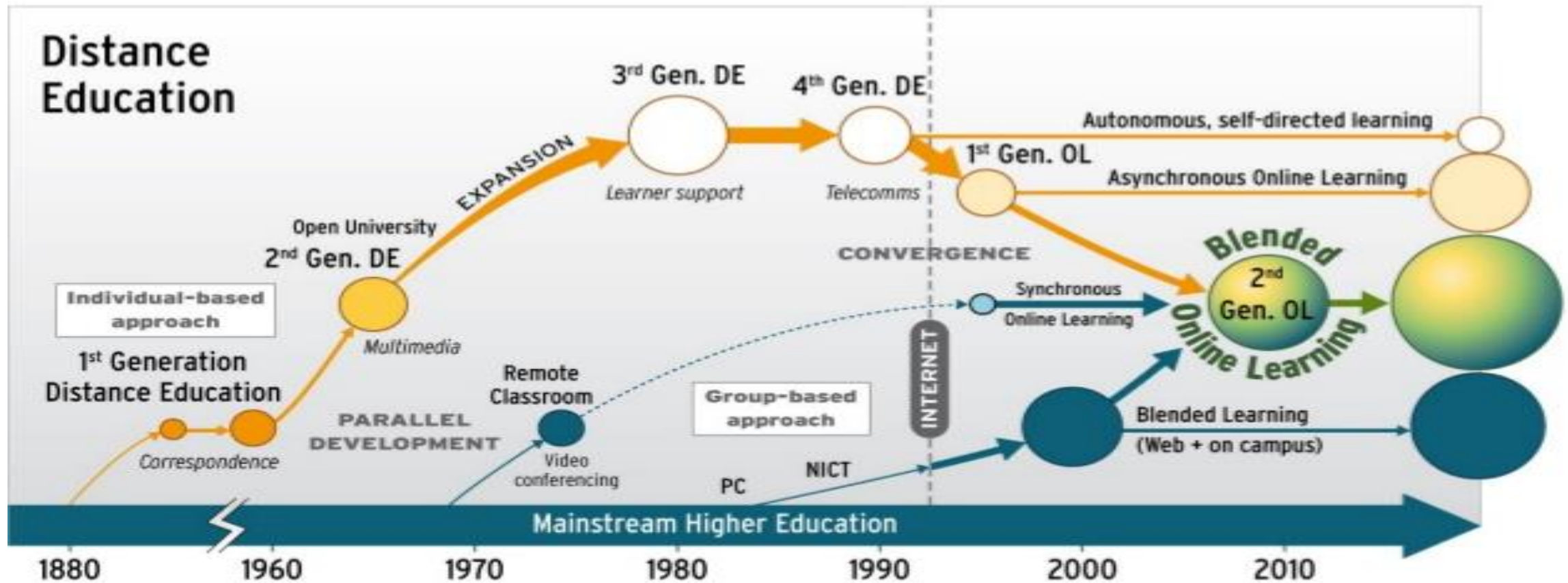




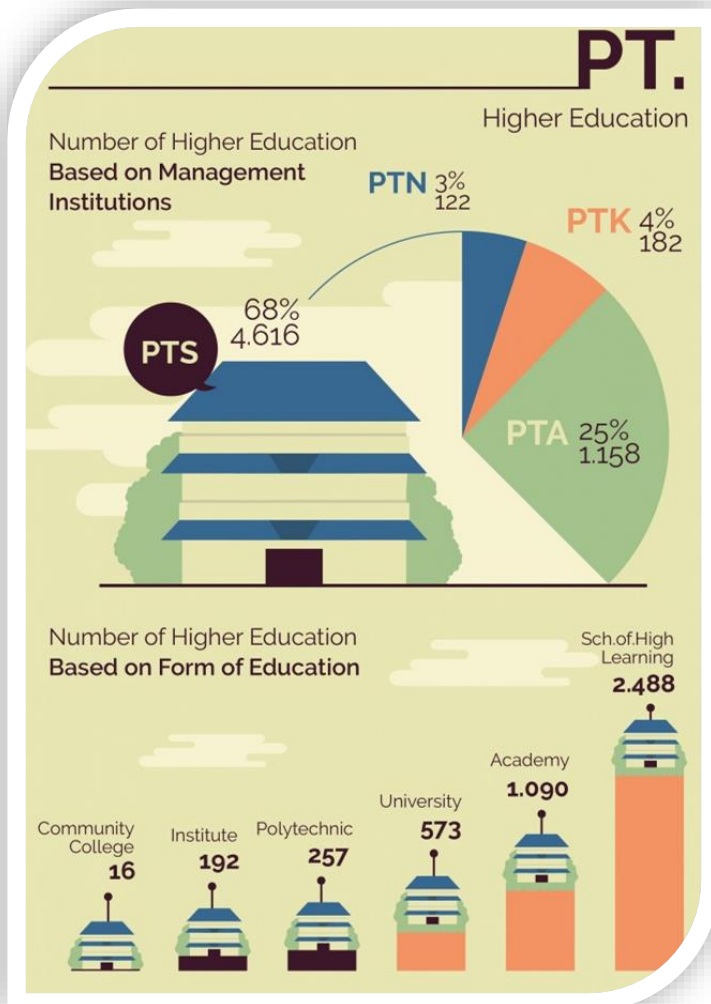
# ONLINE EDUCATION DEVELOPMENT: CASE OF INDONESIA

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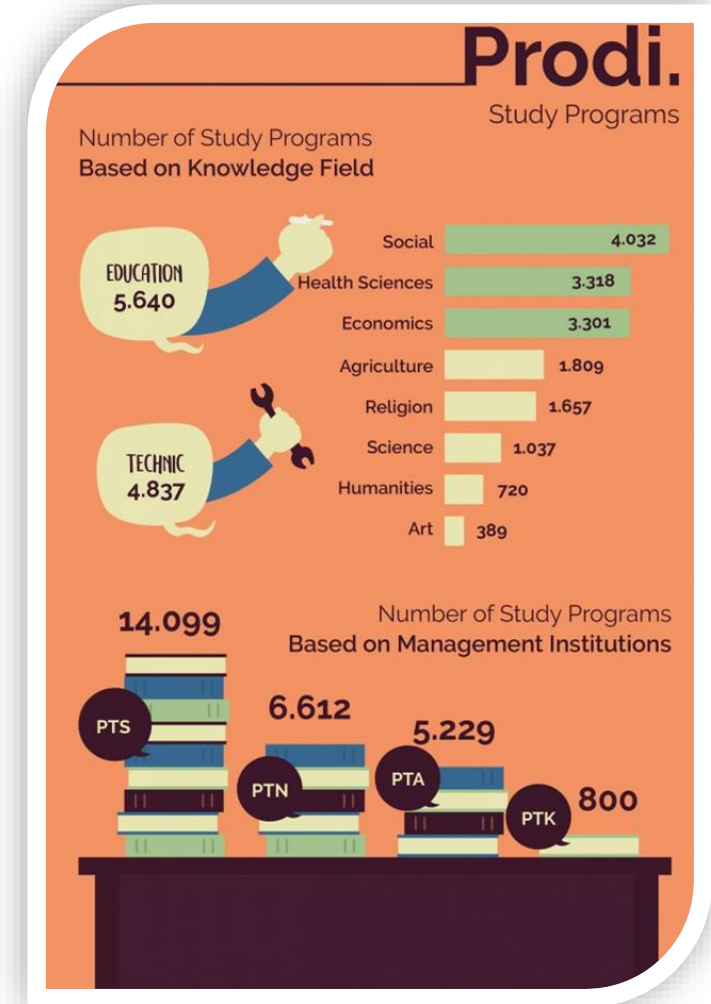
# Development of DE into DL



