

LEADERSHIP  
FOR PRODUCTIVITY  
SOLUTIONS



## 1. CEO'S Message

“

**JIN SOLUTION** will take responsibility for safety for your bright future.

In the global market, Korea has made remarkable progress and continues to develop in various industries such as semiconductors and displays, but our most fundamental safety should be protected in all areas in the past, now and in the future.

JIN SOLUTION has maintained customer safety by providing **Total Gas Solution** based on the Safety First philosophy.

Dear everybody! We will provide the highest level of Total Gas Solution even if the times and environment become more complex, for your bright future moving forward in line with the rapidly accelerating Fourth Industrial Revolution.

”

**Don't Worry, We Keep, Your Future**

Thank you very much.





## 2. History / Introduction

**2010** Obtained license for Specific Equipment Manufacturing  
 Certified as clean workplace : KOSHA  
 ISO 9001:2015 certification (quality management system)

**2014** Completed headquarter/factory  
 (CLASS 100/1,000 clean room facility)

**2021** Consulting for Samsung Electronics / TES manufacturing  
 competitiveness reinforcement business  
 Explosion proof gas cabinet / SEMI S2 certification  
 Built smart factory (POP/MES) system  
 Selected as Best Small & Medium Workplace (KCCI)

**2009** JIN SOLUTION CO., LTD. established

**2012** Obtained license for Mechanical Equipment Construction  
 Obtained license for Gas Facility Construction (Type 1)

**2020** ISO 45001 : 2018 certification  
 Certified as INNOBIZ company (SMBA)

Company Name

JIN SOLUTION CO., LTD.

CEO

J.Y. Kim

Established

Incorporated in August 2009

Business  
 Registration No.

124-86-82428

Type of  
 Business

Manufacturing (Manufacturing of Gas Supply & Distribution System / Plumbing  
 Construction / Manufacturing of Sampler and Furnace Equipment)

Holding License

Mechanical Equipment Construction, Gas Facility Construction (Type 1), Specific Equipment  
 Manufacturing

Headquarter  
 /Factory

98-38, Dongtansandan 7-gil, Dongtan-myeon, Hwaseong-si, Gyeonggi-do, Republic of Korea,  
 18487

Tel No.

(031) 371 – 8700

Fax No.

(031) 371 - 8799

E-mail

sales@jinsolution.co.kr

Homepage

www.jinsolution.co.kr



### 3. Organization Chart

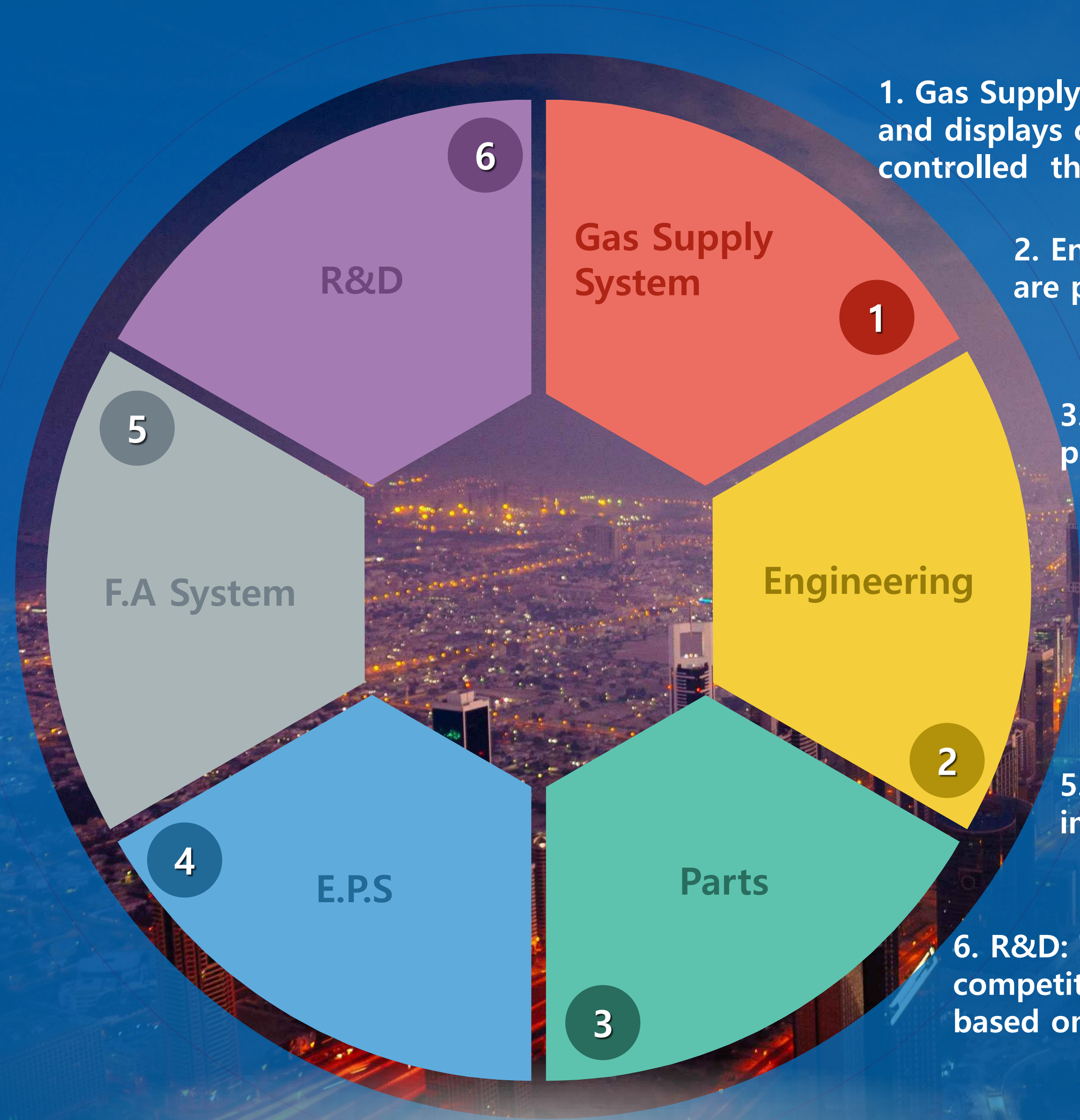


### Management ideology

1. Communication with empathy : Activate communication through mutual understanding
2. Responsible Autonomy : Autonomous organization where authority commensurate with responsibility
3. Give Back to Society : Marginalized neighbors are potential customers
4. Creativity Challenge : Respect for creativity and motivation for self-development



## 4. Business Area



1. **Gas Supply System:** Specialty gas used in microprocessing such as semiconductors and displays can be stably supplied and distributed to process equipment, and controlled through this system.

