



Online Conference

# Bridging Asia-Pacific and Europe: New Qualifications and Competencies in TVET



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# **KOSEN Education and Deep Learning Contest**

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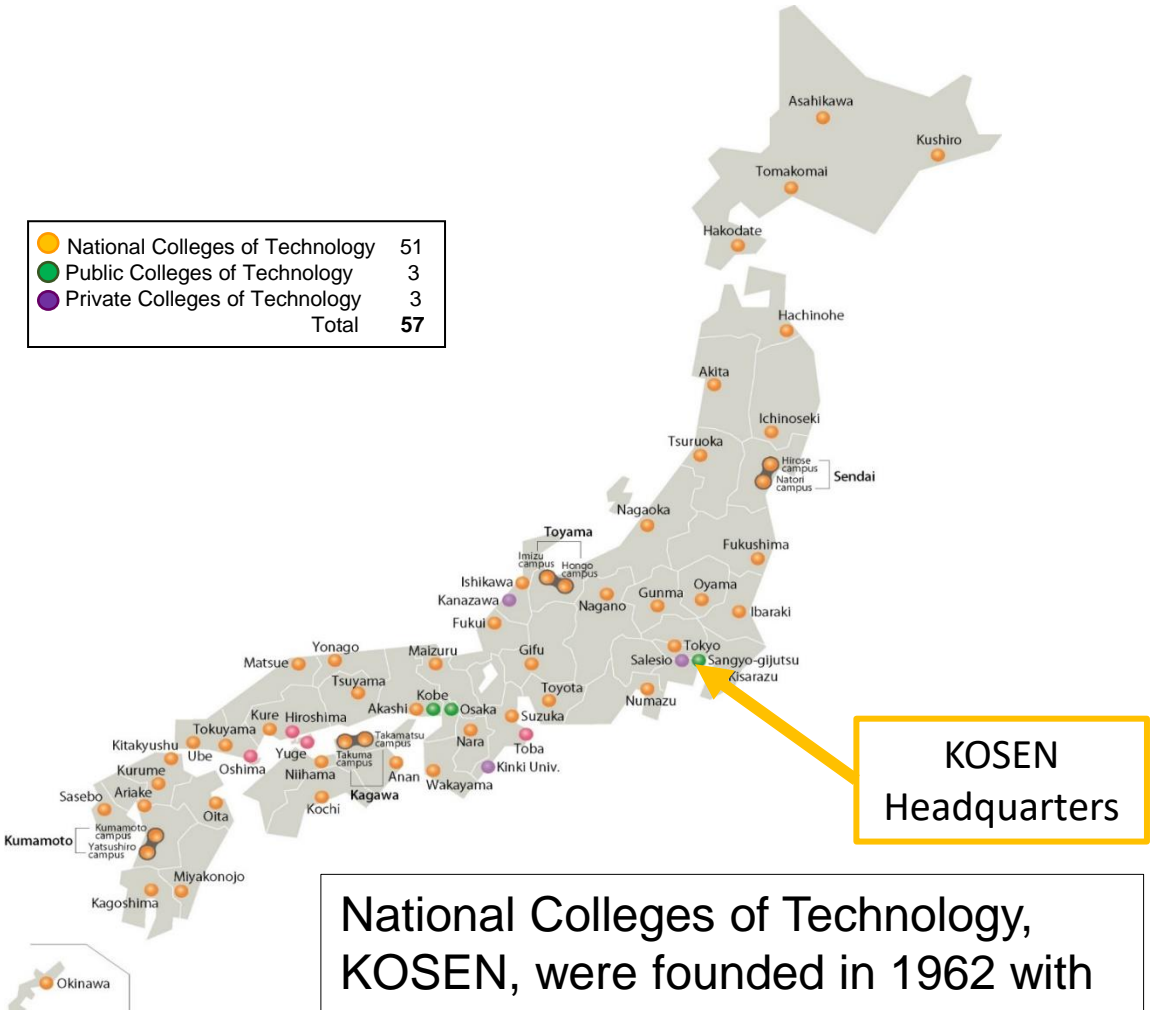
**Identifying New Qualifications and Competencies in TVET :  
Suitable approaches and instruments to share successful projects**



