

# CO<sub>2</sub> Heat pump water heater for commercial use EcoCute

**Q-ton**  
Air to Water

1. Product Outline
2. Various example
  - Japan
  - Europe
  - South Korea

Recovering heat of the air



Transferring the heat to water and supplying hot water



 **MITSUBISHI**  
HEAVY INDUSTRIES, LTD.

Our Technologies, Your Tomorrow

## Ultra Efficient Technologies from MHI

Mitsubishi Heavy Industries introduce 30kW Heat Pump Water Heater



### MHI's **NEW** "Q-Ton"

The World's **FIRST** 2-Stage CO<sub>2</sub> Compressor

Provides Hot Water up to 90°C

COP of up to 4.3  
[430% efficiency!]

Operation down to -25°C Ambient

Using **NATURAL REFRIGERANT**



# Installation Sample in Japan

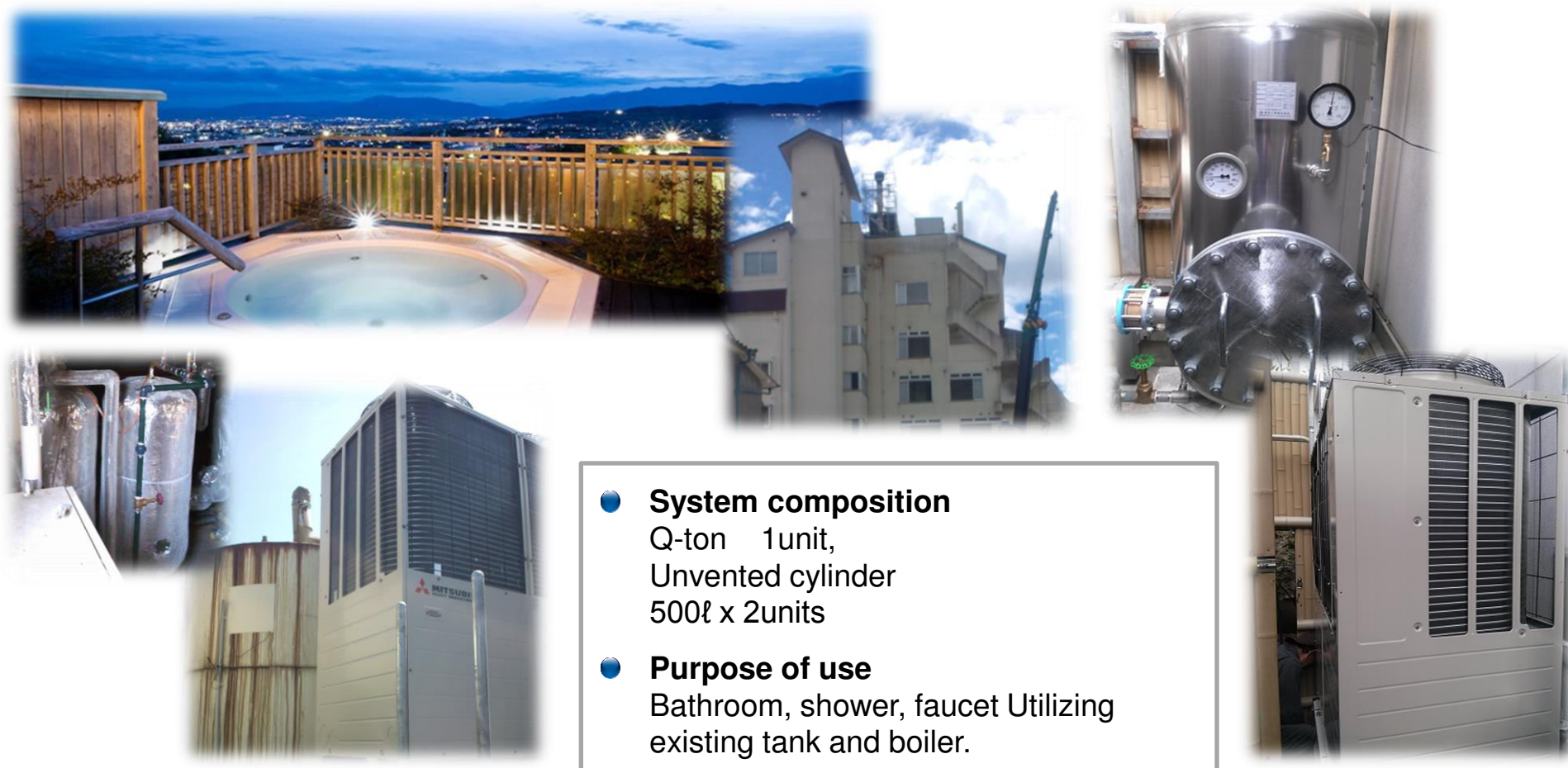
spreading through the various fields of Japan