# Present Condition of HEIs in Indonesia



Total **4,662** HEIs,  
**26,740** tertiary  
education  
programs in **10**  
major Subjects





# Present Condition of HEIs in Indonesia

## Lecturers.

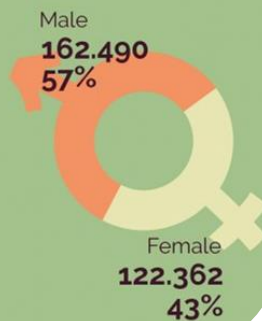
Number of Lecturers  
Based on Functional Title



Number of Lecturers  
Based on Management  
Institutions



Number of Lecturers  
Based on Gender



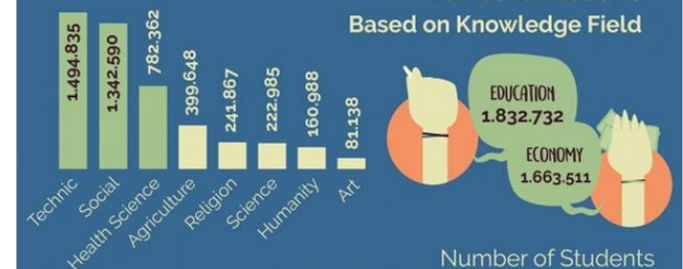
Total **8,222,656**  
students are  
taught by **284,852**  
lecturers for **9**  
types of degrees

## Students

Number of Students  
Based on Level of Program



Number of Students  
Based on Knowledge Field



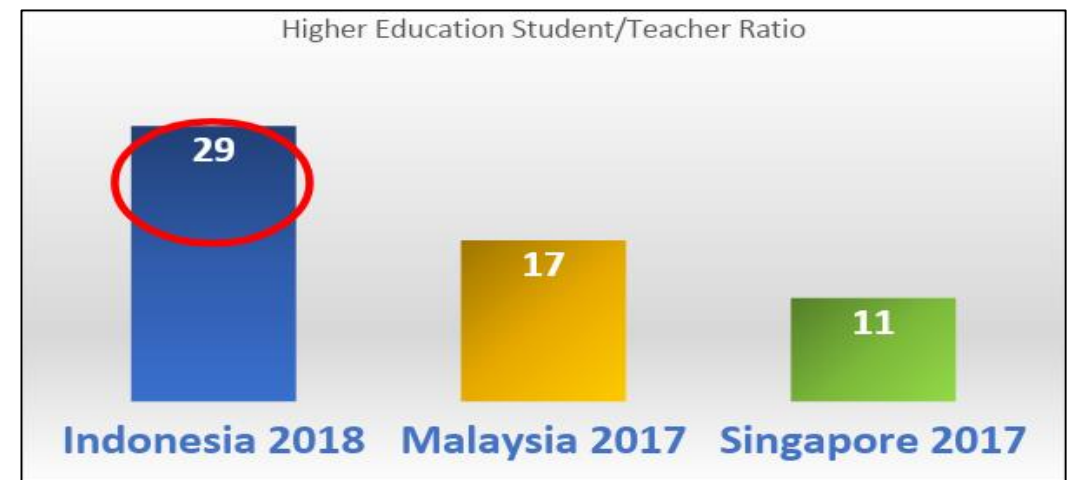
Number of Students  
Based on Management Institutions

