

The Council of
Engineering Deans of Thailand

CEDT

Collaboration of Excellence

Engineering Education Adaptation in New Paradigm

6 Dec 22 at COE Seminar



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CEDT 45th President - Dean of School of Engineering, Sripatum University



Ranking your opinion

Engineer's Essential Skills & Characters



<https://www.menti.com/aly218xewgv9>



ระบุ คุณลักษณะที่จำเป็น ของวิศวกรไทยใน
อนาคต (จากสำคัญ มาก ไป น้อย)

Select as many as you want in the order you prefer. There are 7 options in total.

ความรู้เนื้อหาศาสตร์ทางวิศวกรรมเฉพาะด้าน

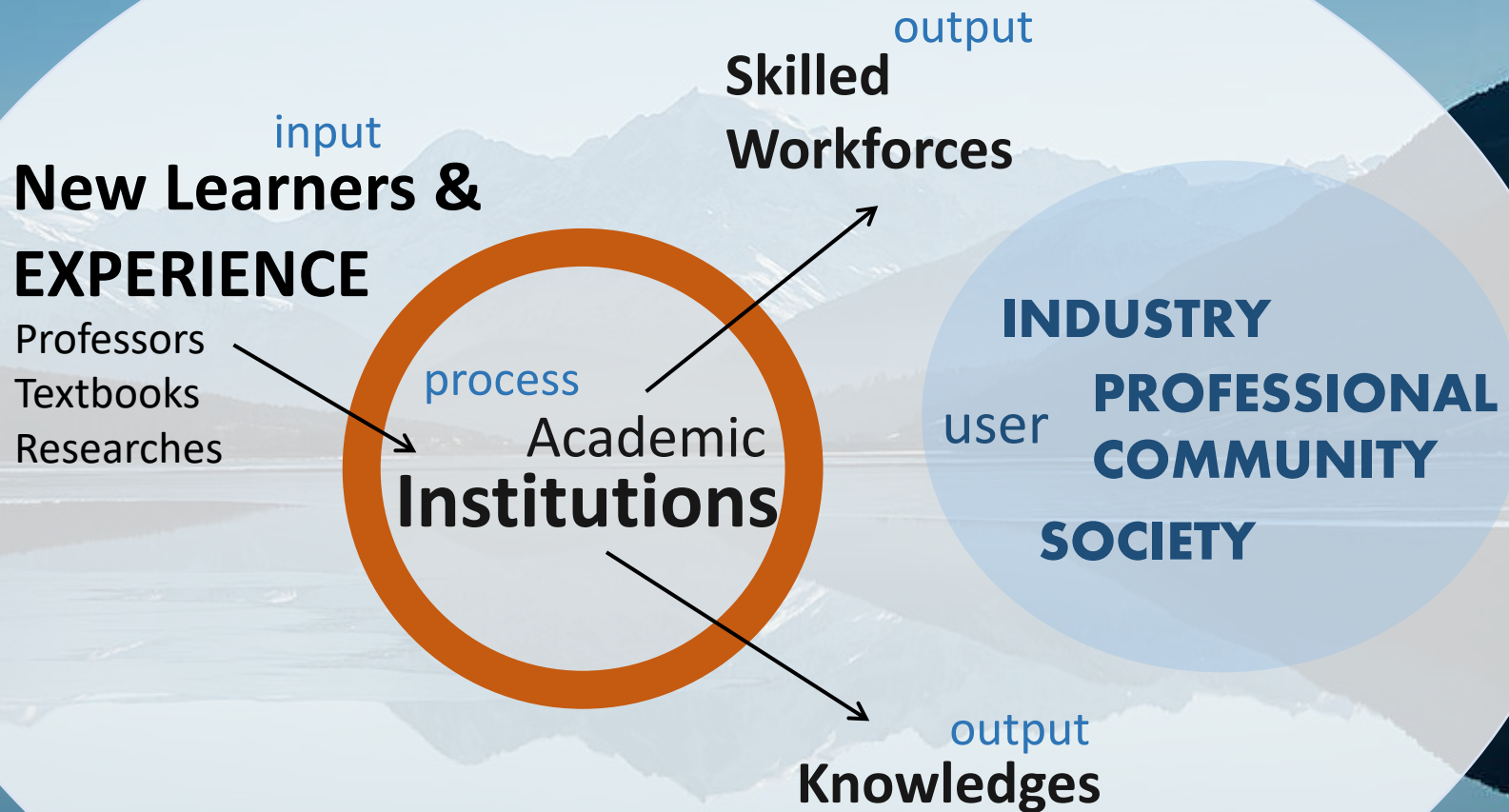
ทักษะการแก้ปัญหา ความคิดสร้างสรรค์

การสื่อสาร การทำงานเป็นทีม ความเป็นผู้นำ

การบูรณาการข้ามศาสตร์ และการเรียนรู้ปรับตัว

ทักษะทางดิจิทัล ระบบควบคุมอัตโนมัติ

จริยธรรม ความรับผิดชอบต่อสังคม



The world as we know before



The world we are in now

V

volatility

U

uncertainty

C

complexity

A

ambiguity

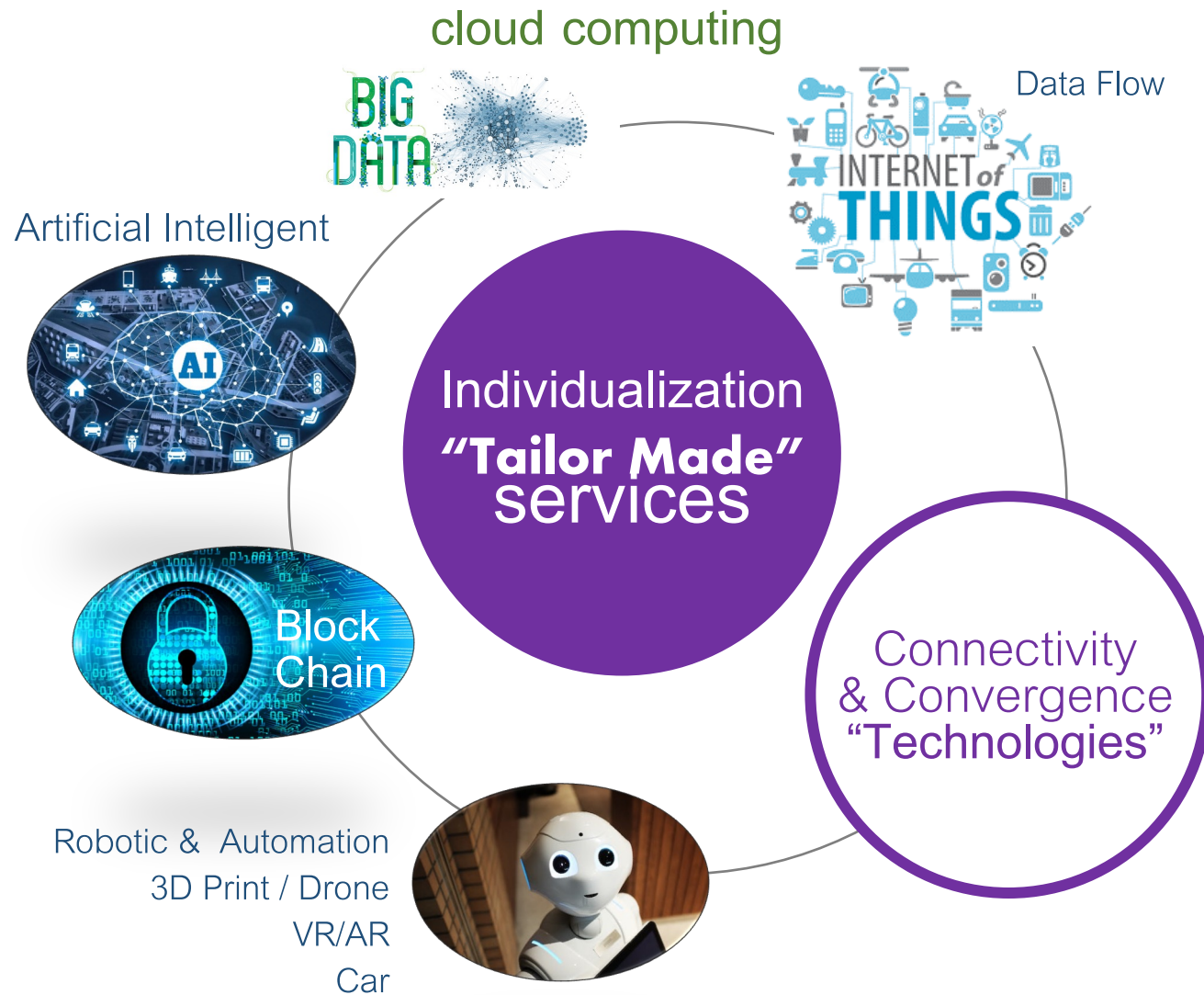
“We need banking
but we don’t need
banks anymore...”

