

COI & COI-NEXT; Formulation of Innovation Platform for Industry-Academia Co-creation

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1) Overview

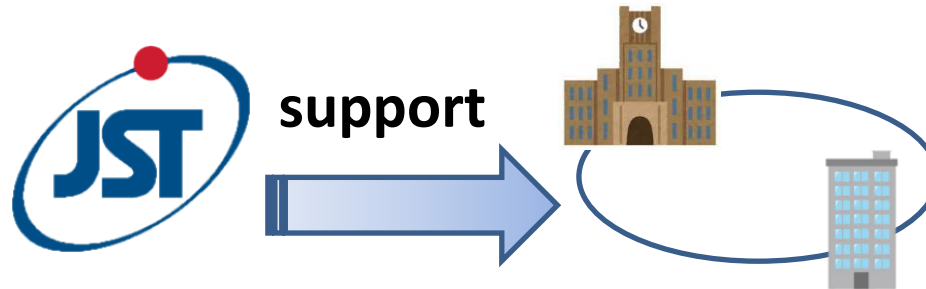
- COI Program**

- COI-Next Program**

2) International Activities in COI Sites

Industry-Academia Collaboration and Technology Transfer

- 1) Promotion for Technology Transfer: A-Step
- 2) Support for University Startups: START
- 3) Support for Formation of Innovation Platforms



- Center of Innovation (COI) Program
- Program on Open Innovation Platform for Industry-Academia Co-Creation (COI-NEXT)

COI & COI-NEXT Programs

COI program started in FY2013 to promote high-risk R&D and to establish innovation platforms. Based on this program, in FY2020 **COI-NEXT program** was established. **Regional Co-creation field** is newly established in FY2021.

Long-term
support

Feasibility
study

	COI Program	COI-NEXT Program				
		Co-creation field, FS	Co-creation field	Policy Priority field	Regional Co-creation field, FS	Regional Co-creation field
Program Start	FY2013	FY2020	FY2020	FY2020	FY2021	FY2021
Research Period	Up to 9 years	Up to 2 years	Up to 10 years	Up to 10 years	Up to 2 years	Up to 10 years
Frequency	Once	Every year	Every year	Every year	Every year	Every year
Number of Projects	18	12	1	4	-	-
Budget/year/project	100-900 million JPY	25 million JPY	320 million JPY	400 million JPY	25 million JPY	200 million JPY

COI Program: Concepts and Goals

1. Concept

- To create a new future and common sense of values within 10 years
- To change universities and wider society

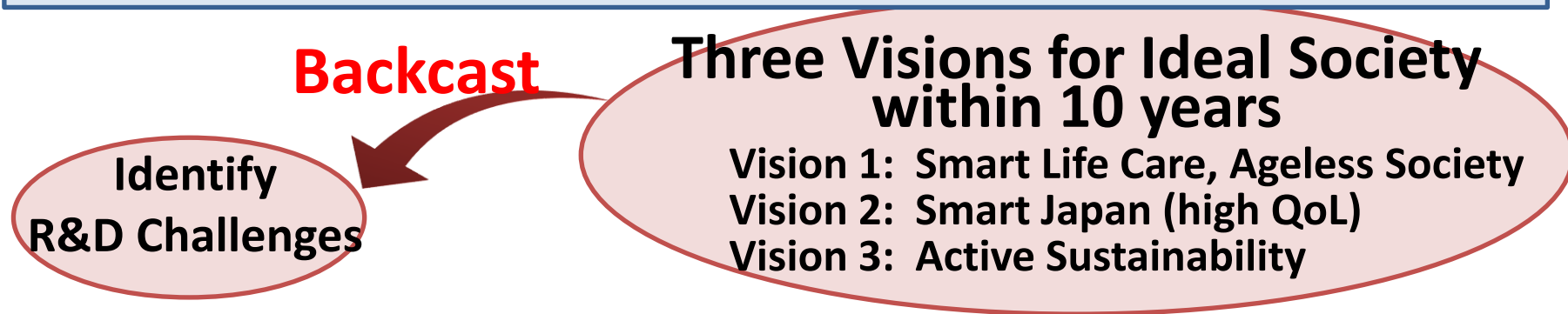
2. Two Goals

- ① To realize **radical innovation** that is difficult for industry and academia to accomplish on their own
- ② To establish an **Innovation Platform** through industry-academia collaboration

Outline: Two Management Concepts

1. Backcasting Approach:

Visualizing an ideal society and subsequently setting R&D plans towards realization of this society.