2. **Engineering:** Services such as utility piping, equipment hook-up and turn-key are provided according to customer needs.

3. **Parts:** Machined parts and fitting materials used in various industries are provided.

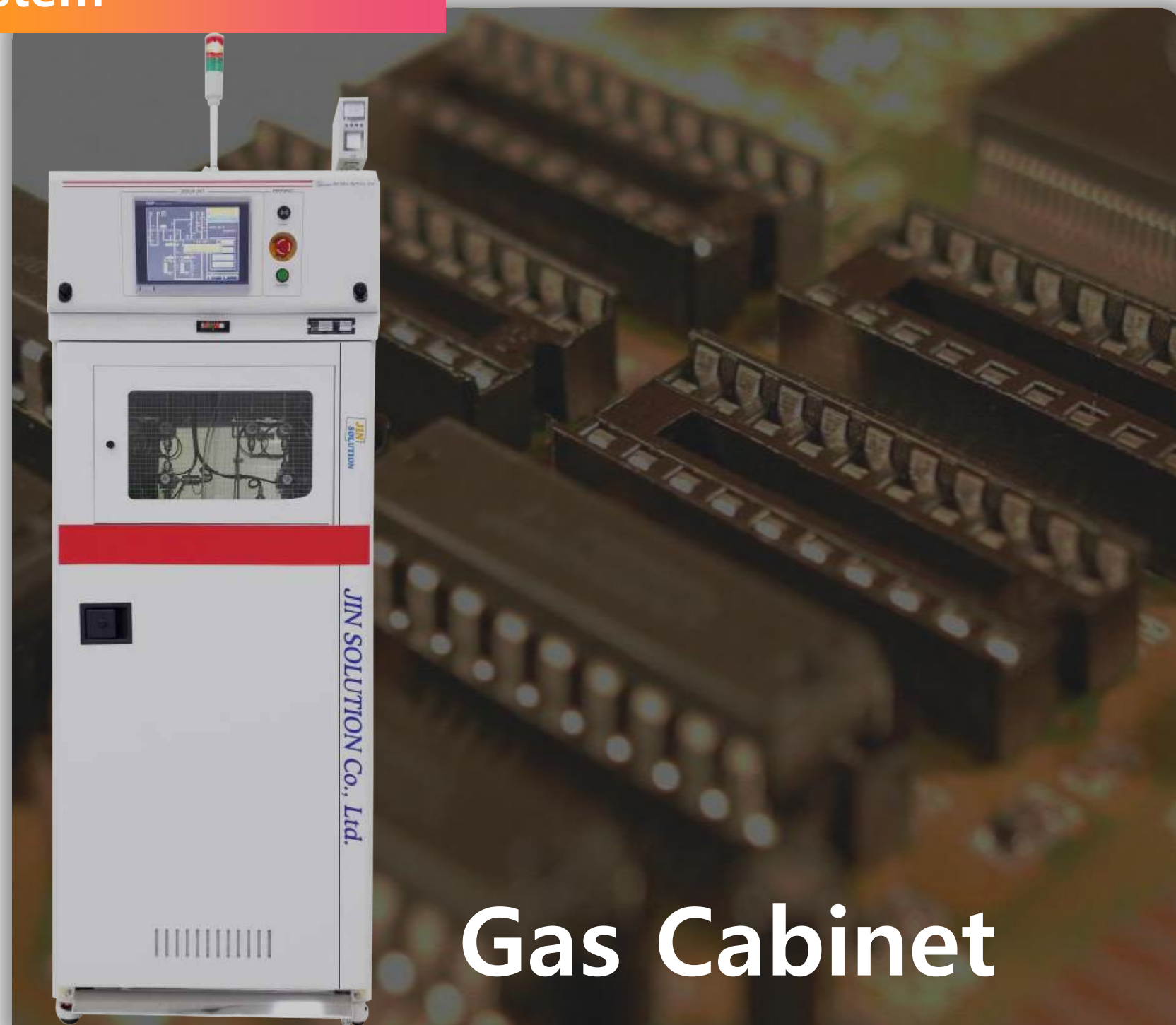
4. **Environment & Production System:** This system can improve the process environment by increasing pollutant gas analysis and energy efficiency.

5. **Factory Automation System:** Production, quality and stability can be improved through this automation system.

6. **R&D:** The R&D of JIN SOLUTION, which has the best technological competitiveness in the manufacturing environment sector, is steadily advancing based on the numerous experiences of the dedicated development team.



## 5. Gas Supply System



### Gas Cabinet

This equipment supplies a constant pressure and a certain amount of gas to the VMB·VMP or main process equipment, and is configured to automatically shut it off and discharge the gas in case of emergency.

#### ▶ Product Types

- Gas Cabinet (GDS Series)
- Bulk Specialty Gas System (BSGS)
- Liquid Delivery System

#### ▶ Product Features

- Automatic Purge: Safety management and gas purity maintenance
- Automatic Leak Check: Automatic inspection and measurement of decompression and pressurization
- Automatic Cylinder Change: Automated cylinder replacement
- Gas and parts usage history and event log
- Tilt, vibration and seismic detection
- Z-Purge Unit: Maintaining constant positive pressure
- Explosion-proof certification
- Interlock: Door, vent, CGA, etc.



### VMB·VMP

This gas safety distribution/supply equipment receives gas from the gas cabinet and distributes a certain amount of gas at a constant pressure inside the system, supplies gas to a number of main process equipment, and automatically shuts it off and discharge gas in case of emergency.

