhanchment training and education for the aged.
- No significant differences between 4 years education in the University and 2 years in CC + 2 years in University.
- In 2012, Indonesia developed 35 new state Community College, 5 of the under the EEPIS supervision.
- We continuously developed the CC, with the target 269 CC by 2015

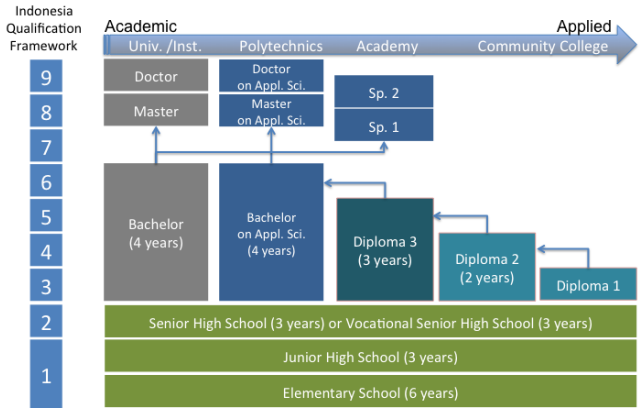




Recognition of Prior Learner (RPL)

Recognition based on the experience, autodidact, certification, etc.





Maximum Recognition

Bachelor + RPL	Sp. , M (App. Sc.)
B App. Sc. + RPL	SP. , M (App. Sc.)
D III + RPL	B App. Sc., Sp.
D II + RPL	D 4
D I + RPL	D 3
High School + PPL	D 2

Conclusion

- In the presentation explain the following topics:
  - Strengthen the Quality of human resources in Indonesia (Indonesia Qualification Framework and new regulation in higher education)
  - Development of vocational higher education (Polytechnics and Community College)
  - Experience of EEPIS in the development of vocational higher education
- All have been started, needed some time to know the results.

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