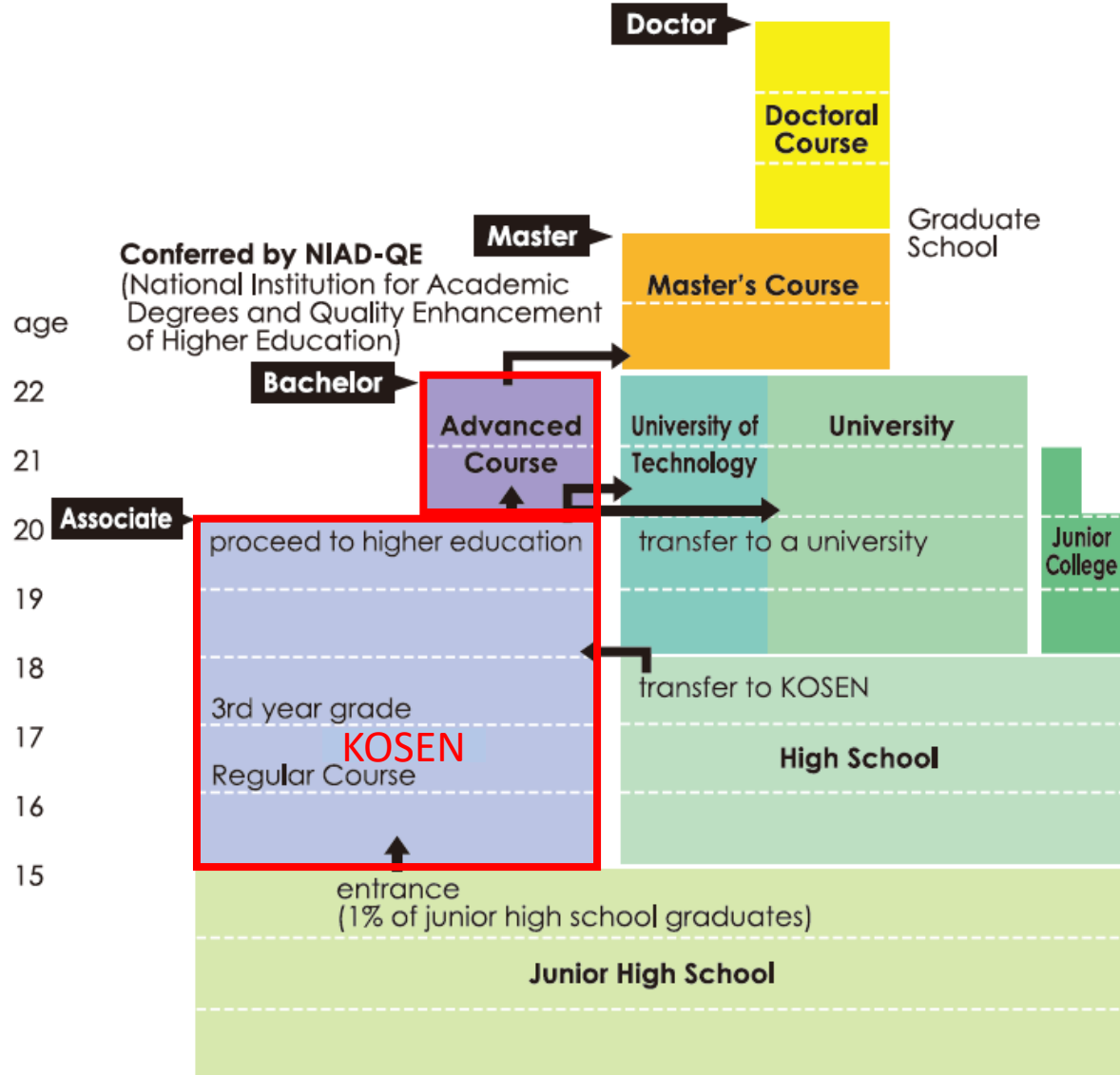
**Dr. Hiroyuki AOKI, Senior Professor,  
International Affairs, Headquarters  
National Institute of Technology (KOSEN), Japan**