#### ▶ Product Types

- Valve Manifold Box (VMB) : Toxic, corrosive and combustible gas
- Valve Manifold Panel (VMP) : Inert gas

#### ▶ Product Features

- Inlet, Outlet Stick Formation
- 1:4, 1:6, 1:8
- 2:4, 2:6, 2:8
- Operational Controller Type
- Full Automatic Type
- Semi Automatic Type
- Manual Type



### Gas Module

We conduct gas module design, manufacturing, test, and onsite set-up by participating from the initial stage of developing process equipment that designs and manufactures gas module parts for new process equipment

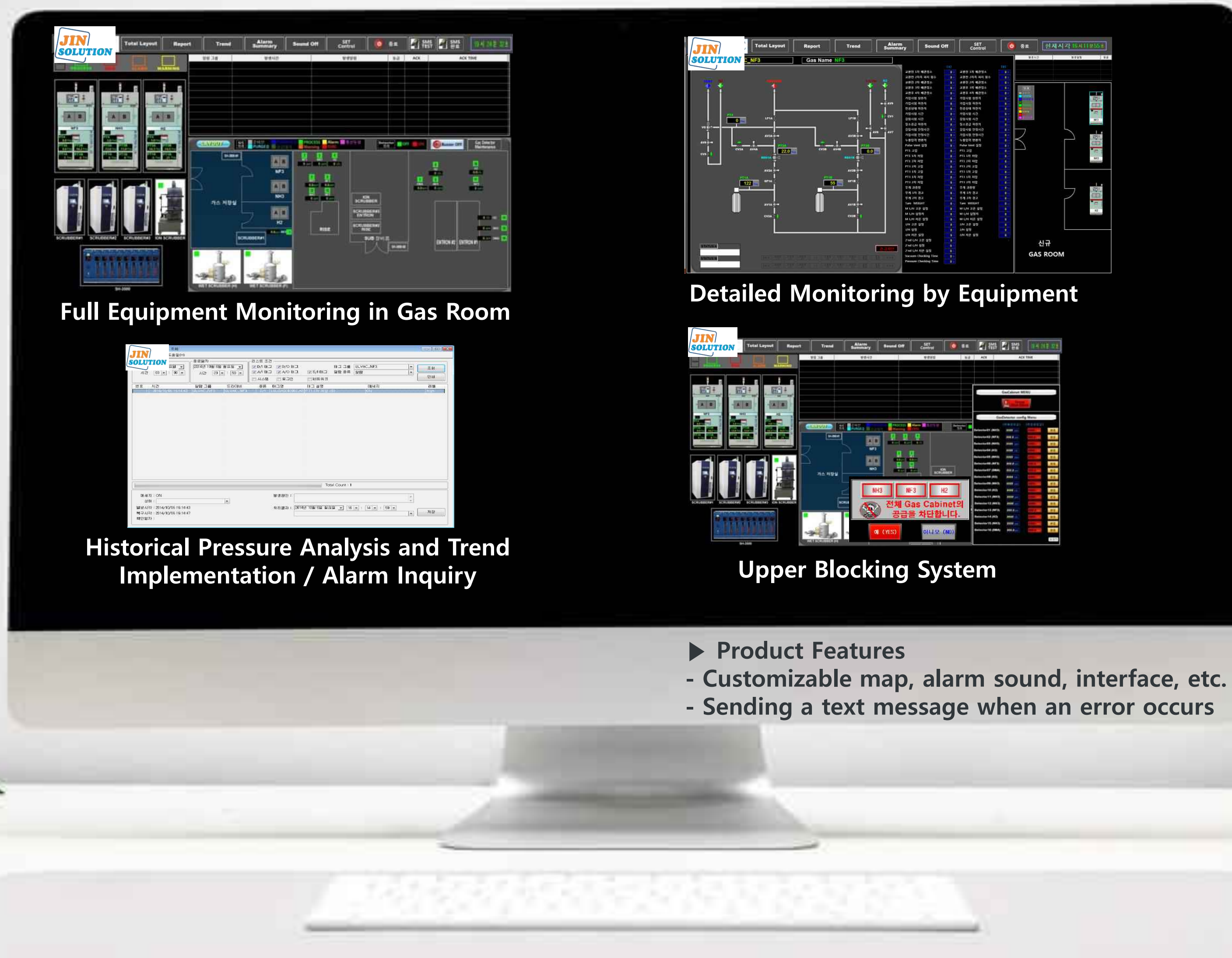
#### ▶ Development Procedure

1. Consultation for equipment specifications
2. Consultation for gas panel/box size and equipment options
3. Design of gas panel/box
4. Gas panel/box production/assembly
5. Test and inspection of gas module part (gas panel/box)
6. Packaging and onsite set-up



# Gas Monitoring System

This system can check the status of the gas supply system in real time in the control room or office, and manage the history and prevent safety accidents through the operation status check and remote control of each supply system.