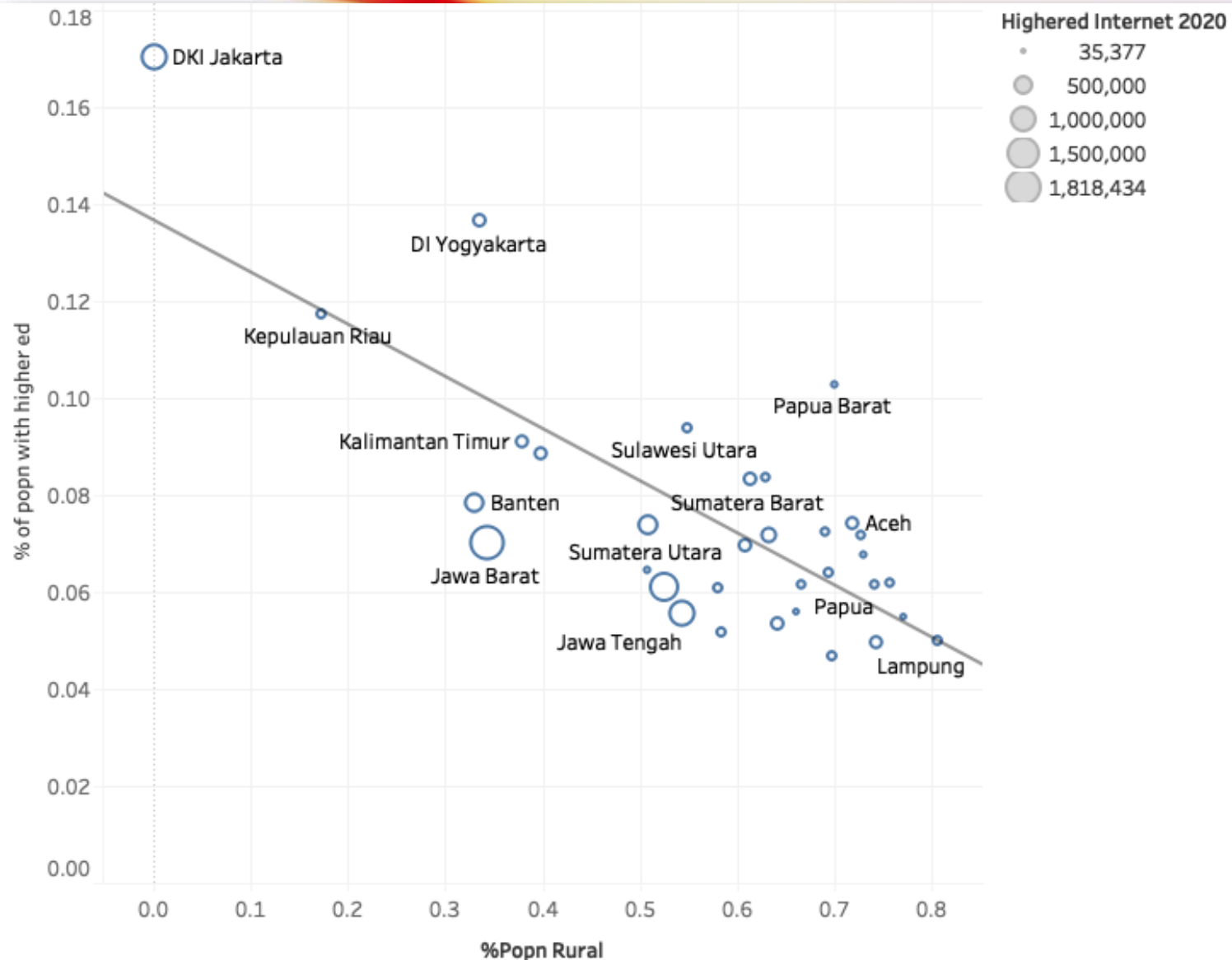


# Potentials of Online Education in Indonesia

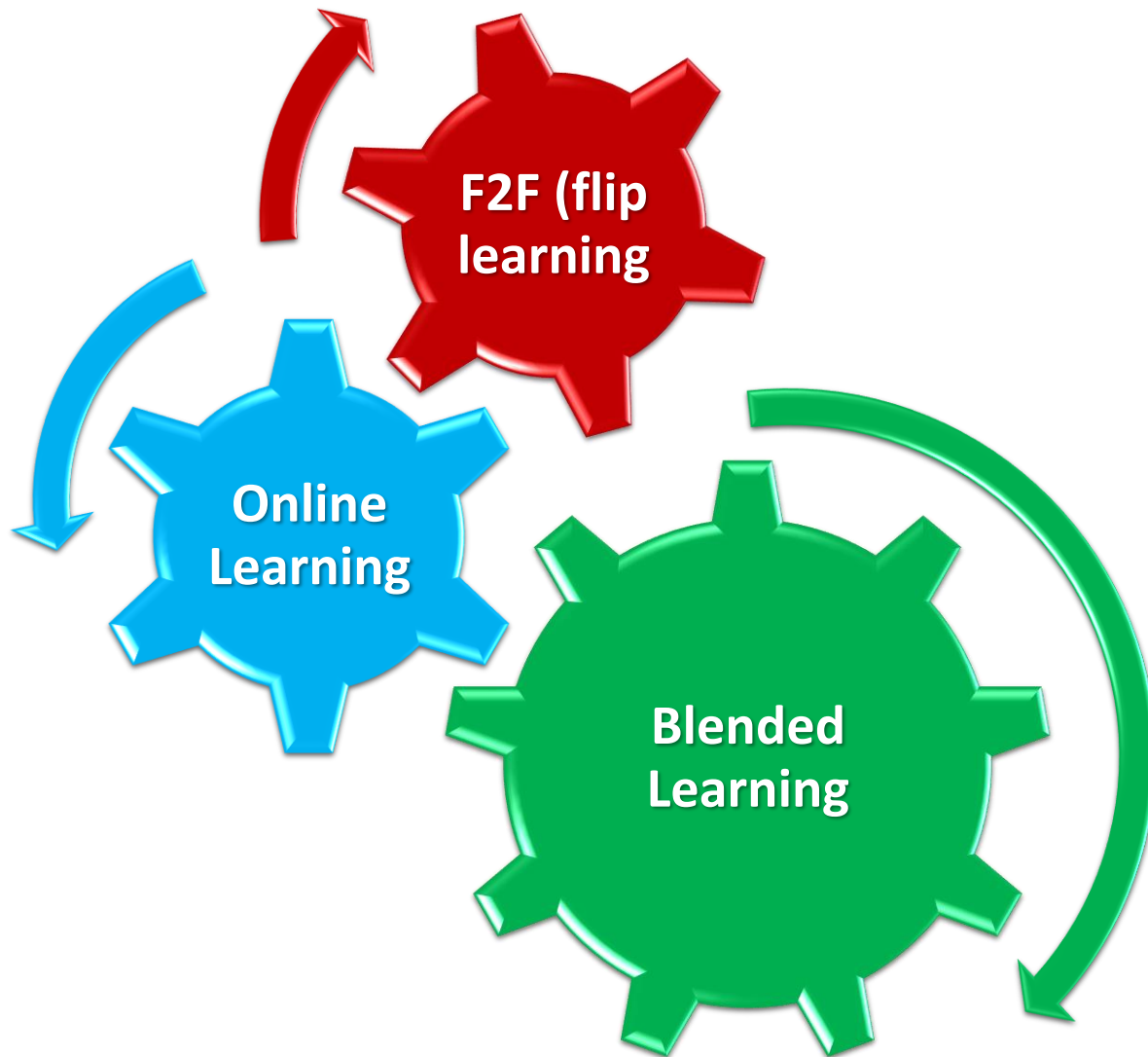
1. If program's grows as fast as student popn (from 8M to 11M), and 50% of courses go online at ICE as 51 regulation permits, then total number of online courses in 2024 is **18,384**; each top-20 University needs to create **920** online courses
2. If 18,384 online courses can meet 50% of students' demand, then each online course at least should take **300 students** on yearly basis
3. Given current **1:29 Teacher to Student Ratio**, online courses can help Indonesia make up the shortage of teachers, a potential way to improve competitiveness relative to ASEAN.

- Enrollment rate → 34,8% to 50%
- Flexible learning → access, equity, quality
- Freedom of learning → anytime, anywhere, anybody
- Reskilling & upskilling
- Increase # of educated (skillful) workers (11,2% in 2019 from tertiary ed).





## Potentials of Online Education in Indonesia



## Current Learning Process

All materials are available digitally in the form of individual learning objects or e-learning packages, while “class time” (*if any*) is for discussion, problem solving activities, peer-review and argumentation

# Students' Perception (2019)

## Online

### PROS

- "It is convenient because I can study from anywhere, even on my phone"
- "It rewards diligent students"
- "I don't feel like I'm learning alone when watching a video"

### CONS

- "Server goes down when many people access at once"
- "Sometime tutor never responds to questions"

## Face to face

### PROS

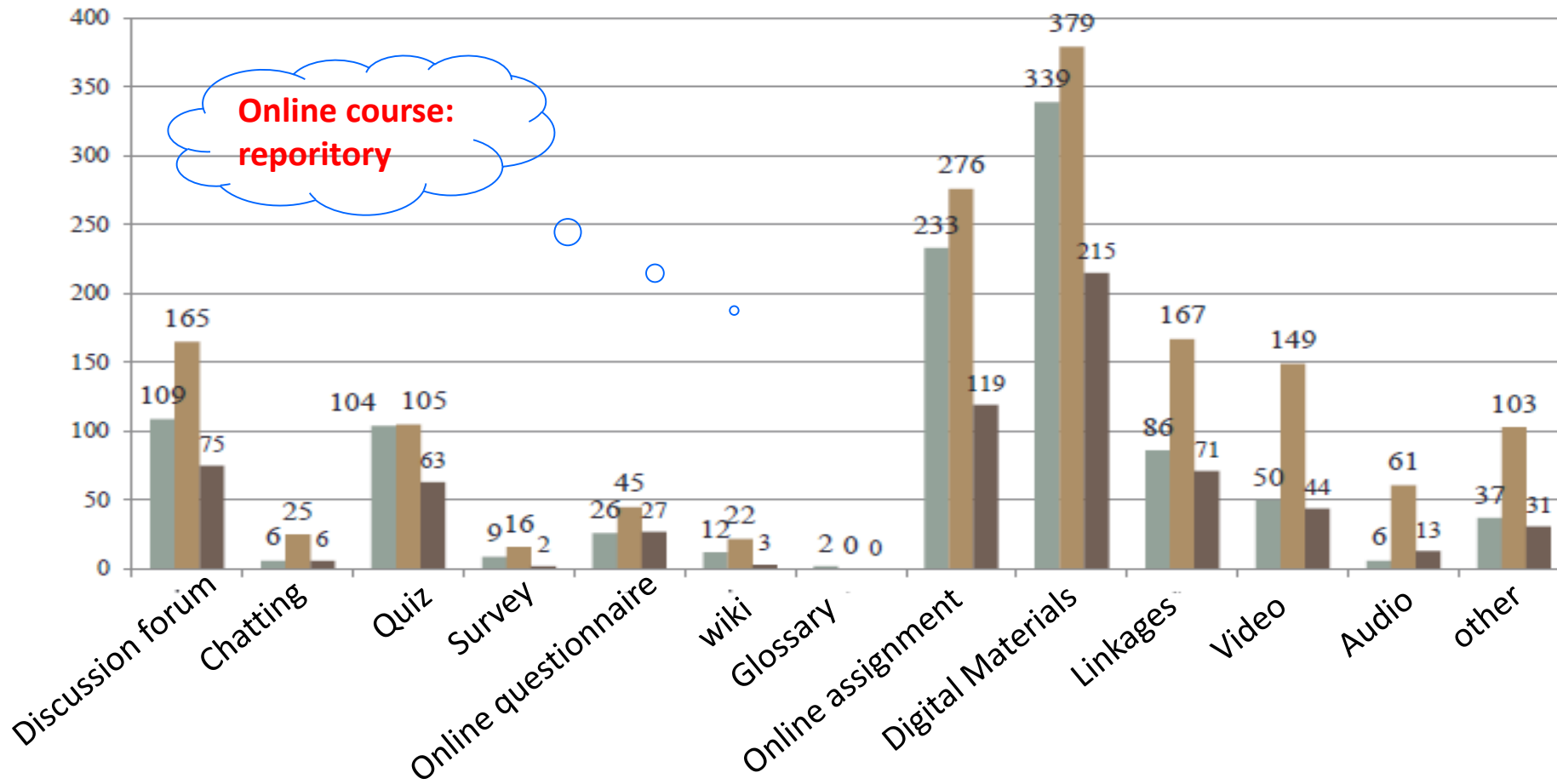
- "Gives me a better understanding because we can discuss deeply"
- "I ask a question and get an answer immediately"
- "I meet my classmates, which I find valuable. It is important to me to make friends and learn together"