The hybrid system combined with a boiler takes advantage of good sides of 2 system.

## Japanese hot spring inn in Matsumoto and Kanazawa



- **System composition**  
Q-ton 1unit,  
Unvented cylinder  
500ℓ x 2units
- **Purpose of use**  
Bathroom, shower, faucet Utilizing  
existing tank and boiler.

# Installation Sample ② (School lunch center)

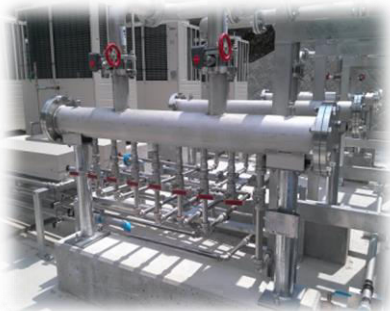
This site is the largest all-electric school lunch center in Japan.

- **System composition**

Q-ton 12 units,  
Large open tank

- **Purpose of use**

hot water supply for  
dishwashers





# Installation Sample ③ (warm-bathing facility)

- **System composition**

Q-ton 12 units,  
Large open tank

- **Purpose of use**

preheating water supply for boiler

静内温泉  
新ひだか町町民保養施設



# Installation Sample ④ (Food factory)

- **System composition**

Q-ton 4 units,  
Open tank 4,000L, 15,000L

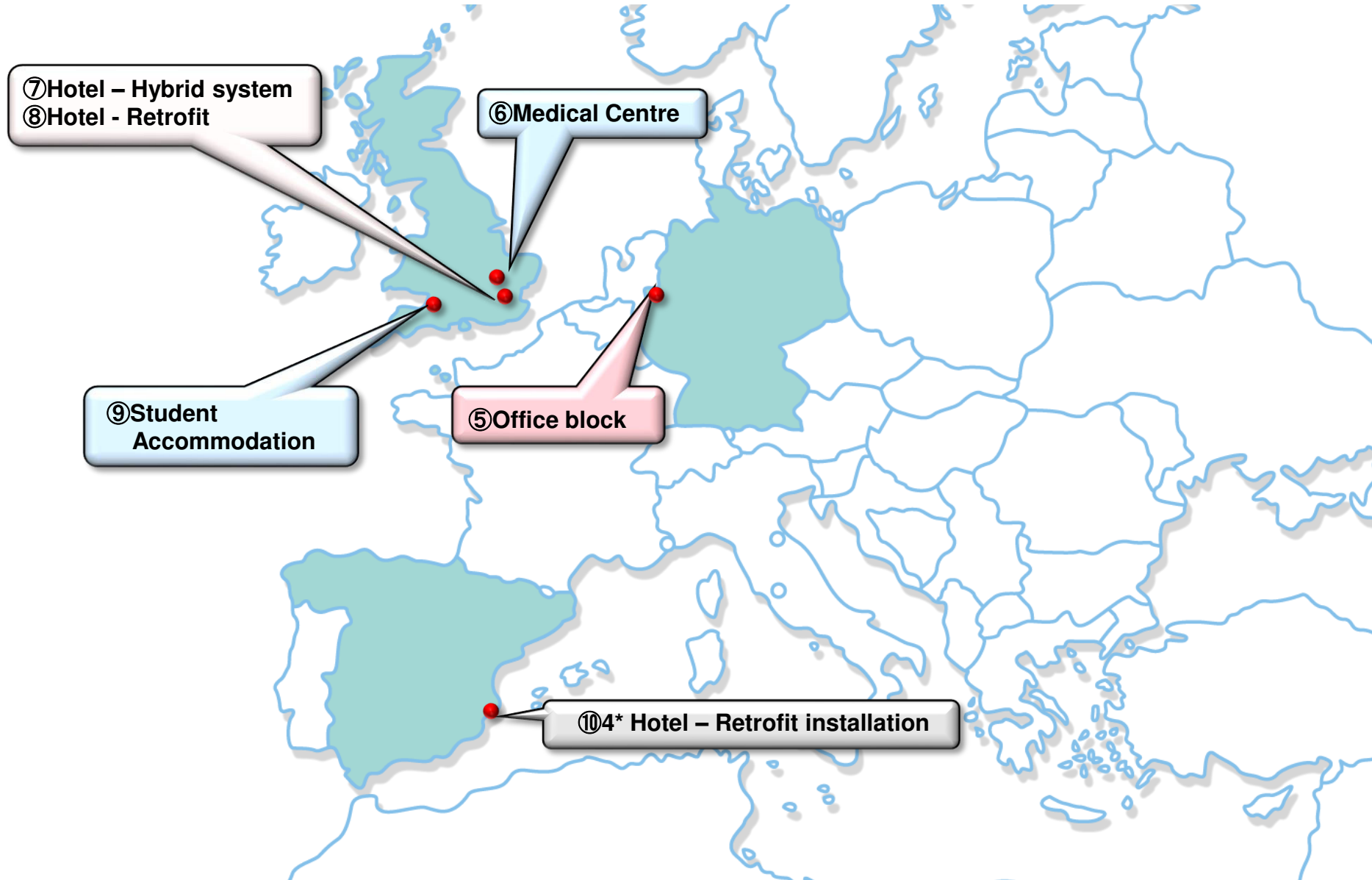
- **Purpose of use**

Cleaning in the factory, food manufacturing process use





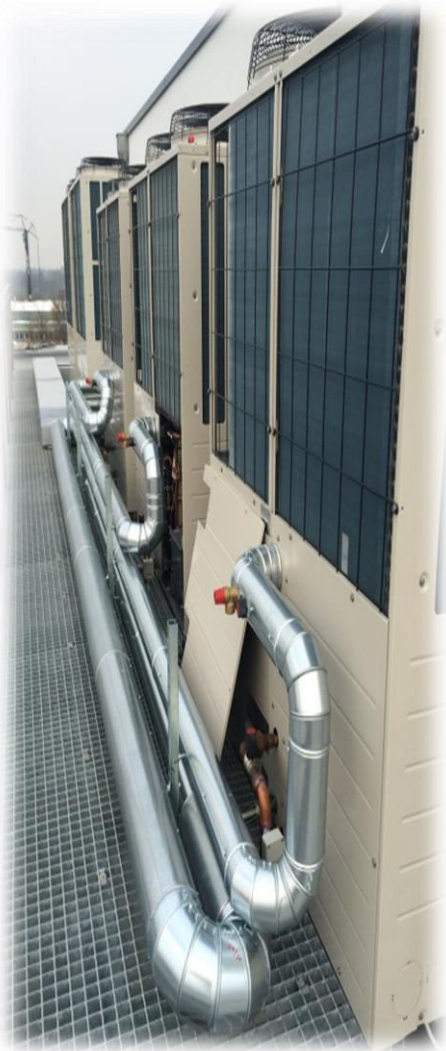
# Installation Sample in Europe





# Installation Sample ⑤ (Office block – UFH)

- **System composition**  
Q-ton 3 units,  
Closed tank 1,000L
- **Purpose of use**  
Central heating system via  
under floor heating circuit