Full Equipment Monitoring in Gas Room

Detailed Monitoring by Equipment

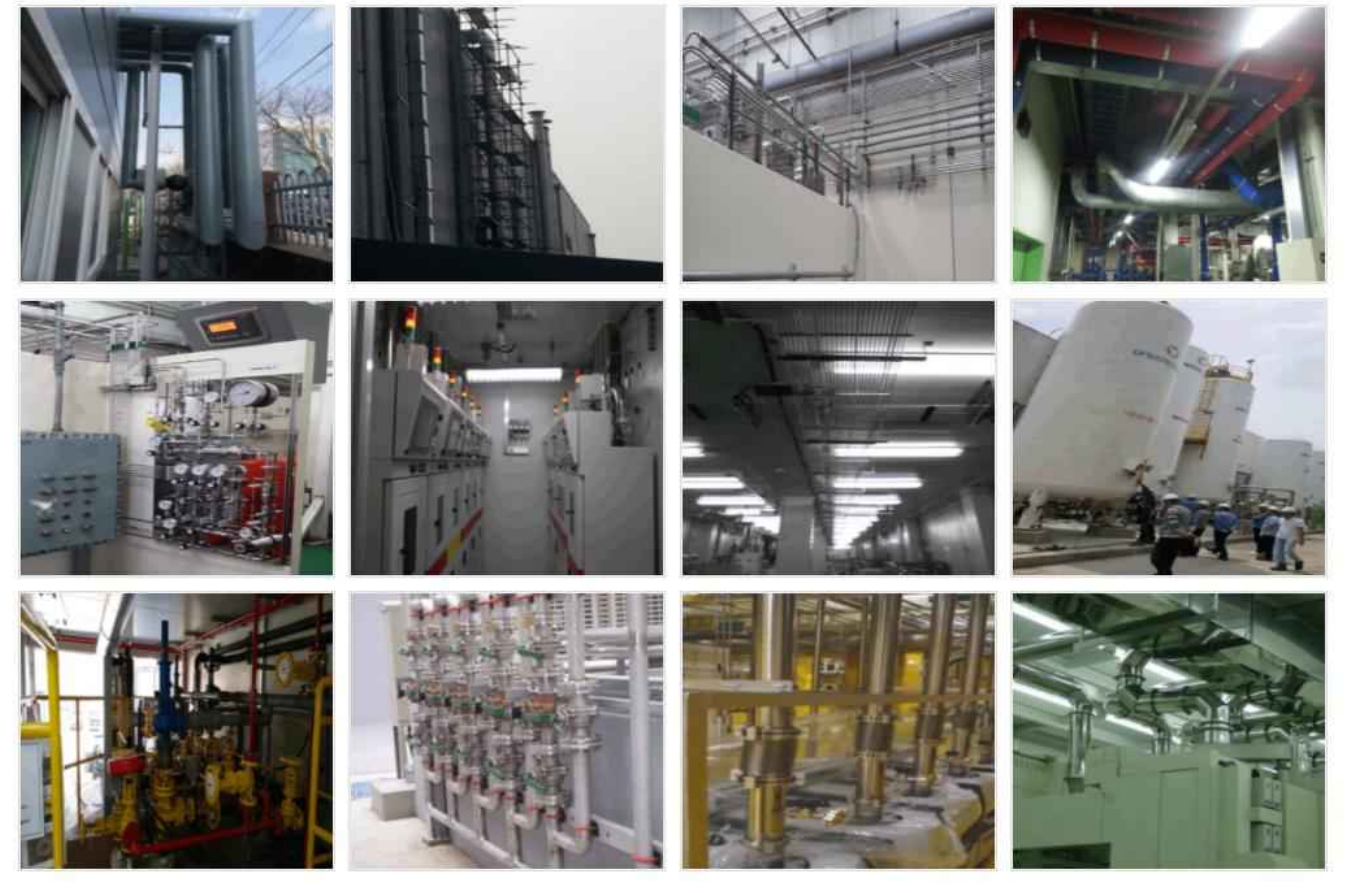
Historical Pressure Analysis and Trend Implementation / Alarm Inquiry

Upper Blocking System

- ▶ Product Features
- Customizable map, alarm sound, interface, etc.
- Sending a text message when an error occurs



# 6. Engineering



## ► Utility Piping

- CDA Piping
- Inert Gas (N2, Air, He, Ar, etc.) Piping
- Toxic/Corrosive Gas Piping
- PCW/DIW Piping
- Exhaust/Drain Piping
- Vacuum Piping
- Chemical Piping



## ► Clean Room Construction

- Optimal space construction according to customer needs

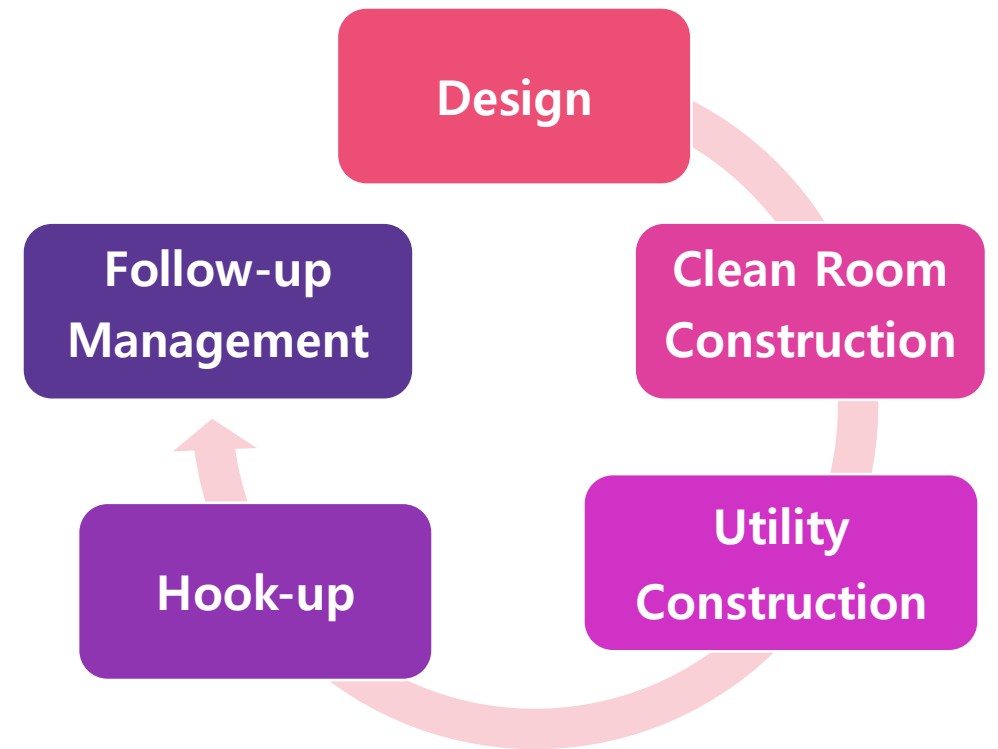


## ► Hook-up Construction

- Equipment/system design and piping connection required for the process, and on-site construction
- Measurement of moisture and oxygen concentration
- Particle evaluation

## ► Turn-Key

- Shortened design and construction period
- Induction of creative design
- Construction completion ↑
- Reduced construction cost