2. Under One Roof:

Establish an innovation platform (COI Site) where universities and companies can work on R&D together

COI Site

Industry
Municipality



Collaboration
under one roof



Academia

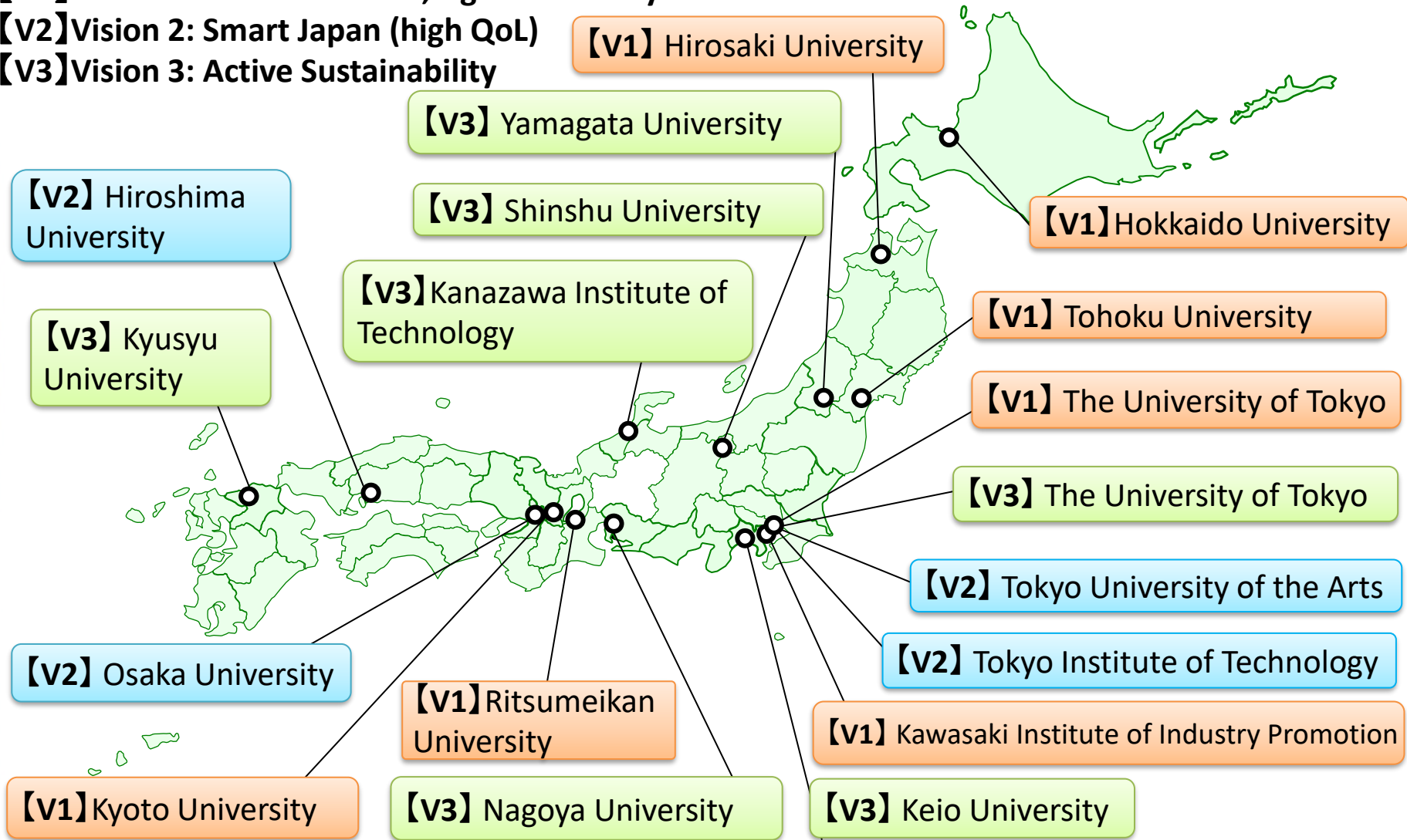


18 COI Sites

【V1】Vision 1: Smart Life Care, Ageless Society

【V2】Vision 2: Smart Japan (high QoL)

【V3】Vision 3: Active Sustainability



“Features” of the Operation Method(1)

■ Strong Support by Visionary Leader (VL)※

※VL=program officer

- **A business-owning VL** gives support.
- Visionary Teams consist of three or four experts from industry including one VL.
- These teams are **in charge of progress management and recommendation of COI sites.**

Activities of visionary team

- More than 100 meetings a year for all COI sites
 - Visiting each site (once a year, carried out over a day)
