Conference Name	The 6th International Joint Conference on Convergence (IJCC 2021)
Date	February 18(Thur) ~ 20(Sum), 2021
Venue	Lotte Cinema World Tower, Seoul, Korea
Hosted by	The International Promotion Agency of Culture Technology (IPACT)
	The Institute of Internet, Broadcasting and Communication(IIBC), Knowledge Forest

Adapting **Design Thinking** to **Software Design** for solving ill-defined requirement problem on **Creative Thinking**

SEO CHAEYUN

Contents

1. **Background**

2. **Related works**

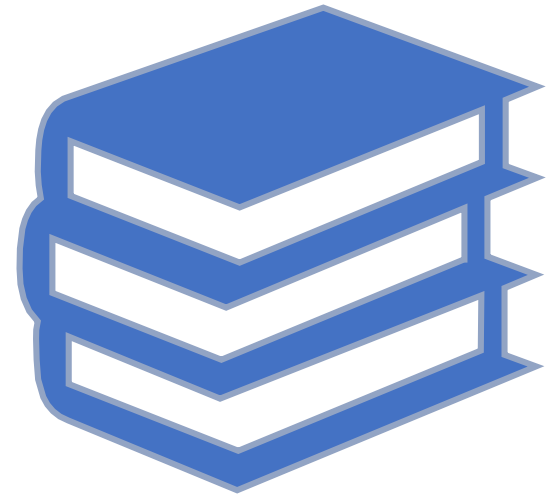- Software development process