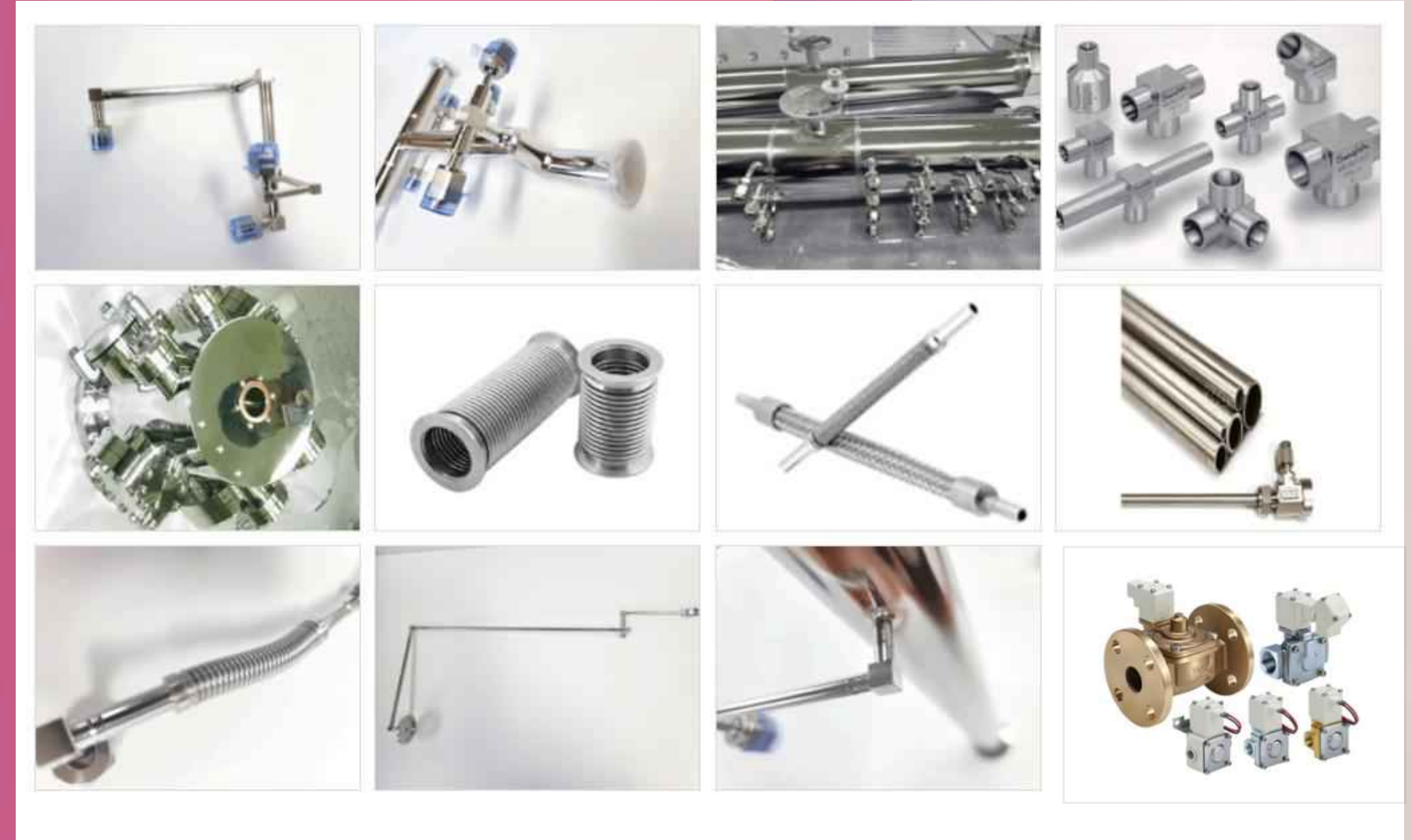


## 7. Parts



Machined parts and fitting materials used in various industries are provided.

- Gas Line, Vacuum Line
- Pipe & Tube
- C&C Machining, Laser Cutting
- VCR, Flange, Lok, Sanitary,
- Valve
- Regulator
- Filter