# Installation Sample ⑥ (Medical Centre – New build)



- **System composition**  
Q-ton 1 unit,  
Closed tank 1,000L
- **Purpose of use**  
DHW supply to 20  
treatment and  
examination rooms  
including the reheat  
of the secondary  
circuit





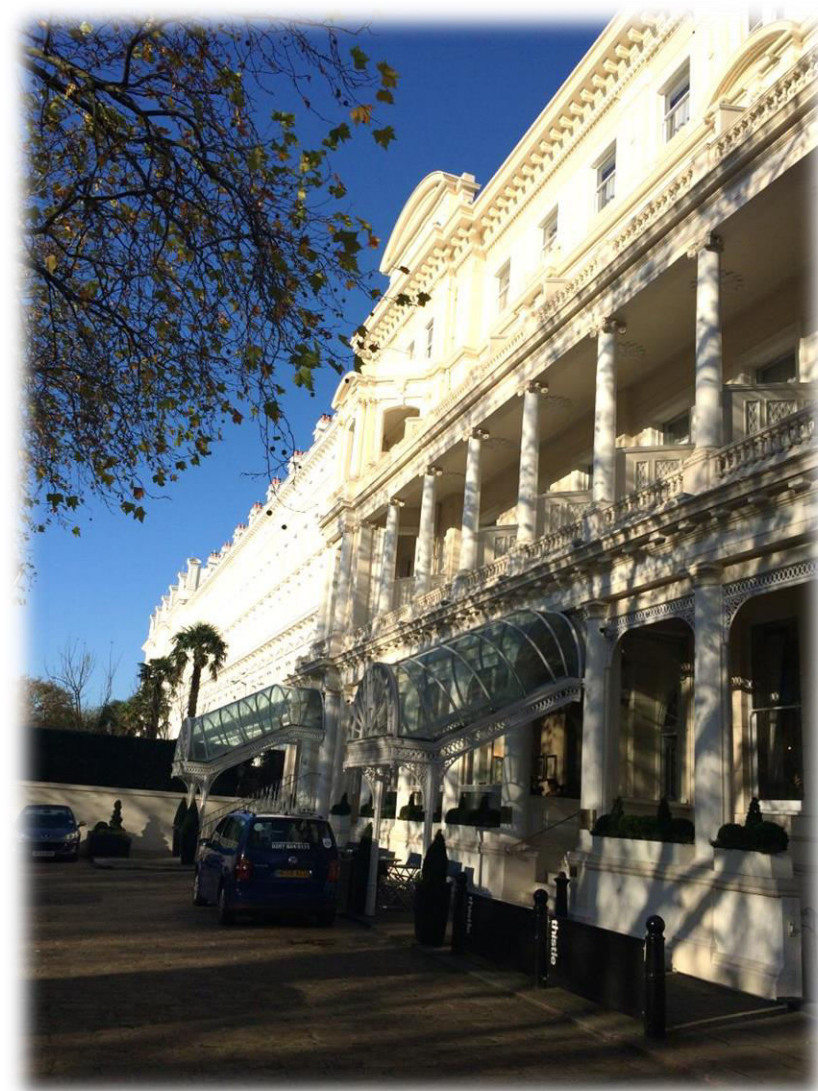
# Installation Sample ⑦ (Hotel – Hybrid system)

- **System composition**

Q-ton 1 unit,  
Closed tank 2 No 1,000L

- **Purpose of use**

DHW supply to 56 rooms using the existing boiler to reheat the distribution circuit





- **System composition**

Q-ton 2 units,  
Closed tank 2 No 1,000L

- **Purpose of use**

DHW supplies to 250 people using the existing boilers to deliver central heating







- **System composition**  
Q-ton 1 unit,  
Closed tank 1 No 1,000L

- **Purpose of use**  
DHW supply for up to 48 students using 6 kW immersion element to cover re-circulation demand