April 28<sup>th</sup>, 2021

# 51 national KOSEN colleges across Japan



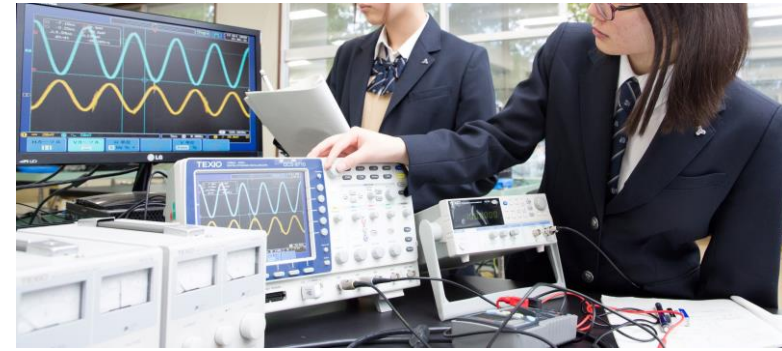
# Japan School System



Age

**KOSEN**

High school + University



Advanced Course  
(2 yrs.)

Regular Course  
(5 yrs.)

21	Research	Engineering Design	21	Graduation Research	Engineering Design
				20	Internship
19	Graduation Research		19		
18	Internship		18	Liberal Arts	
17	Hands-on Practices		17	General Education	
	Experiments				
16	Liberal Arts (S&T)		16	Preparation for Univ. Entrance Exam	
15			15		

Projects, contests

Liberal Arts  
(Mathematics, Science & Physics, English)

Majored Engineering Subjects

University Entrance Exam

Experiments and Hands-on Practices

5/7-year Consecutive Engineering Education (age 15-20/22)

Various Contests/Competitions  
Robot Contest, Programming Contest, Design Competition, English Presentation Contest etc.  
Since 2020, Deep Learning Contest



# Major Technology Breakthroughs influenced Human Resource Developments at KOSEN



KOSEN was established in 1962 in response to the strong demands of the industry in Japan.

1962

Rapid Growth of Internet  
late 1990s - early 2000s

KOSEN developed diverse engineers with practical & creative skills to be able to work in various fields.