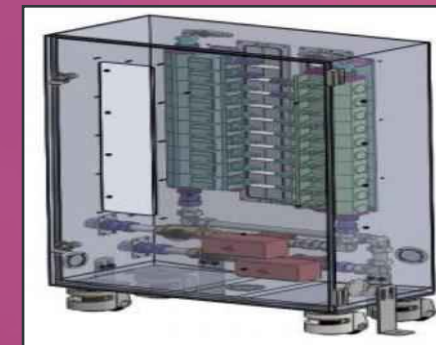
### - Components



Radiator



Gas Cooler



PCW Manifold

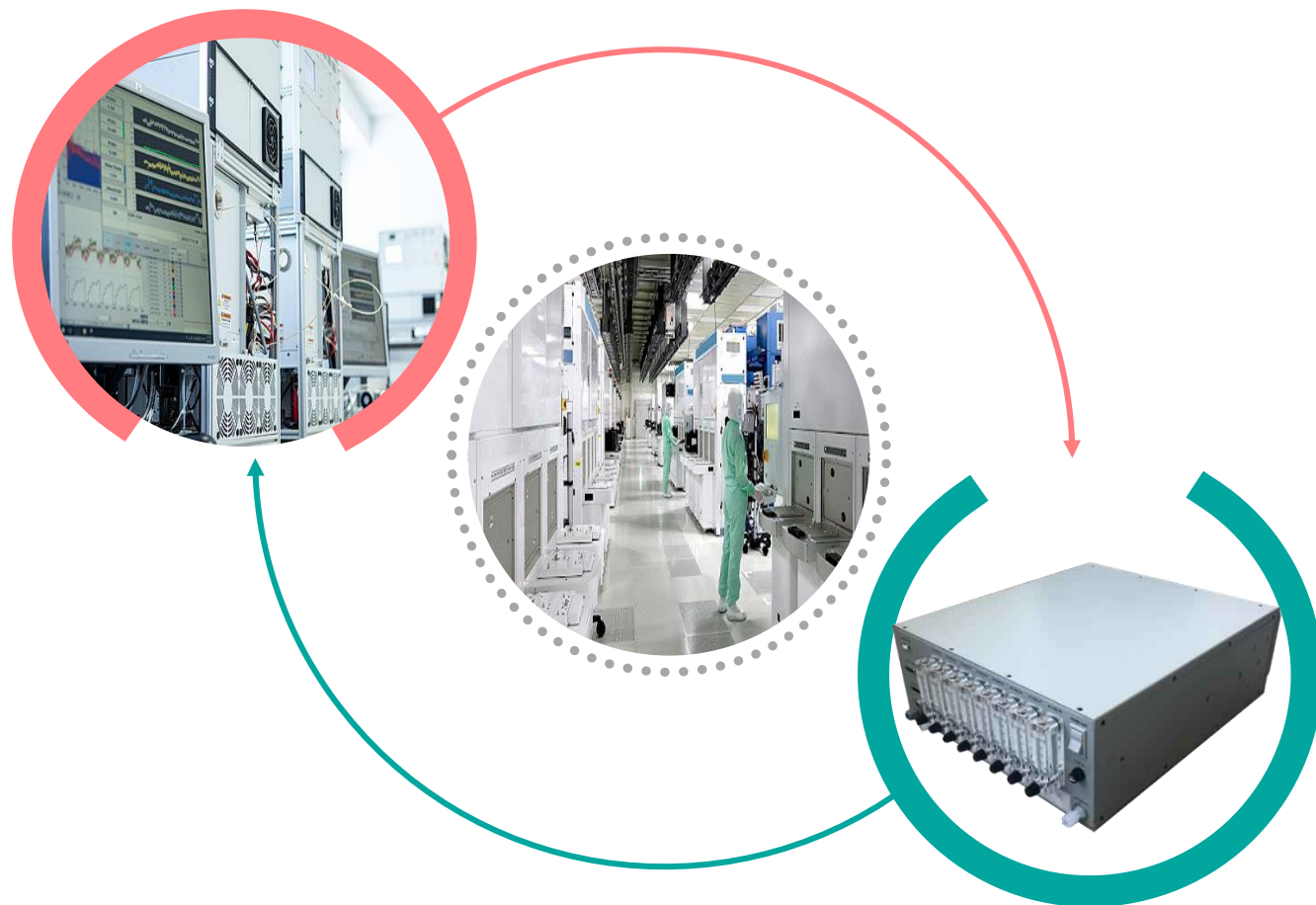


HRS

- Purpose: A system that prevents explosion by reducing the concentration of hydrogen emitted from the hydrogen process
- Method: Passive catalytic hydrogen removal
- Features: No power type, and communication with process equipment (pressure, temperature, concentration, etc.)



## 8. Environment & Production System



### AMC Monitoring System with Sampler "Zenith V-3"

**Air polluting molecules** such as ammonia (NH<sub>3</sub>), hydrogen fluoride (HF), hydrogen chloride (HCl), hydrogen sulfide (H<sub>2</sub>S) and sulfur dioxide (SO<sub>2</sub>), **could be collected and gathered, and then transferred to an analyzer for fast and accurate analysis by applying the Sampler Device "Zenith V-3" to the AMC Monitoring System.**

The Sampler Device "Zenith V-3" **made of Super-Hydrophobic Coated Manifold** can prevent internal contamination, and the shortest duct with minimal fitting and tubing provides quick and accurate analysis results.

The Sampler "Zenith" controlled by the PLC System displays real-time measured concentration by port, sets system operating conditions, checks alarm, event, trend data and data log files, and also has **its own back-up function during system shutdown.**

**JIN SOLUTION** provides the Sampler Device "Zenith V-3" and the AMC Monitoring Portable System.



Sampler System

**Host Interface**  
 · Control over all analyzers  
 · 17 inch monitor

**Analyzers**  
 · NH<sub>3</sub>, HF and HCl gas analyzer  
 · Measurement of PPB, PPT concentration  
 · Additional gas analyzers available (CH<sub>4</sub>, CO<sub>2</sub> 등)