 - Interviewing each site (once / year)
 - Individual interviews with the major members of site
- Facilitating collaboration among COI sites

■ Flexible Review

of Implementation Plans & Visions

- Flexible review of implementation plans and visions based on changes in social conditions and trends of competitors.

“Features” of the Operation Method(2)

■ Two-headed System

- **Project Leader (PL) from industry and Research Leader (RL) from academia**

Project Leader

: Supervise the overall management of COI sites and their R&D activities.

Research Leader

: Responsible for the day-to-day operation of the headquarters of COI sites and support of R&D strategy planning.

■ Establishment of Research Promotion institution

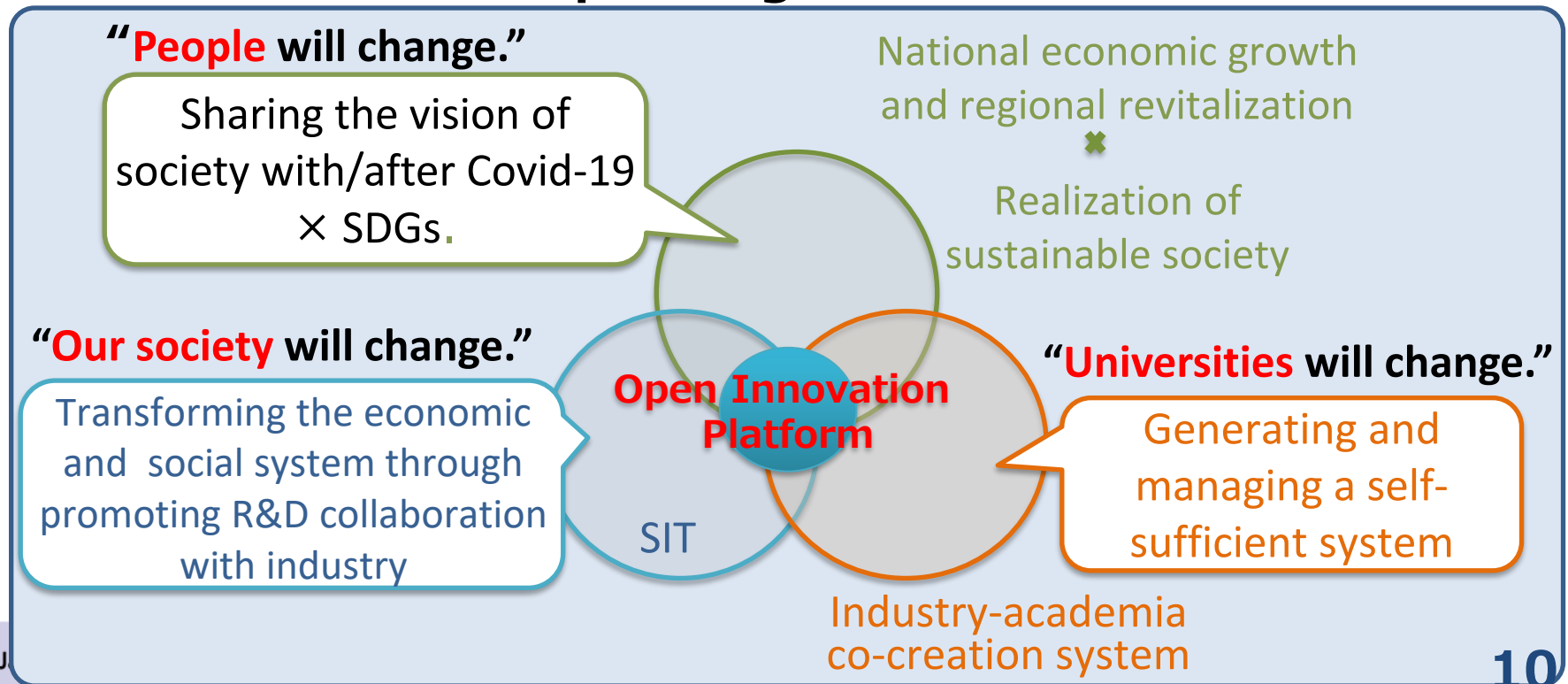
Acts as research headquarters, creates a strategic management plan.