Bill Gates

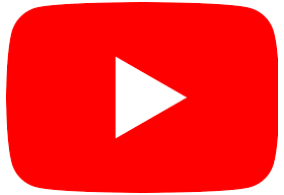


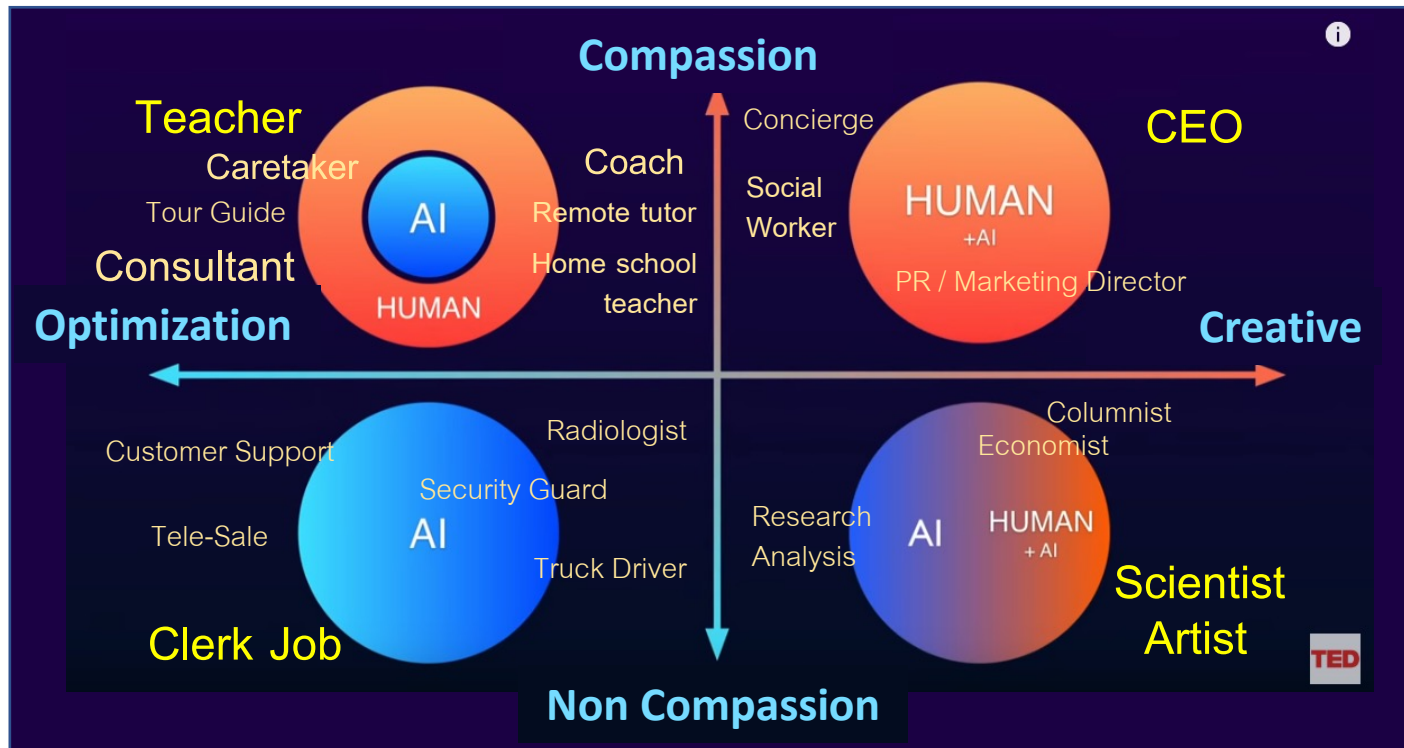
“We need education
but we may not need **university** anymore” ?