### CONS

- "It is not convenient for me to go because I work full-time"
- It is double the cost to take face-to-face



# Lesson learned – Lecturers (2017)



- Major constraint:**
1. Instructional design
  2. Technical know how

*“Given all the gadgets/materials there is no guarantee that learning will happen ... ”(Reeves, 2014)*

# Online Learning Survey (2017-2019)

## HEIs

- 25% implement online learning
- 40% use online learning for blended learning
- Less than 25% courses are digitized
- 41% have internal policy
- 25% collaborate with other HEIs
- Tools: whatsapp, email, skype
- LOM: teks, slide/ppt, video
- HR: IT and media developer
- 45% have specific QA system for online learning

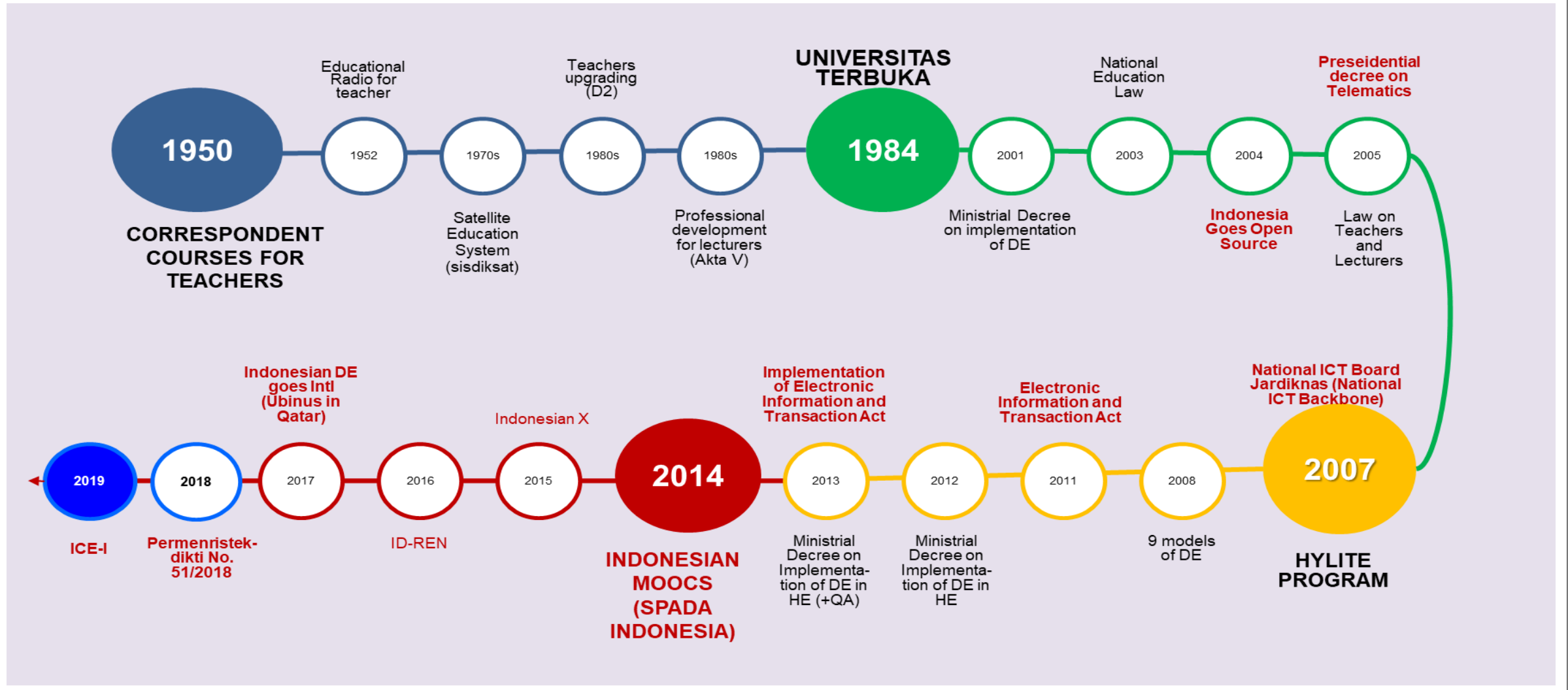
## Lecturers/users

- 54% have lesson plan incl learning path
- 86% develop their own e-learning with various existing materials
- 98% uses offline discussion and discussion forum for interaction
- Assessment: essay + MCQ
- 34% feel confident with their tech skills
- Instructional design is still reported a problem
- 39% monitor learning interaction in LMS
- Less than 20% provide feedback
- Less than 20% request feedback from students
- More than 87% love to use e-learning

## Students

- Only 13% of online learner has high self-regulated skills
- 77% of online learner are “help seeker”
- Only 12% online learner has high community of inquiry
- 79% preferred teaching presence and cognitive presence in online learning.