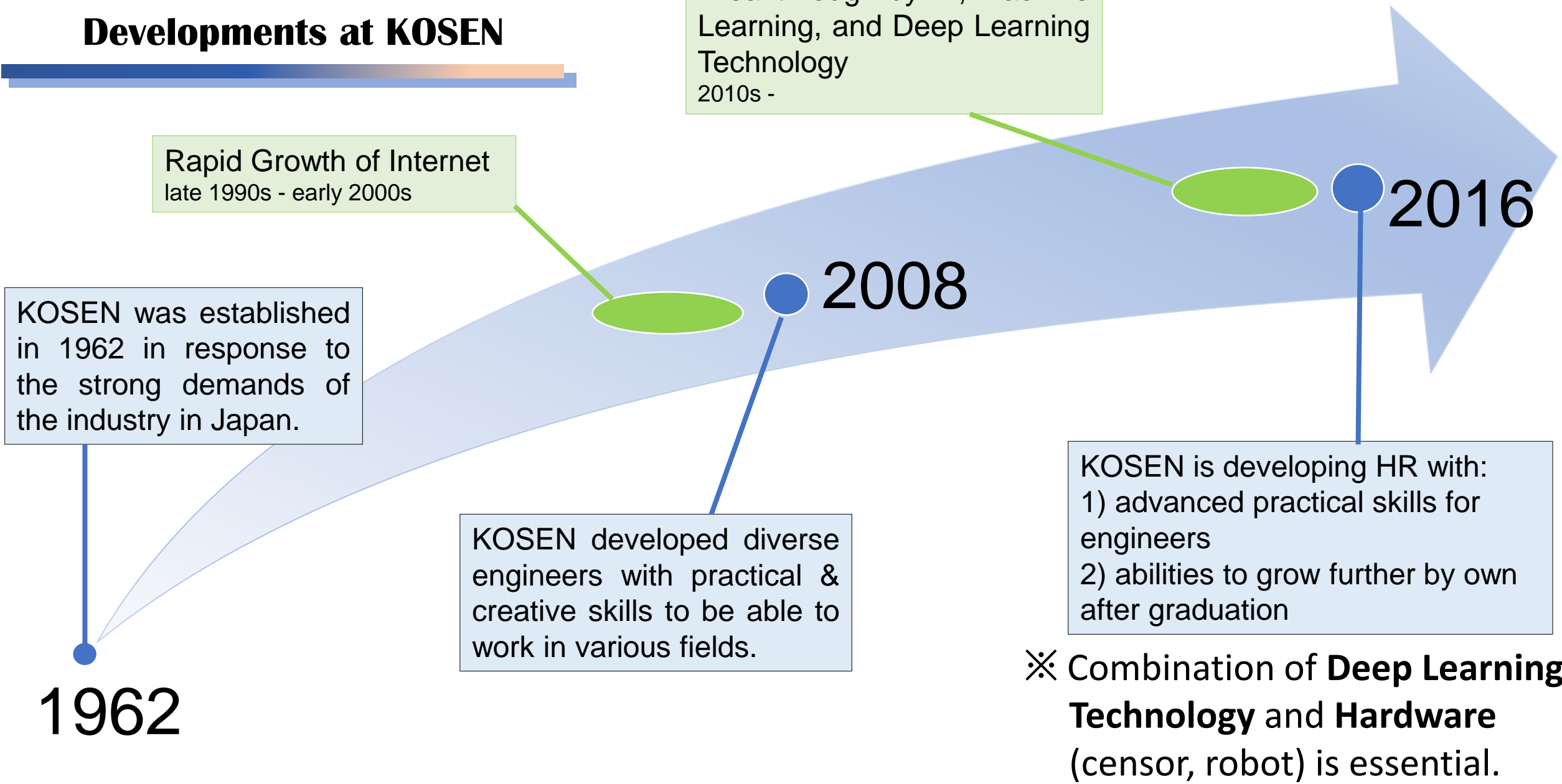
2008

Breakthrough by AI, Machine Learning, and Deep Learning Technology  
2010s -

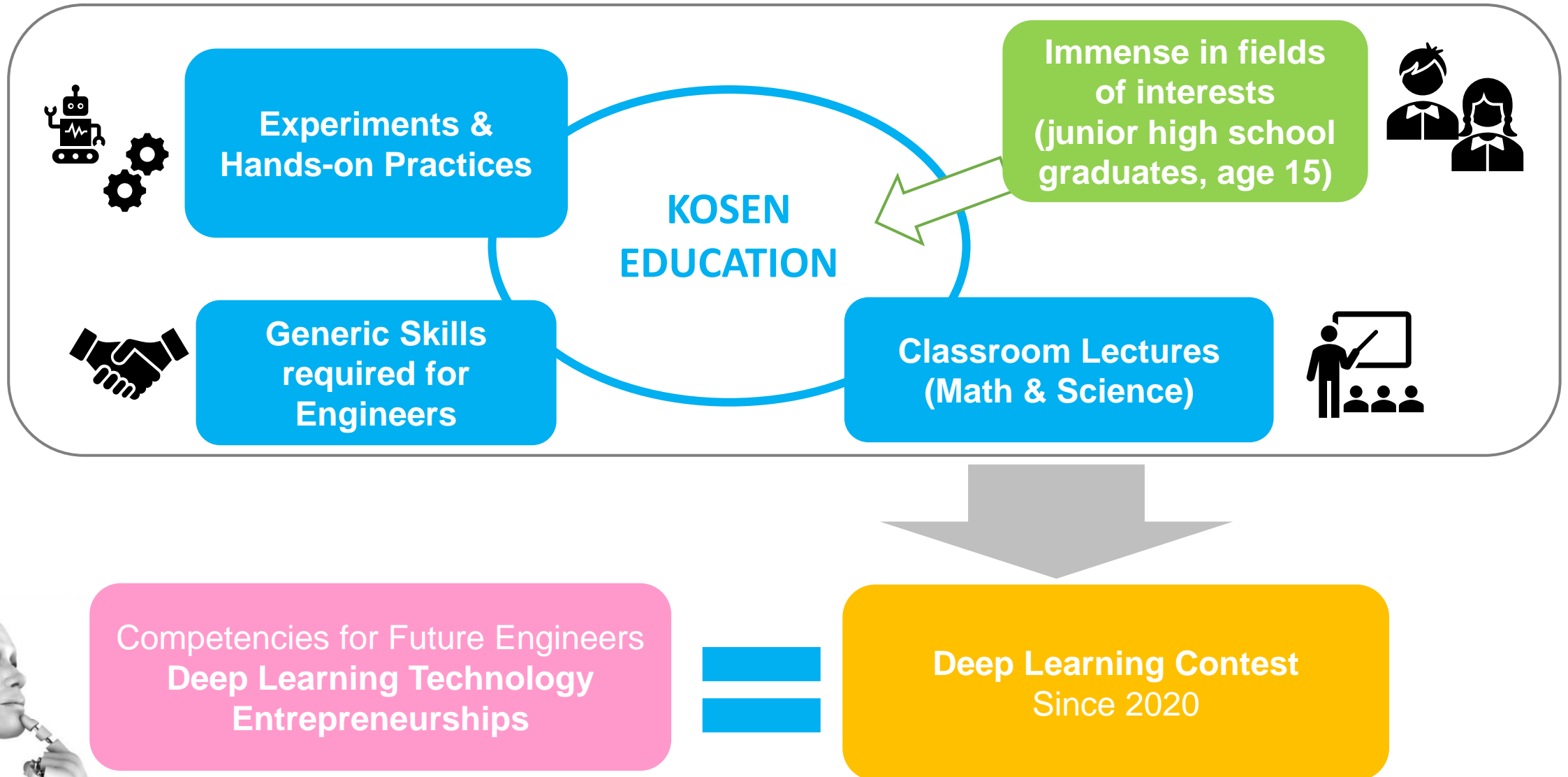
KOSEN is developing HR with:  
1) advanced practical skills for engineers  
2) abilities to grow further by own after graduation

✂ Combination of **Deep Learning Technology** and **Hardware** (censor, robot) is essential.