- **Project Leader (PL) and Research Leader (RL) are set.**

COI-NEXT: Concepts

- This program puts forward a vision of a future society based on the SDGs.
- For realization of this vision, this program promotes backcasting R&D and management of industry-academia co-creation system for open innovation platform.

Concept Image of COI-NEXT

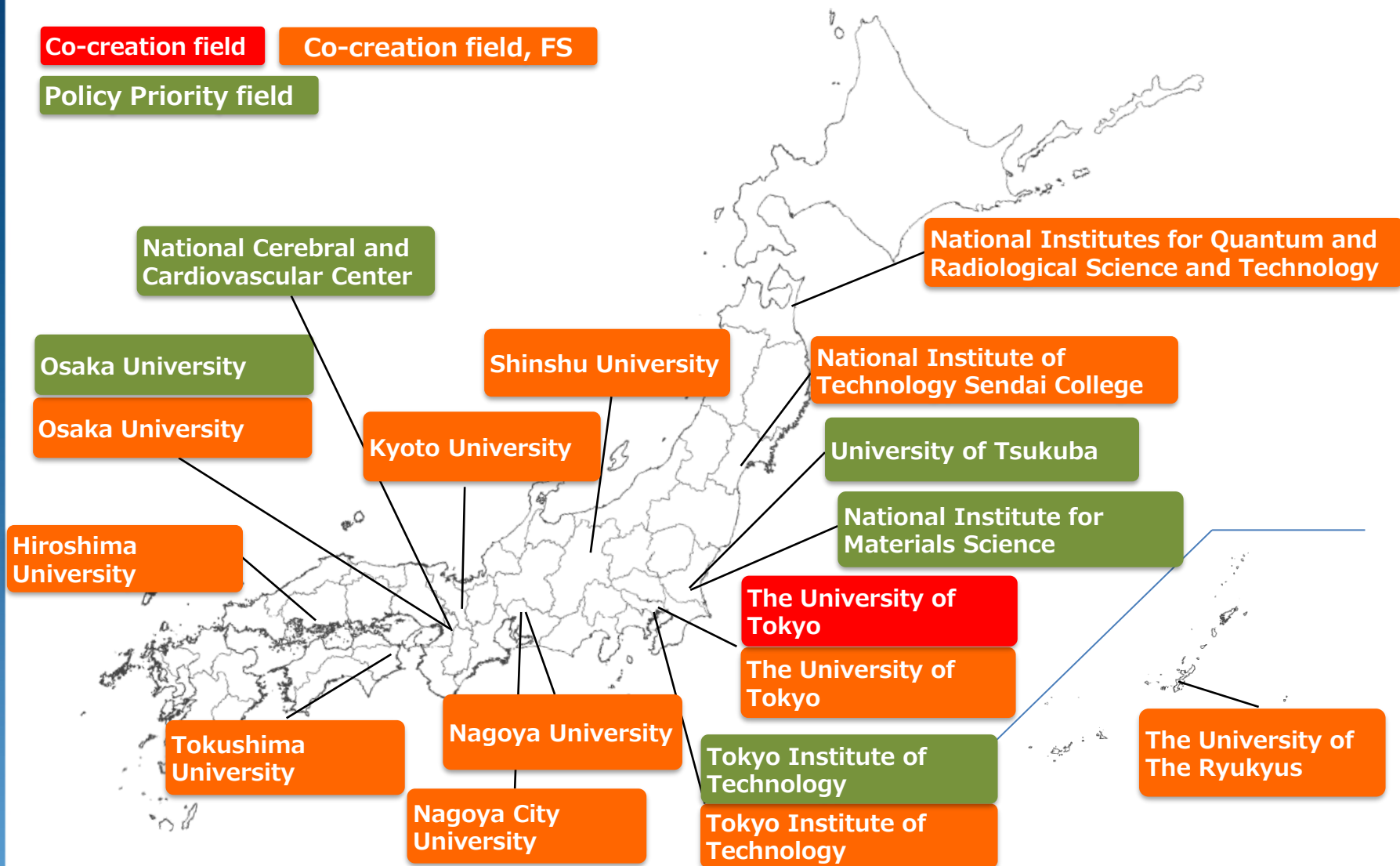


18 COI-NEXT Sites

Co-creation field

Co-creation field, FS

Policy Priority field



※The map is based on the blank map published by the Geospatial Information Authority of Japan.

Outline

1) Overview

- COI Program

- COI-Next Program

2) International Activities in COI Sites

QOL Health Check-up in Vietnam

Hirosaki University developed “QOL Health Check-up” through analyzing over ten years' worth of integrated big health data (approximately 3000 items per person as of 2020).

This conducts medical examination, result judgment, and enlightenment on the same day for the purpose of behavioral change after medical examination.

Development of QOL Health Check-up at two Vietnamese Companies



Education,
Result explanation



Doing exercises

Testing grip strength



(2019.12)

https://coi.hirosaki-u.ac.jp/en/?page_id=18

Safe Water for All

Safe Water in Tanzania – the Global Aqua COI of Shinshu University – has launched a co-project with Tanzanian Universities.

- From 2018, promoted initiative to prevent fluorine pollution in domestic water in the Arusha region.
- Trial of new adsorbent and simple detection sensor for fluorine concentration, started in Tanzania.

Conducted water quality surveys of groundwater and well water



Water purification experiments by local students

<https://www.shinshu-u.ac.jp/coi/english/>

Cloned Reproduction of Cultural Properties

- "Clone cultural property" was developed by **cutting-edge digital technology and outstanding sensibility and technique** to solve the problem of balancing "preservation" and "publication" of cultural property.
- So far, cloned reproductions of a wide variety of cultural properties in Japan and overseas have been produced.
- ◆ In collaboration with **the Rotterdam Boijmans Museum of Art**, "enlarged reproduction of The Tower of Babel" created and displayed.
- ◆ Cloned reproduction of the **mural paintings of the Bagan ruins** is exhibited in a public collection of **the Myanmar National Museum**.
- ◆ Displayed at **G7 Summit 2016**, held in Ise-shima, Japan



The Bamiyan Wall Painting



Our challenges:

- **To tackle social issues**
- **To change universities and wider society**

**Thank you very much
for your kind attention!**