# The Development of Technology-Based Education in Indonesia



# Regulation

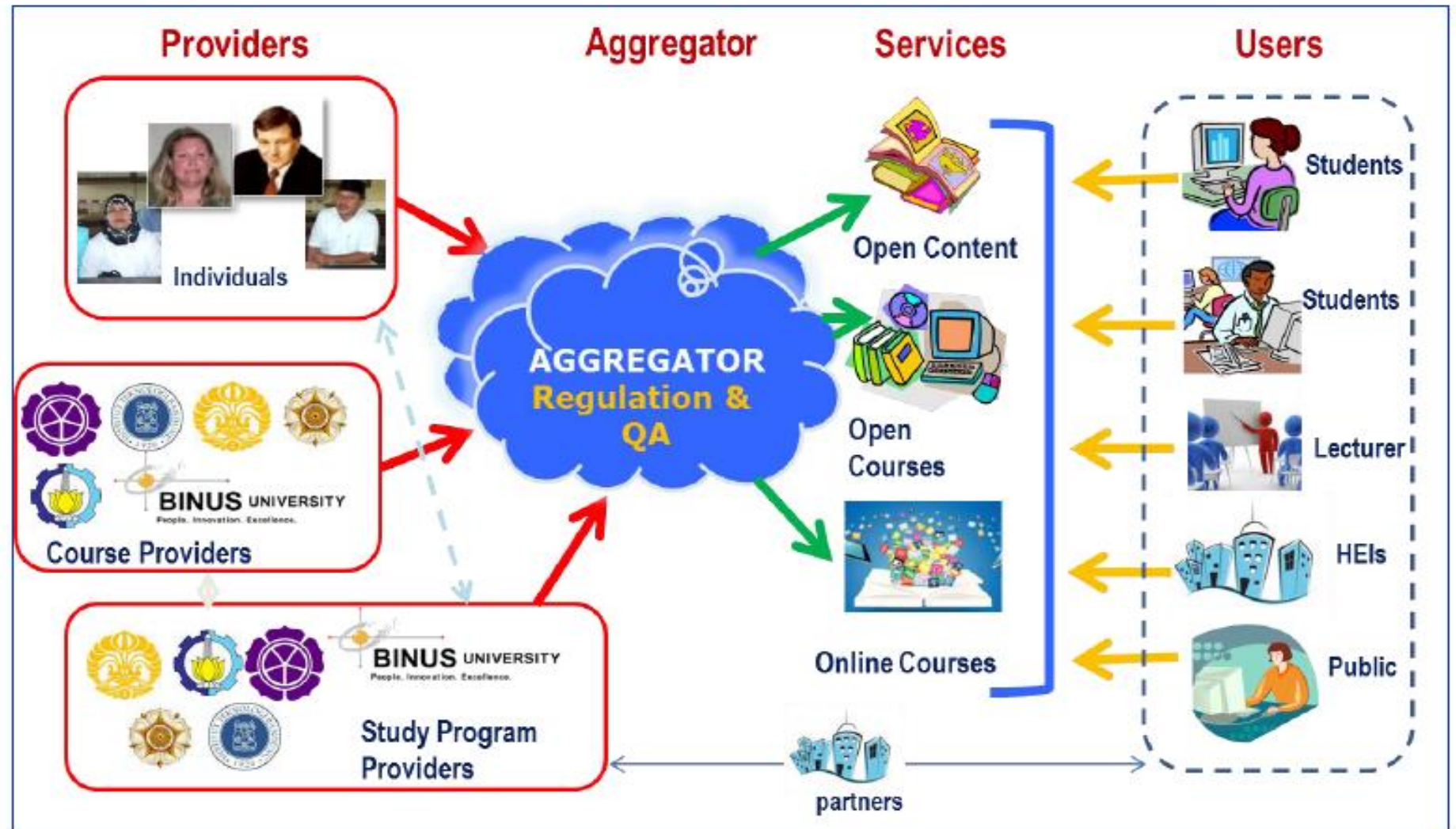
## **Study Program** ( $\geq 50\%$ online courses from one curriculum)

- Accreditation: excellent
- Operational license from DGHE

## **Courses** ( $<50\%$ online courses for blended or DE, 40% belanja mata kuliah)

- Internal approval (Senate etc.)