Change of Tech.

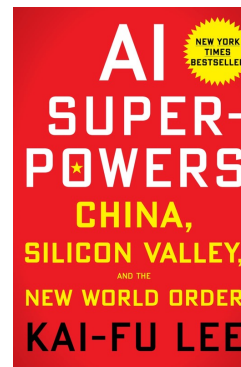


Change of Behaviors





AI vs. Human



<https://youtu.be/ajGgd9Ld-Wc>

Signals of Change

Futures and Beyond: Navigating Thailand toward 2030

FutureTales LAB by MQDC
National Innovation Agency

<https://youtu.be/roIRVJ7eSYE>

Credit Bank for Life-Long Learning

Weakening **Value of Degree**

Specialism VS. **Multipotentiality**

School & Ed-Tech as a Megacorporation

Echo Chamber

AI Based Teaching & Tutoring

The World as Our Classroom

Integration of **Tele-education & Virtual Schools**

Immersive Education

Edutainment

Just in Time Knowledge and Learning

Cognitive Enhancement

Focus on Learning How to Learn
(Re-Learn / Unlearn)



**Learning
to be Human**



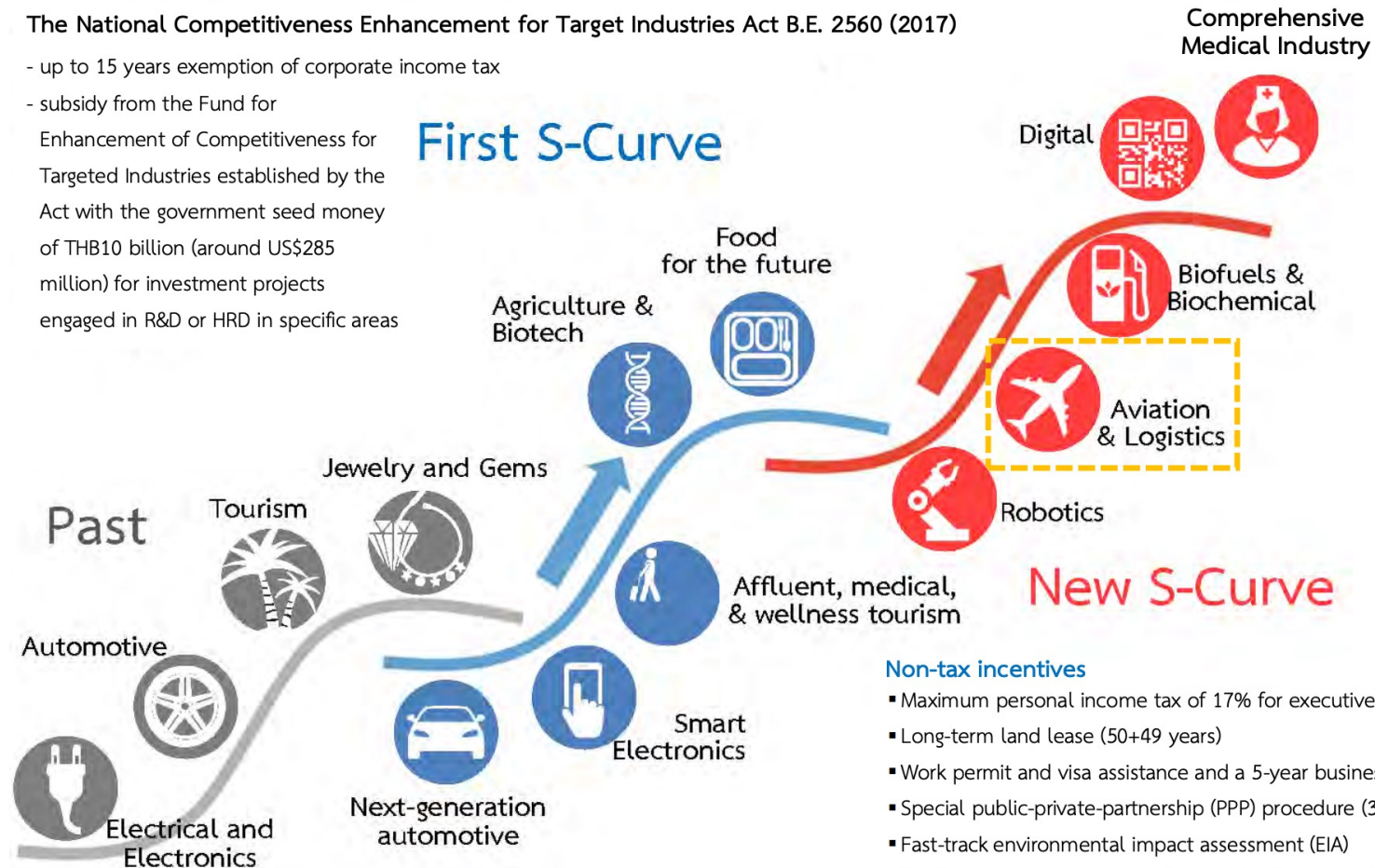
**Teacher as a
Meddler
in the Middle**

Thailand's Industrial Paradigm Shift

The National Competitiveness Enhancement for Target Industries Act B.E. 2560 (2017)

- up to 15 years exemption of corporate income tax
- subsidy from the Fund for

Enhancement of Competitiveness for Targeted Industries established by the Act with the government seed money of THB10 billion (around US\$285 million) for investment projects engaged in R&D or HRD in specific areas