- Design thinking

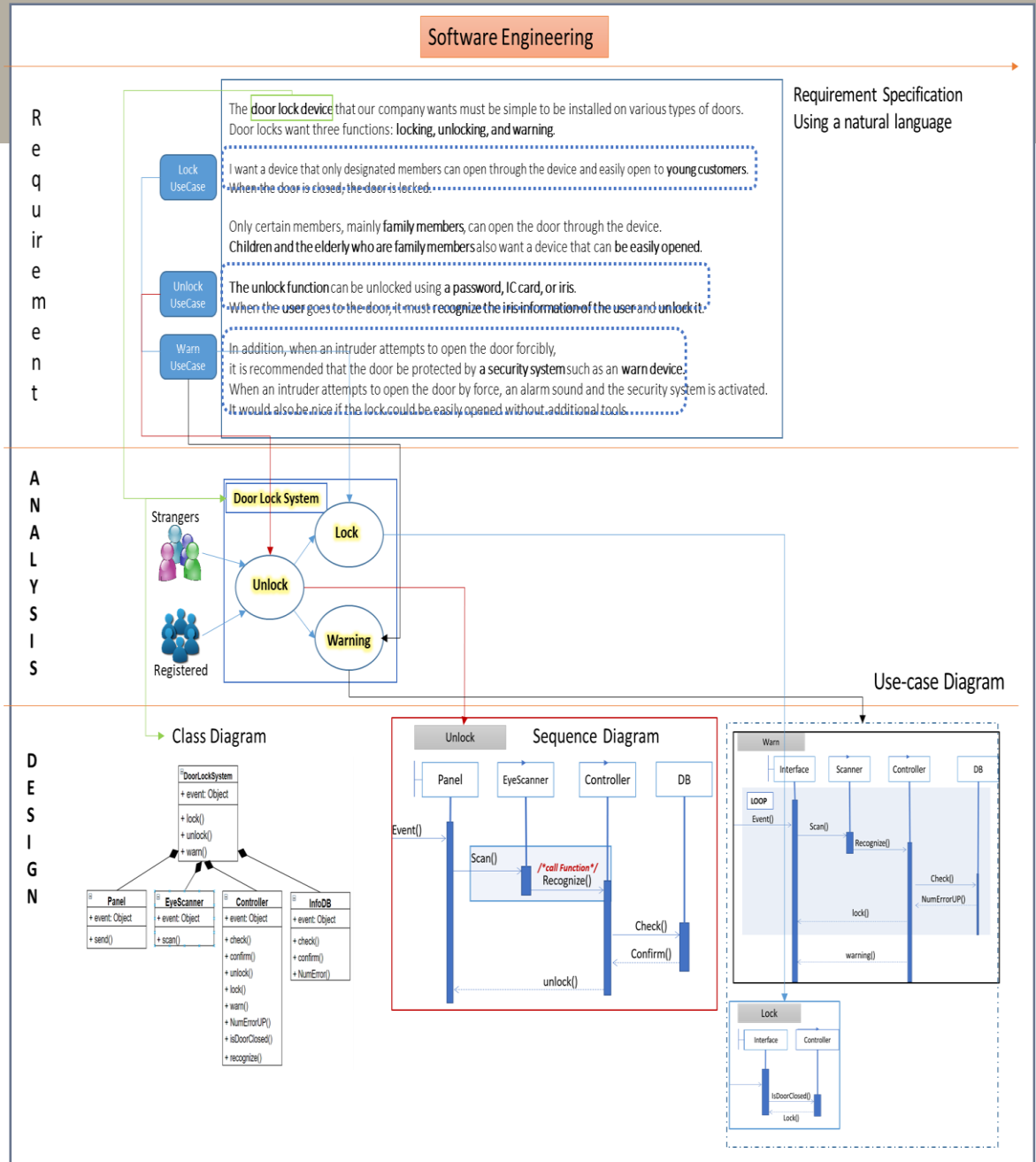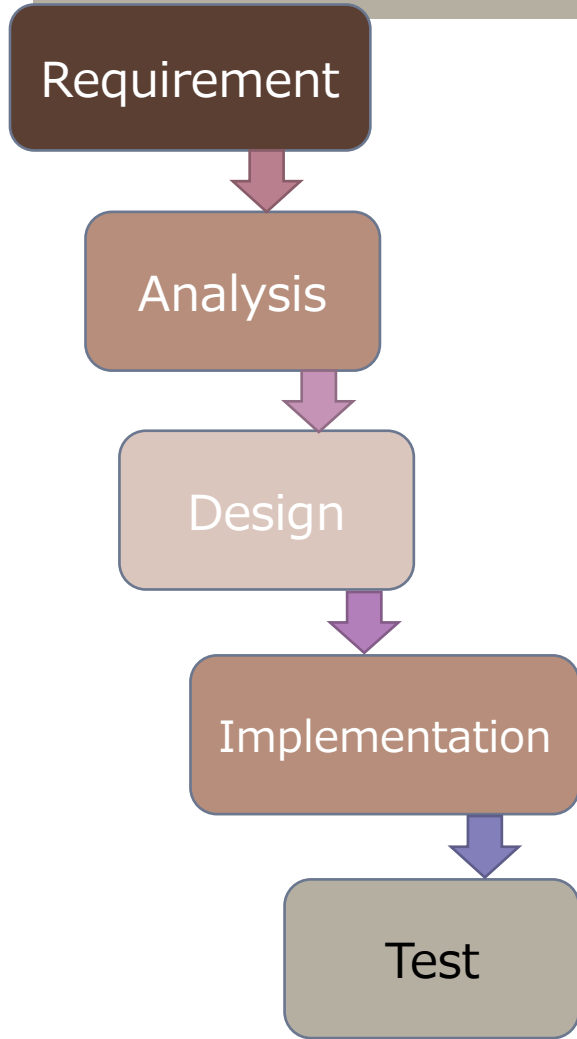3. **Adapting Design Thinking to Software Process**

4. **Conclusion**

Background

• Highly creative process to address human needs, which use design thinking to tackle ill-defined/unknown requirement specification problems.

• Reframe in better human-centric ways than Ivan Jacobson's Use case approach of Objects Oriented Software Engineering (OOSE).

• We may consider creative design with Ill-defined/unknown requirement specifications given from customer needs.