# SPADA (Indonesia MOOCs 2014)







# SPADA Indonesia

Sistem Pembelajaran Daring Indonesia

**54** HEI provider

**201** HEI partners

**18.138** students

## SERVICES

### SPADA

Open  
Content

**297**

Open  
Courses

**221**

Online  
Courses

**279**

### ONLINE COURSES

Online  
Courses  
7in1

**102**

Online  
Courses  
Student  
Exchange

**29**

### Prof teachers ed

Study  
Program  
**53**

Students  
Batch I  
**6775**

Students  
Batch II  
**10596**

Students  
Batch II  
additional  
**732**

**Total 18103**

Passed **16567**

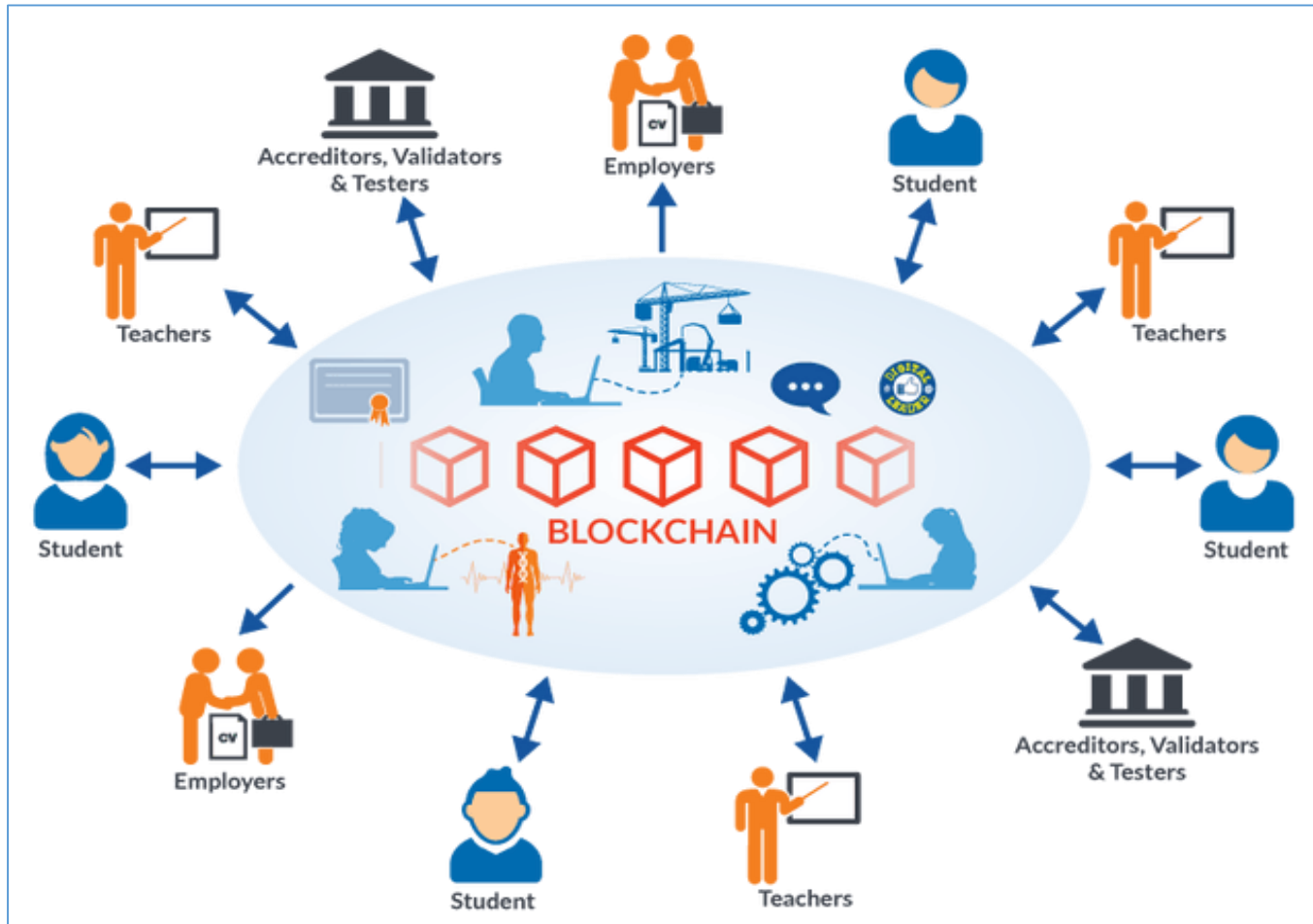
No passed  
**804**

# DE study program in Indonesia (68)

No	Nama PT	Program
1	Universitas Terbuka	40
2	Universitas Sebelas Maret1	1
3	Poltekkes Kemenkes Kalimantan Timur	2
4	Universitas Negeri Gorontalo	1
5	Universitas Cenderawasih	1
6	Universitas Bina Nusantara	5
7	Universitas Kristen Satya Wacana	1
8	Universitas Nusa Cendana	1
9	Universitas Negeri Makassar	1
10	Universitas Jember	1
11	Universitas Amikom Yogyakarta	1

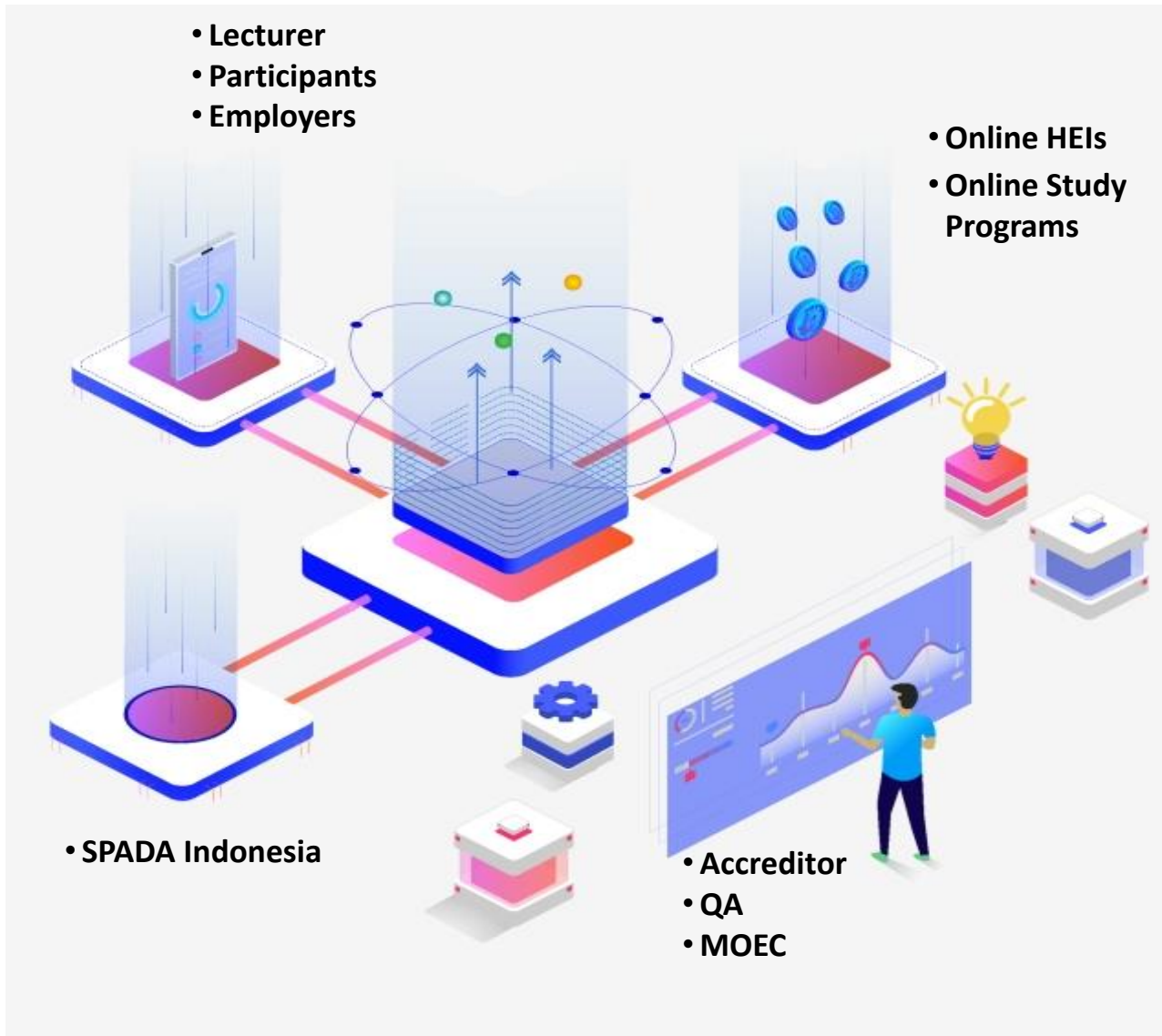
No	Nama PT	Program
12	Politeknik Elektronika Negeri Surabaya	2
13	Universitas Katolik Indonesia Atma Jaya	1
14	Sekolah Tinggi Ilmu Komunikasi Lspr	1
15	Poltekkes Kemenkes Kupang	2
16	Universitas Sriwijaya	1
17	Universitas Lambung Mangkurat	1
18	Universitas Halu Oleo	1
19	Universitas Negeri Semarang	1
20	Universitas Pelita Harapan	1
21	Universitas Bunda Mulia	1
22	Universitas Telkom	1

# Blockchain for educations



## Blockchain for education (microcredential)

- retail: courses/subjects, competency certification package
- Recognition of prior learning
- certification



