Subcommittee on Analysis and Measurement Technologies

- Social Issues: All biotechnology fields
- Leadership Organization: Shimadzu Corporation
- Representative: Takahiro Nishimoto (Managing Executive Officer, CTO, Shimadzu Corporation)
- Leader: Kiyotoshi Fujimoto (Director for City-Business-Academia Collaboration, Startup and City-Business-Academia Collaboration Office, Industry and Tourism Bureau, City of Kyoto)
- Leader: Koichi Meisho (Chief Researcher, Kyoto Municipal Institute of Industrial Technology and Culture)
- Leader: Masahito Natsuhara (Senior Project Manager, Government and Academic Collaboration Unit, Global Sales Strategy Department,Shimadzu Corporation)

Analysis and Measurement Technologies Supporting the Bioindustry

Social Issues

- Health and medical
- Global environment
- Population and nutrition

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Progress in Genetic Engineering

Genome analysis
Genome editing

IT/AI technologies
Bioinformatics

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Sustainable Bioeconomy Society

To date

- Manufacturing based on chemical synthesis
- Low molecular weight drugs
- Fossil fuels and petrochemistry

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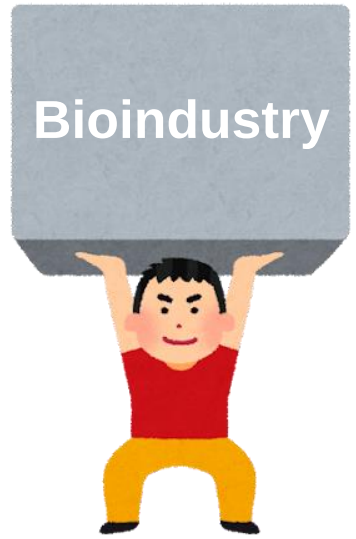
In the future

- Manufacturing using biological functions
- Macromolecular drugs and antibody drugs
- Reduction of CO_2 emissions, carbon neutrality, and energy efficiency



Analysis and measurement technologies provide the basis for each stage of research, development, manufacture, and quality control

Vision and Mission

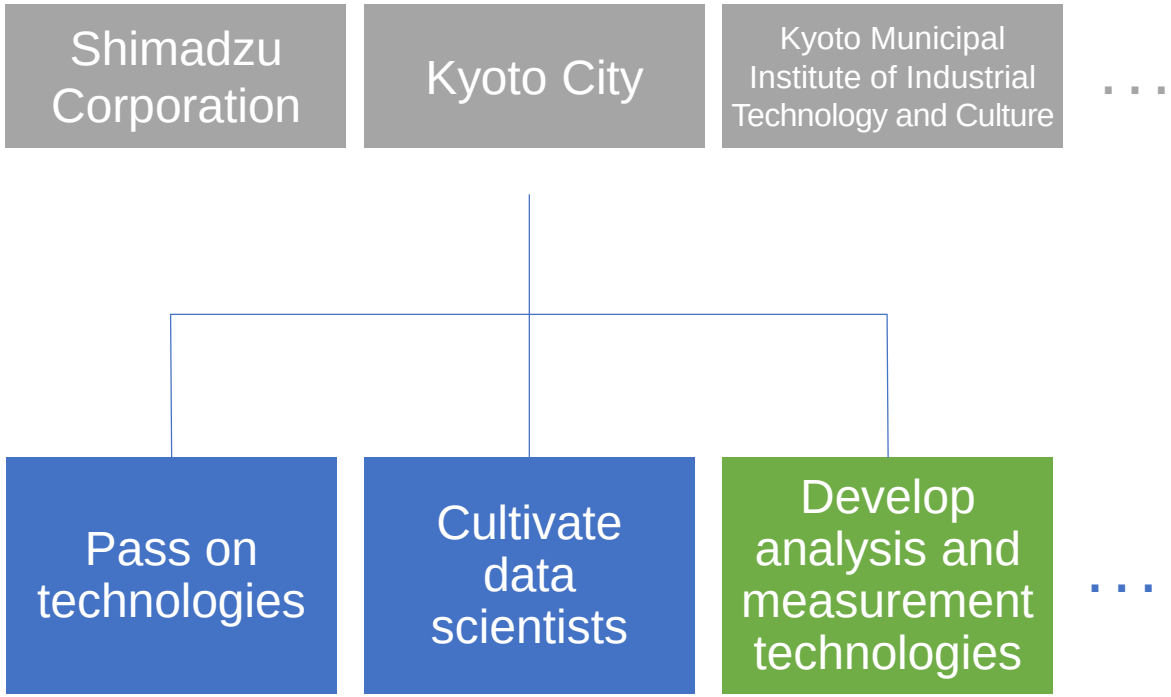
- Issues: Analysis and measurement technology is not being passed on to the next generation. There is a shortage of data scientists and a flow of personnel out of the Kansai area
- Vision: To realize the development of a world-class bioindustry with analysis and measurement technology
- Mission: Cultivate human resources and develop new technologies

Cultivation of Human Resources	1. Cultivate and educate human resources to properly pass on existing analysis and measurement technologies 2. Cultivate data scientists familiar with the analysis and measurement field, which are currently in short supply 3. Apply countermeasures to stop the outflow of human resources from the Kansai region to other regions
Development of Technologies	1. Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees 2. Biotechnology start-ups are created and supported by analysis and measurement technologies 3. Develop new analysis and measurement technologies in the biotechnology field 4. Accumulate and utilize analysis methods and the data acquired

Members (planned)

1. **Pharmaceutical and food and beverage manufacturers**
2. **Chemical and reagent manufacturers**
3. **Analytical and measuring instrument manufacturers**
4. **Public organizations**
5. **Universities and academia**
6. **Biotechnology start-ups**

etc.



Activity Plan

1. Program to Develop Analysis and Measurement Human Resources

1. Holding analysis and measurement seminars <Cultivate human resources for analysis and measurement, pass on technology and know-how, using OBs>
2. Holding analysis and measurement seminars <Support and cultivate data scientists, having a background of “wet lab” science>
3. Human resource bridge-building between academia and companies in Kansai in the analysis and measurement field

2. Development of Analysis and Measurement Technologies

1. Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees (Trouble consultation), and create and support biotechnology start-ups through analysis and measurement technologies
2. From 1, identify new analysis and measurement technology needs, and accumulate and utilize applications
3. Development of analysis and measurement technologies Example: antibody analysis, more advanced genetic analysis, new measurements using magnetic nanoparticles, etc.

Five-Year Activity Schedule

Program to Develop Analysis and Measurement Human Resources	1st year	2nd year	3rd year	4th year	5th year
Holding analysis and measurement seminars (1) <Cultivate human resources for analysis and measurement, pass on know-how>					
Holding analysis and measurement seminars (2) <Support and cultivate data scientists, having a background of “wet lab” science>					
Human resource bridge-building between academia and companies in Kansai in the analysis and measurement field					

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Development of Analysis and Measurement Technologies	1st year	2nd year	3rd year	4th year	5th year
Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees <Trouble consultation>					
Identify new analysis and measurement technology needs, and accumulate and utilize applications					
Develop new analysis and measurement technologies					

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