• To achieve this, we propose adapting design thinking to software design on creative thinking.
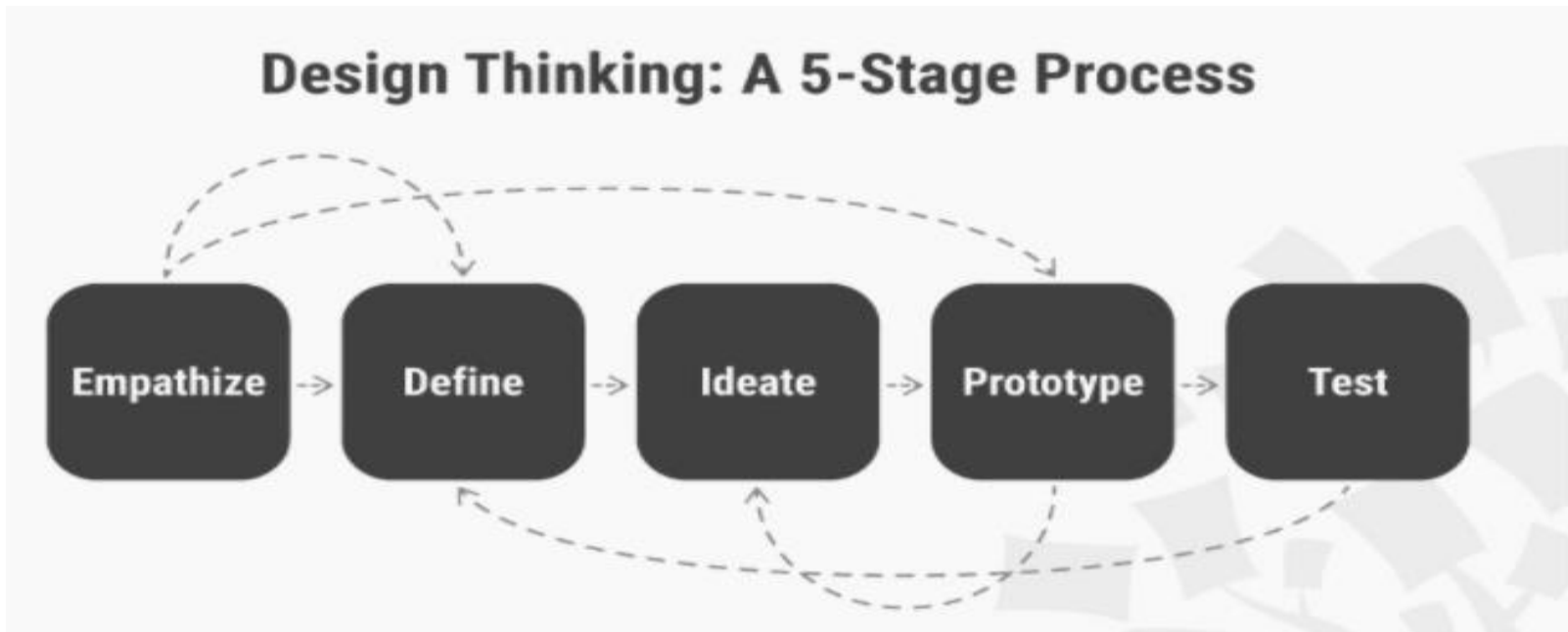
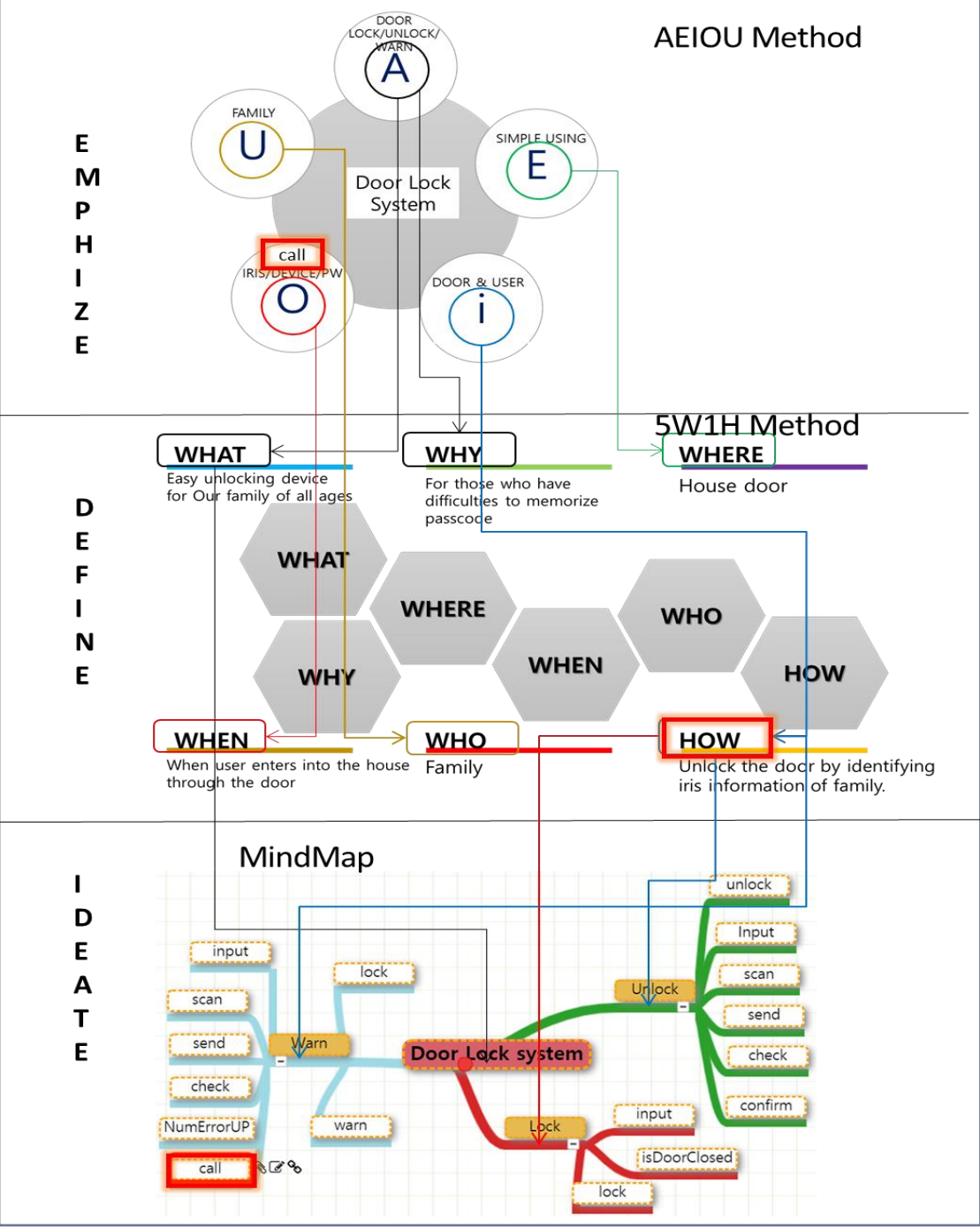# Related works