# Blockchain For Education

- Digital Badges
- Micro Credentialing



# Model of ICE-Institute

4

*Enroll in a course and do the study*

*Verify and curate e-learning/digital courses*

1

*Apply and submit e-learning course for verification and curation*

2

**ICE INSTITUTE**

**Marketplace of Online courses**

3

*Search and select e-learning course*

*access*

Students/  
participants

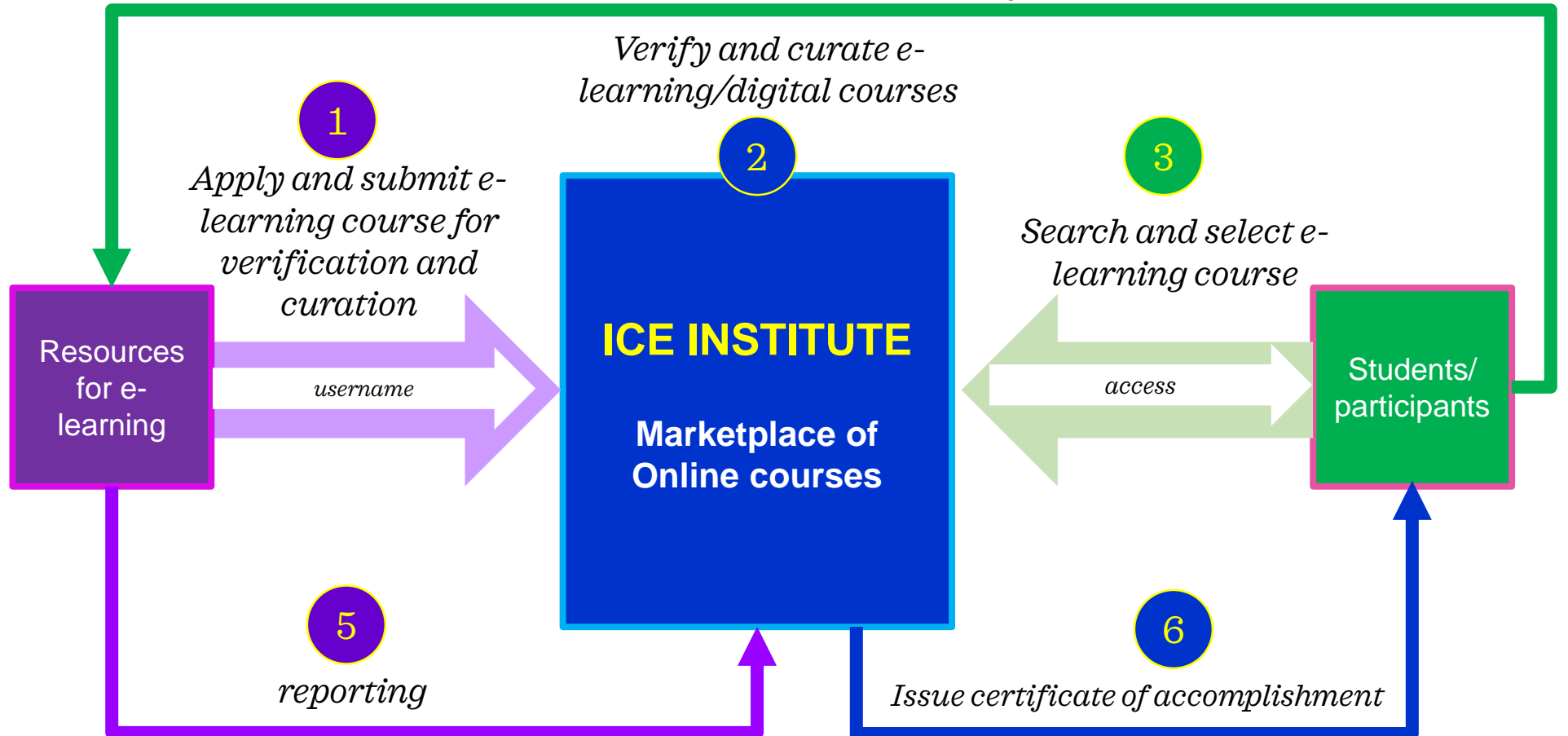
5

*reporting*

6

*Issue certificate of accomplishment*

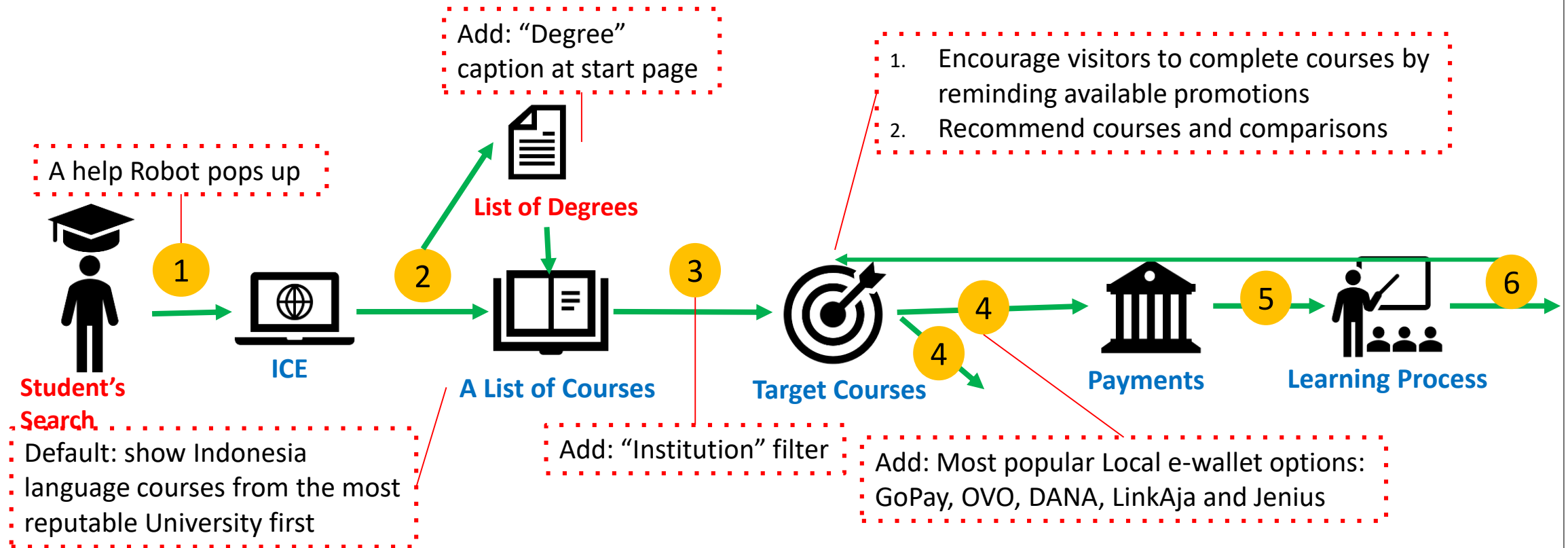
- HEIs
- Industry/Private sectors
- MOOCs
- Institution/organization
- Individual/Community







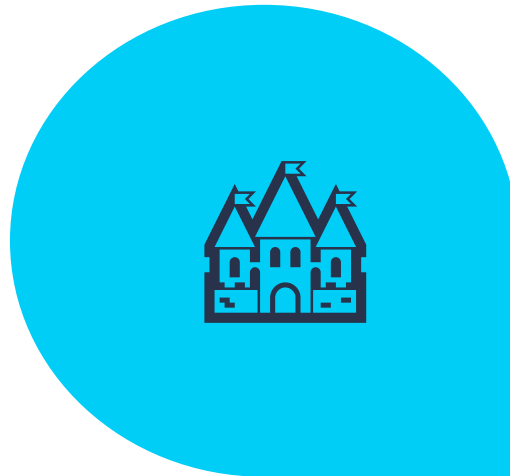
# Business Model of ICE-Institute (detail)





# ICE Institute – Online Courses Marketplace

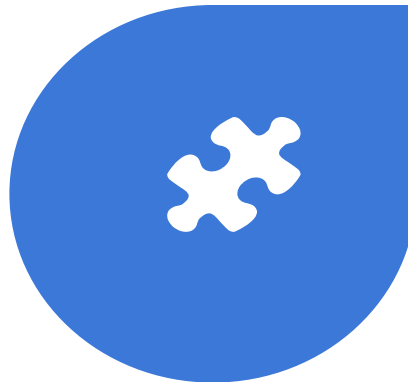
A **gallery** of all online courses being offered in Indonesia (national e-learning registry) through a process of verification and curation.