Source: Krungsri Exclusive Economic and Investment Outlook 2018

Human Capital Need

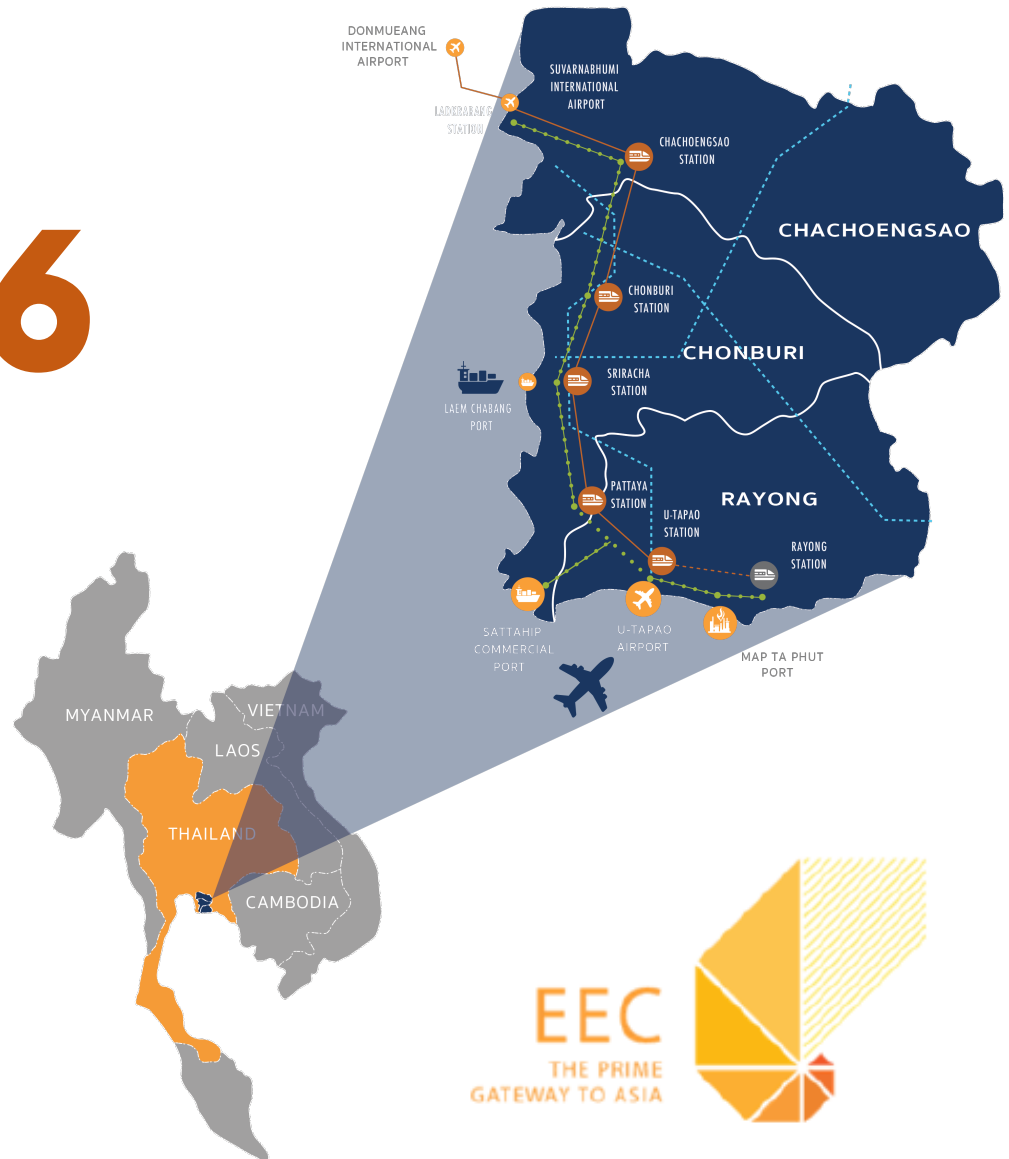
Expected Workforce Need for EEC
Between 2021 - 2025

564,176

Next Generation Automotive	38,726
Smart Electronics	53,515
Health & Wellness Tourism	7,870
Smart Agriculture & Biotech	24,240
Food for the Future	2,794

Robotics	91,779
Aviation	13,917
Biofuel & Biochemical	3,030
Digital	146,399
Comprehensive Medical Ind.	11,505