# Installation Sample ⑩ (4\* Hotel – Retrofit installation)



- **System composition**

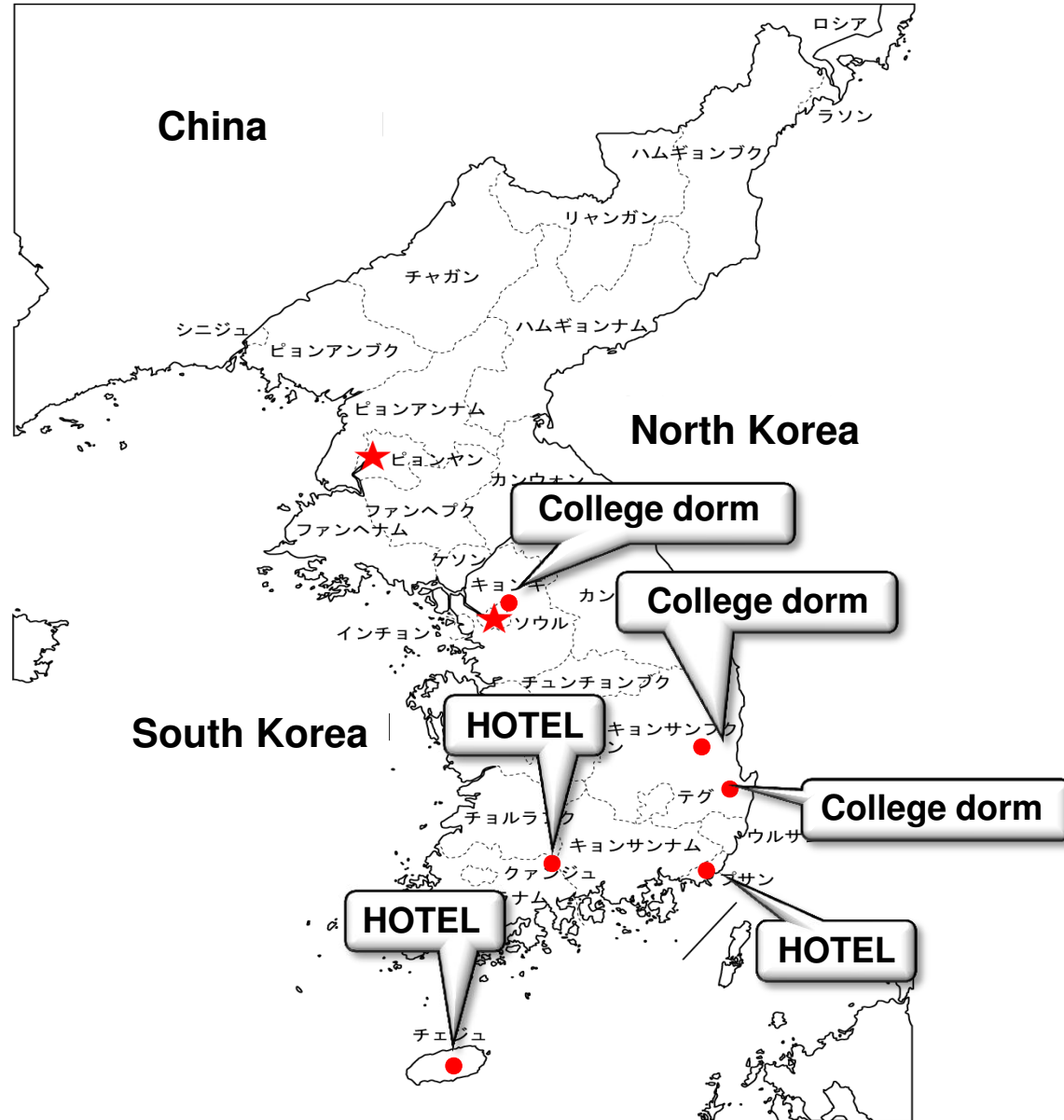
Q-ton 2unit,  
Closed tank 2 No 3,000L + 5 No 4,000L tank

- **Purpose of use**

DHW is provided to 200 rooms and the existing boiler is kept for back up



# Another installation Sample in South Korea



# Thank you for your kind attention