**Microcredentialing/digital badges** → certificate of accomplishment per online course



**Flexible learning** – freedom of learning – anytime, anywhere, anybody – access, equity, and quality across time and space

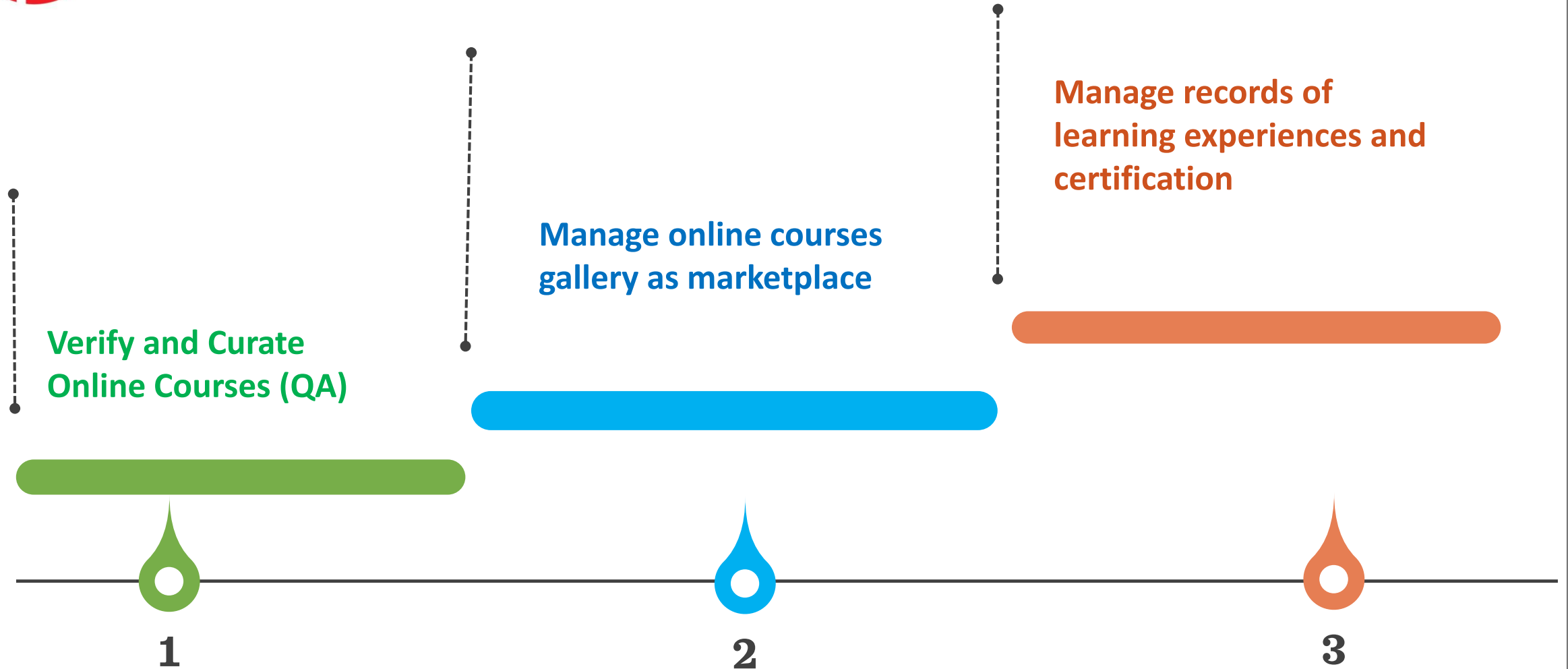


**Transferrable** for credit earning/transfer scheme



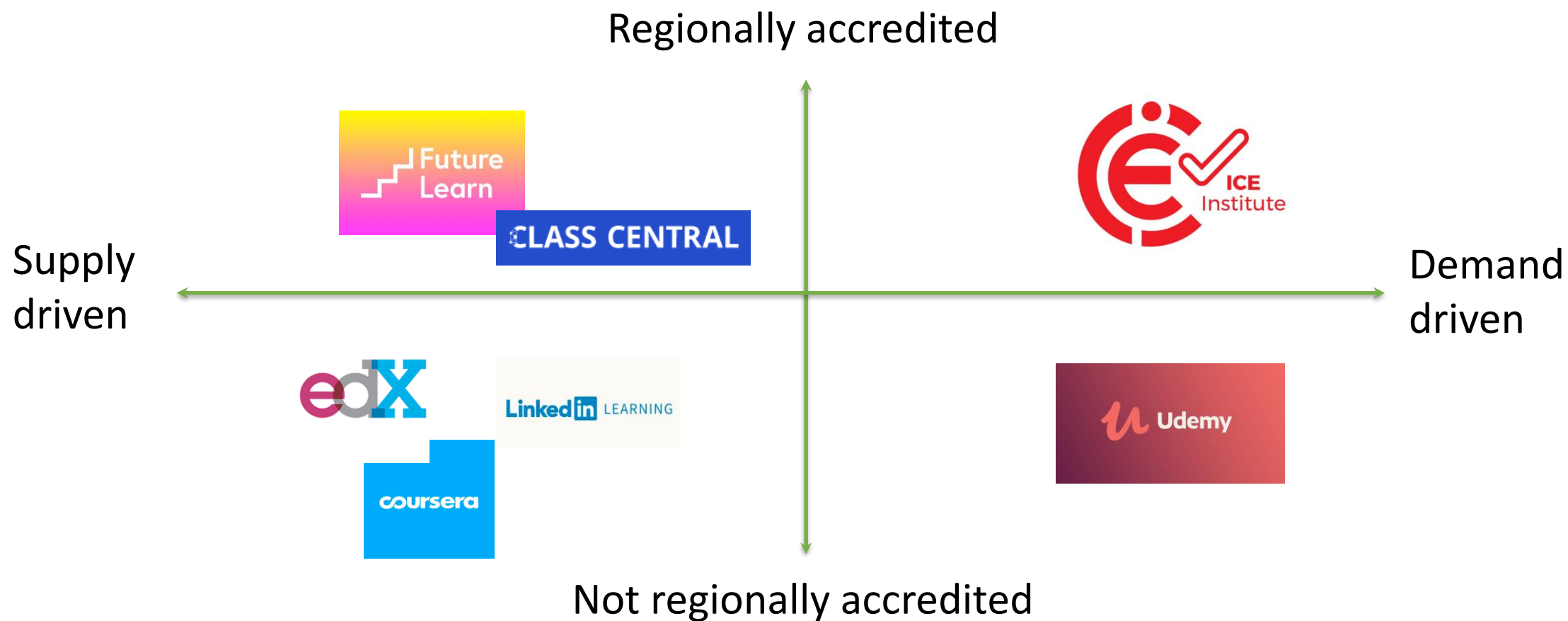


# Function of ICE Institute





# Positioning ICE-I





## Progress

- Umbrella legal support – Ministerial Decree No. 51/2019 as “national quality assurance for online learning”
- Draft of Ministerial Decree specifically on ICE-Institute will be revised
- Roadmap of development of ICE Institute
- Physical facilities in Universitas Terbuka – Secretariat office, initial funding
- ICE Institute system’s development (UT – including the blockchain system)

### Support from **Asian Development Bank**

1. Short Term Expert Prof. Marito Garcia (University of Virginia) – roadmap development
2. Short term consultants (UoV Ph.D students of Darden School of Business : Srihar Gullapalli, Pengheng Ren): business model
3. Blockchain Technology Development Project (US\$500.000,- : consulting, workshop, benchmarking, system development)





## Sustainability Aspects