Railway System	24,246
Marine Commercial	16,978
Logistics	129,177

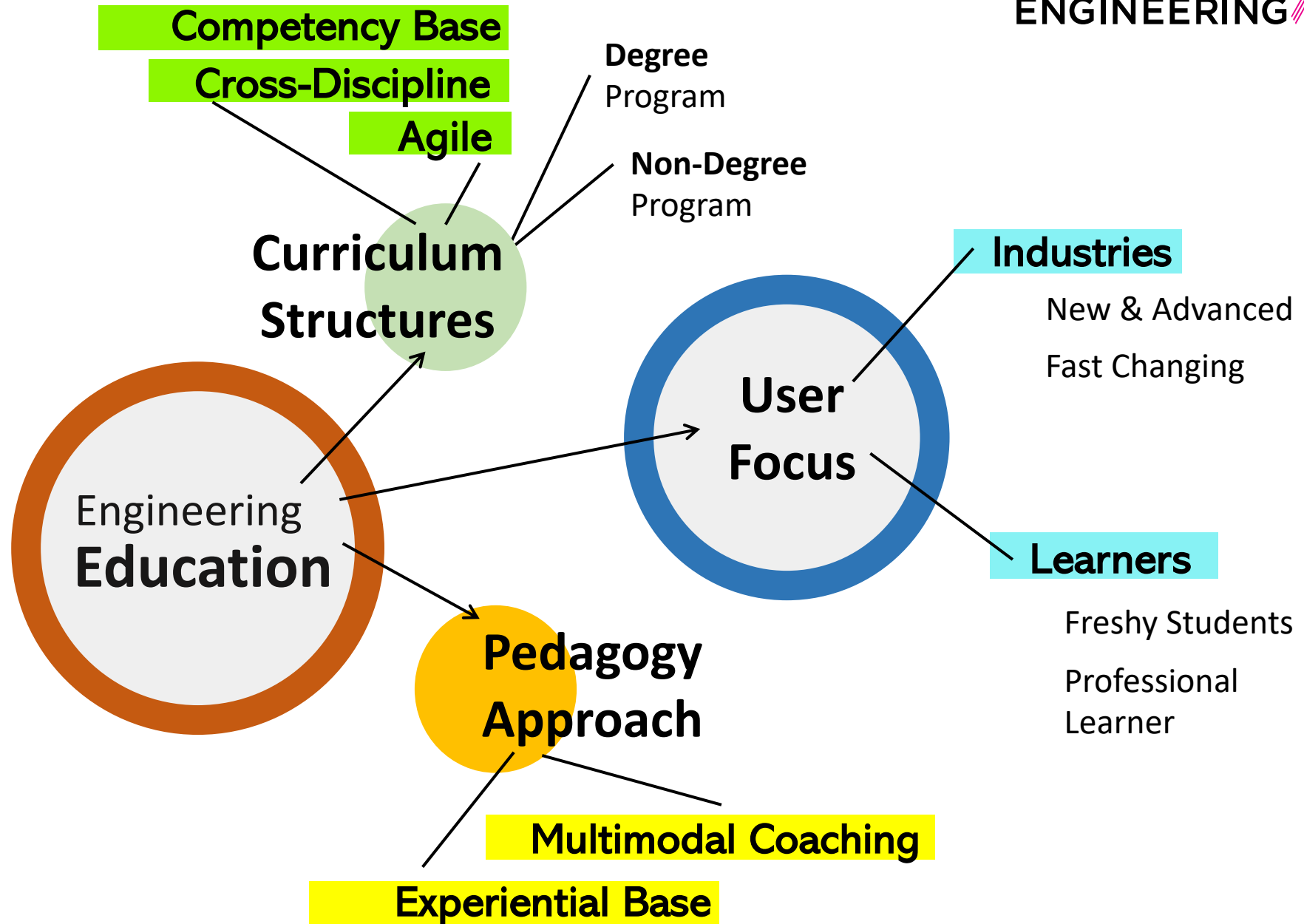


Source: EEC-HDC

How might

Thai Engineering Education

respond to this current urgent needs?