Software Development Process

Design Thinking

- **In 1967, Herbert A. Simon first mentioned design thinking in the Sciences of the Artificial book.**
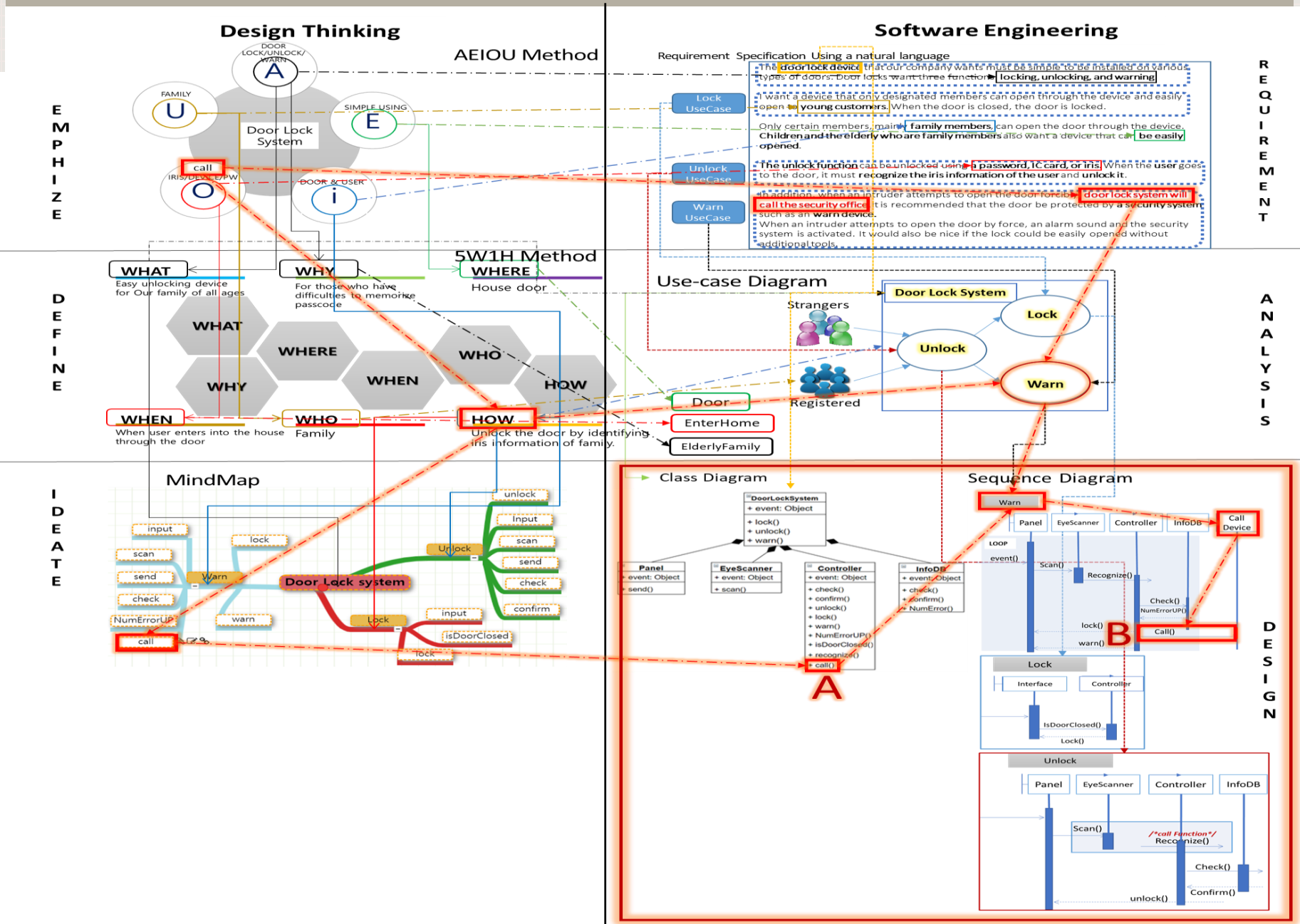
- **Design thinking process**

Design Thinking: A 5-Stage Process

Empathize → Define → Ideate → Prototype → Test

Design Thinking Process

AEIOU Method

5W1H Method

MindMap

Research

Adapting Design Thinking to Software Process

Adapting Design Thinking to Software Process

Conclusion

•Software engineers attempt to develop software based on customer requirements with software engineering approaches, they may have an ill-defined or unknown problem of requirements given from the customer.

•We adapt software engineering with design thinking at requirement and design stage because of reframe these in human-centric ways.

•We are considering more sophistical and creative thinking at software development lifecycle. We will guarantee how to make quality of software based on creative design in 4th Industrial revolution

•We are going to develop a development system for majored college students.