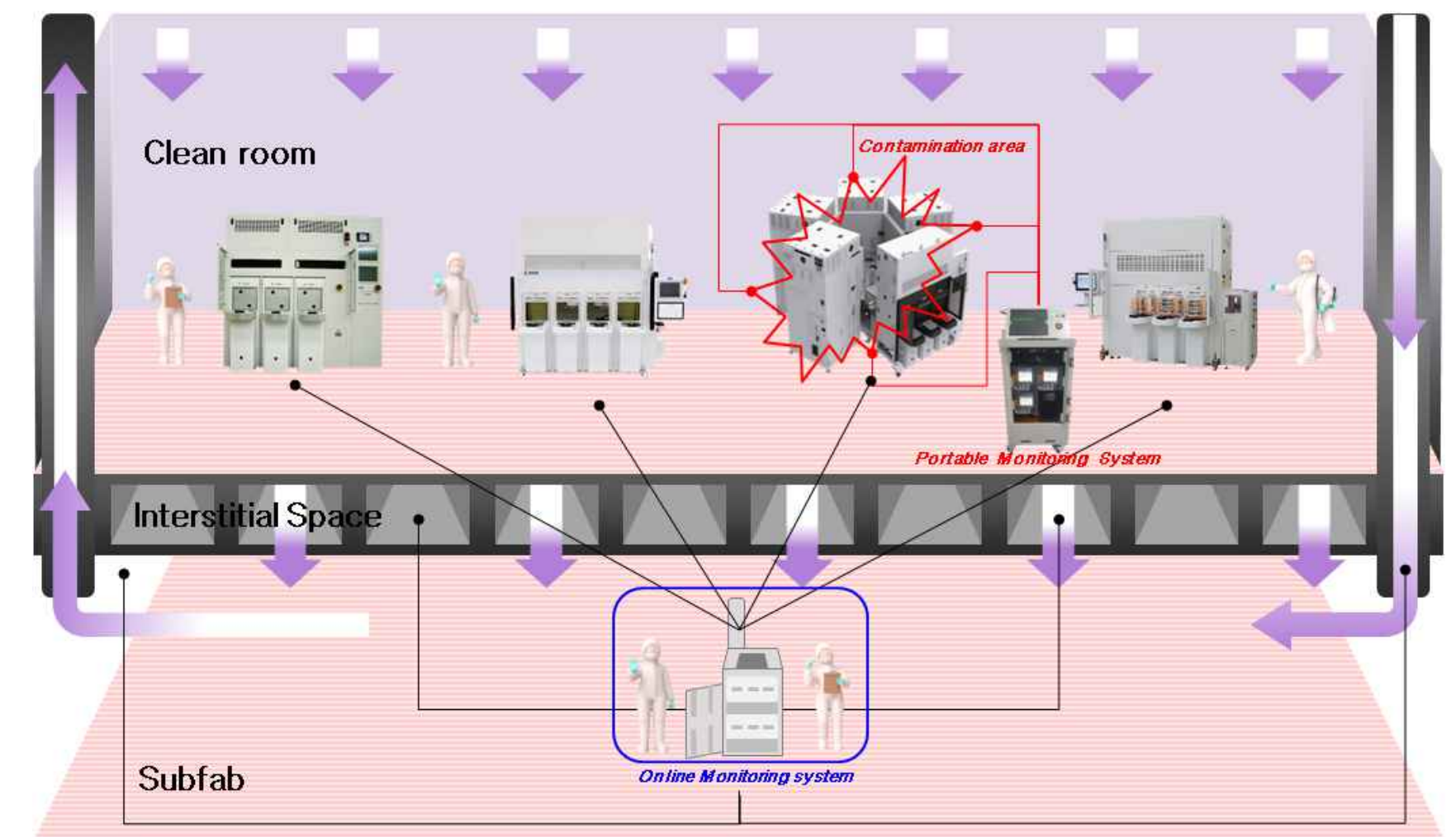


**Sampler**  
 · The clean room, equipment systems, filter, interstitial space, and the collection of recirculating air, etc  
 · Transferred air polluting molecules to each contamination analyzer  
 · 8 / 16 / 24 Port configurable

**UPS**  
 · Backup power supply  
 · Full system running for 8 hours

#### AMC Portable Device

Dimension (H x W x D)	54 " x 23 " x 33 "
	138.7cm x 60cm x 86cm
Weight (w/o analyzers)	507 lbs (230 kg)
Body material	Steel & Aluminum



AMC Monitoring System Overview



## Factory Automation System

Production lines of the semiconductor, FPD, LED, OLED, Solar Cell and general logistics are making efforts for improvement of product productivity, uniform quality, equipment stability, and improvement of working conditions. Accordingly, JIN SOLUTION CO., LTD. provides Factory Automation System.

### ► System Application

- Process automation of FPD and semiconductor production lines
- Process automation of secondary battery production line
- Inspection equipment, etc.

### ► Examples of Practical Product Application



Automatic Shipping System



Pallet Transfer Line



Pallet Transfer Logistics



Aging Line



Logistics Transfer Roller Conveyor (1)



Logistics Transfer Roller & Chain C/V



RGV & Logistics Transfer Conveyor



Roller Bed



Pallet Transfer Lifter & C/V



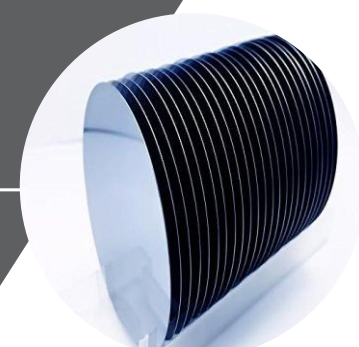
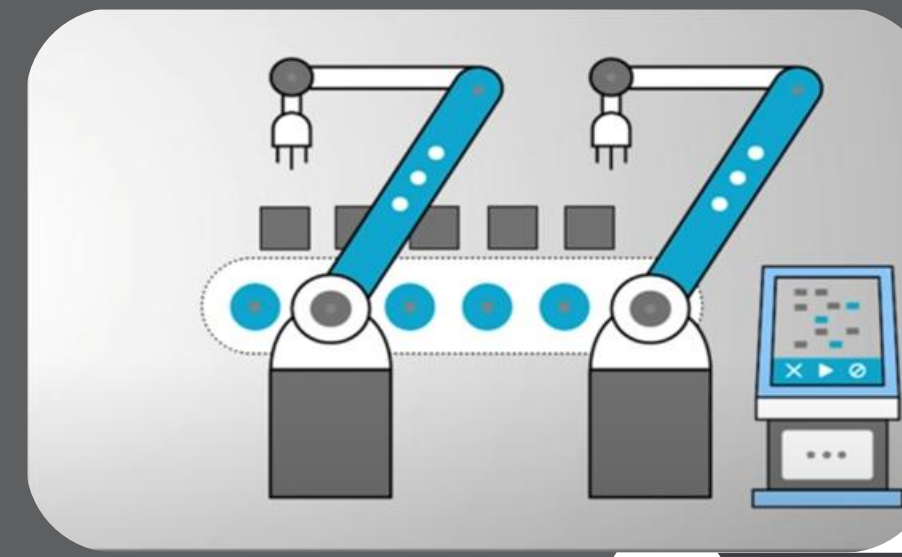
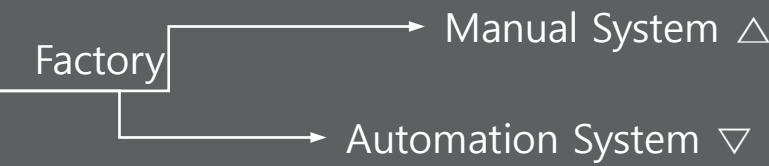
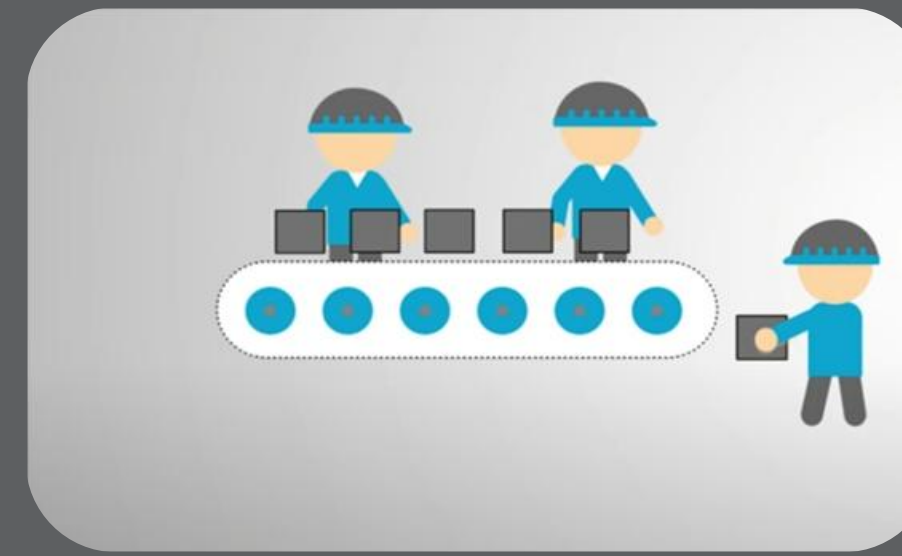
Drop Lifter