Curriculum Structures

Leaf & Fruit

Swift to Adapt

Branch

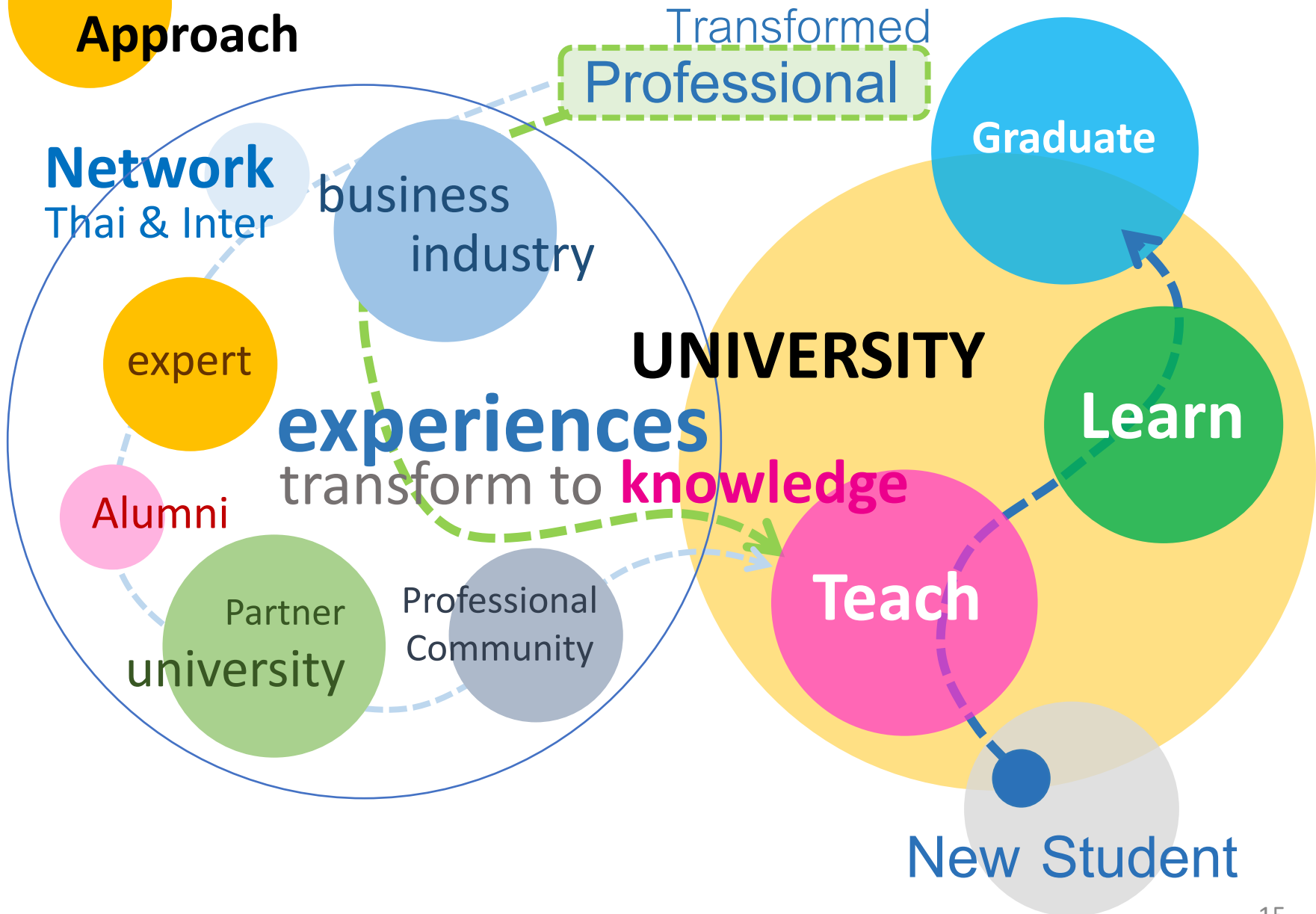
Smart to Apply

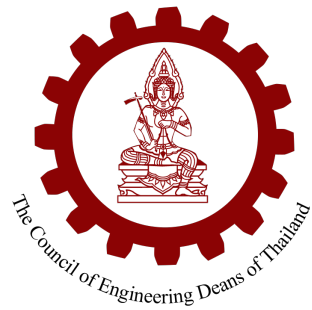
Trunk & Root

Strong Fundamental



Pedagogical Approach





Q & A