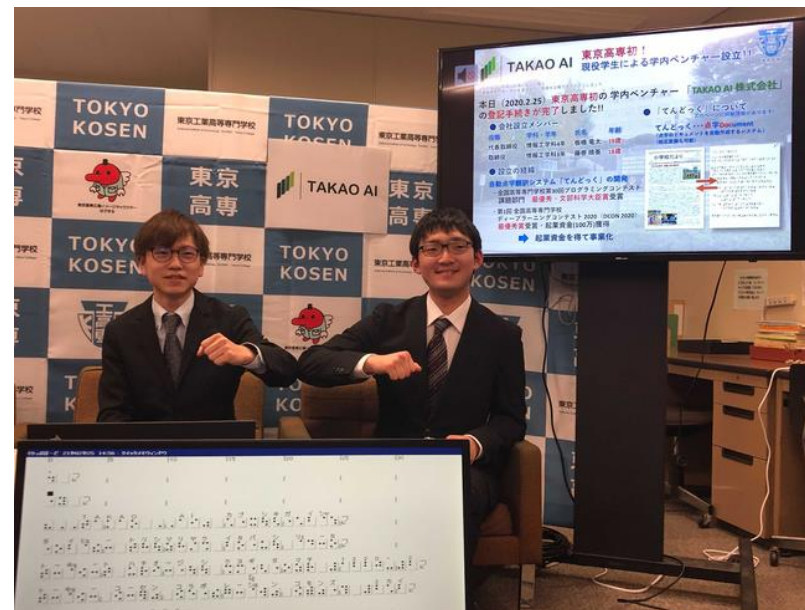
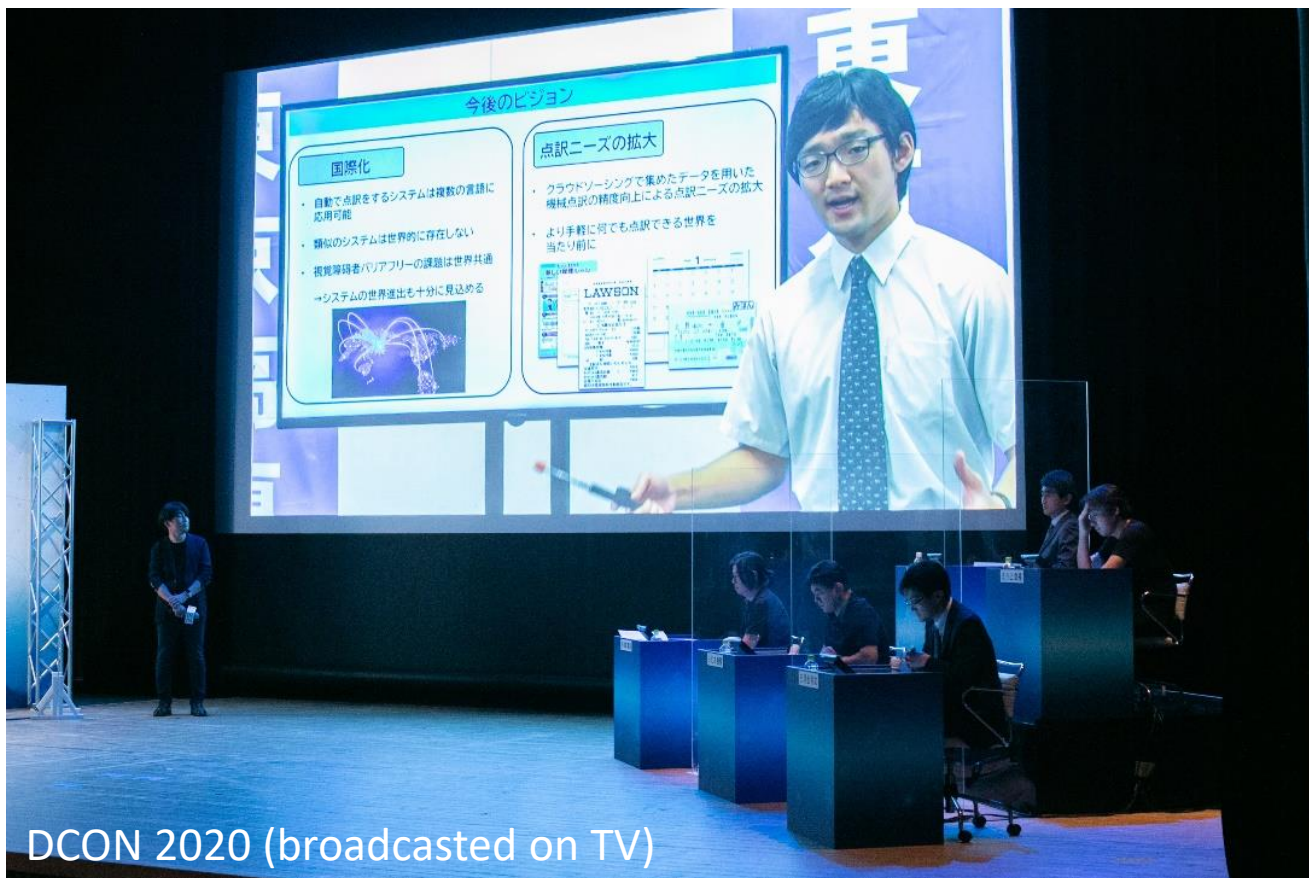
2016



# Deep Learning Contest/DCON



# Deep Learning Contest/ DCON



New Company was launched by students (2020 Winners)