OHC (Over Head Conveyor)



RCM (Rear Chassis Module)

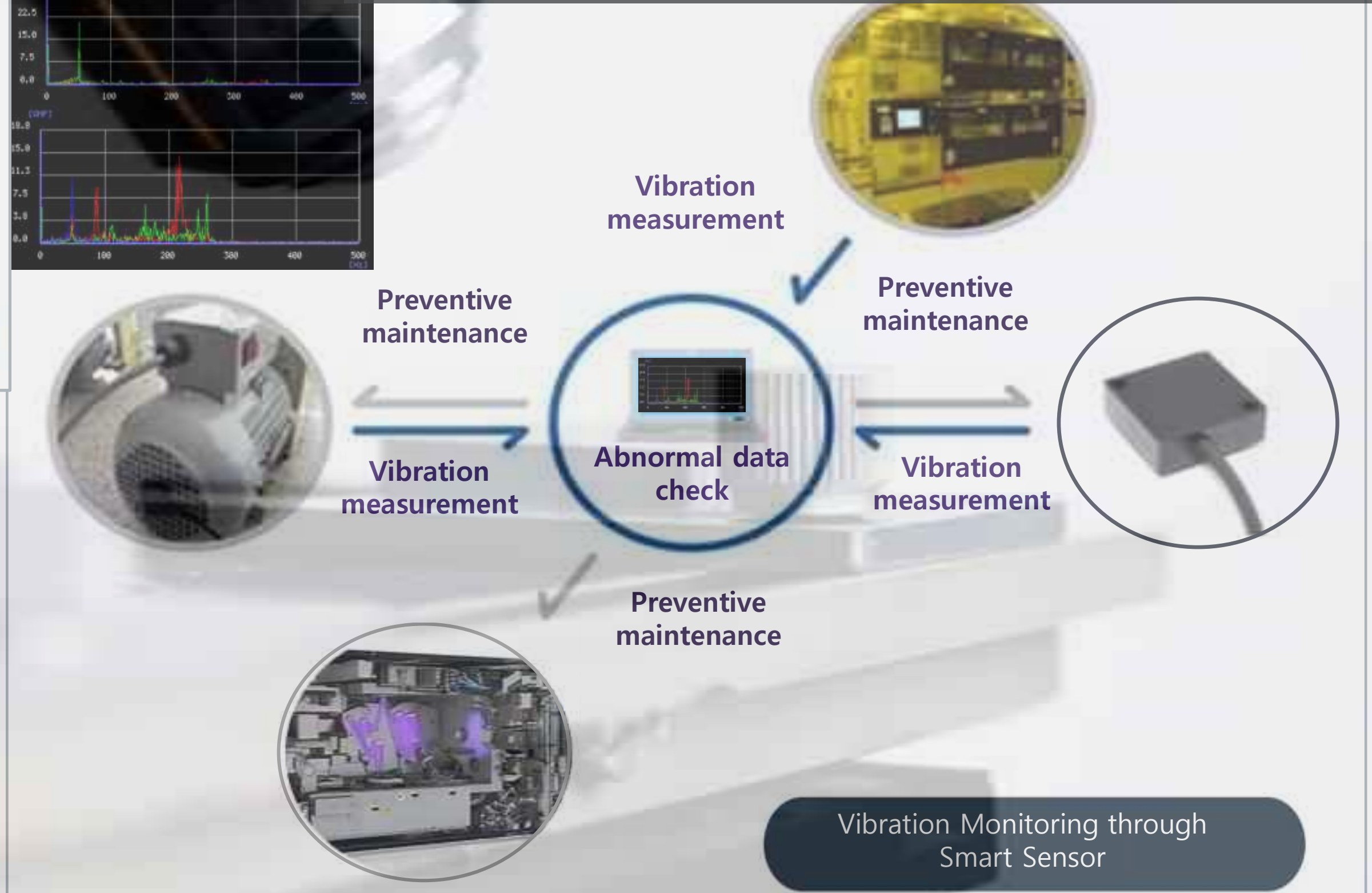
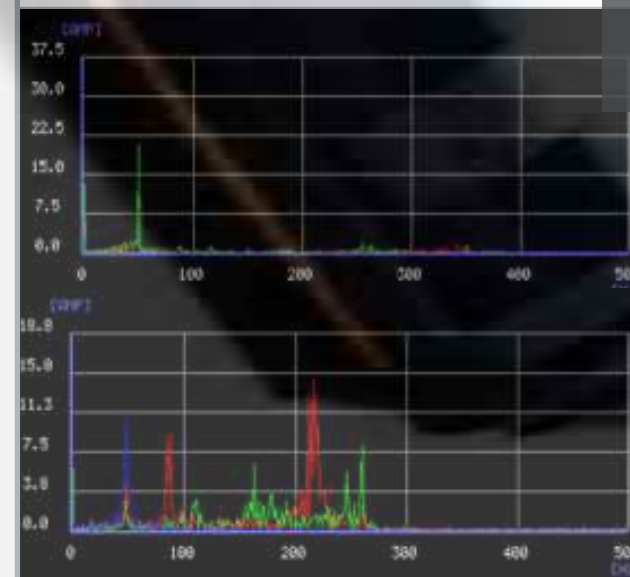






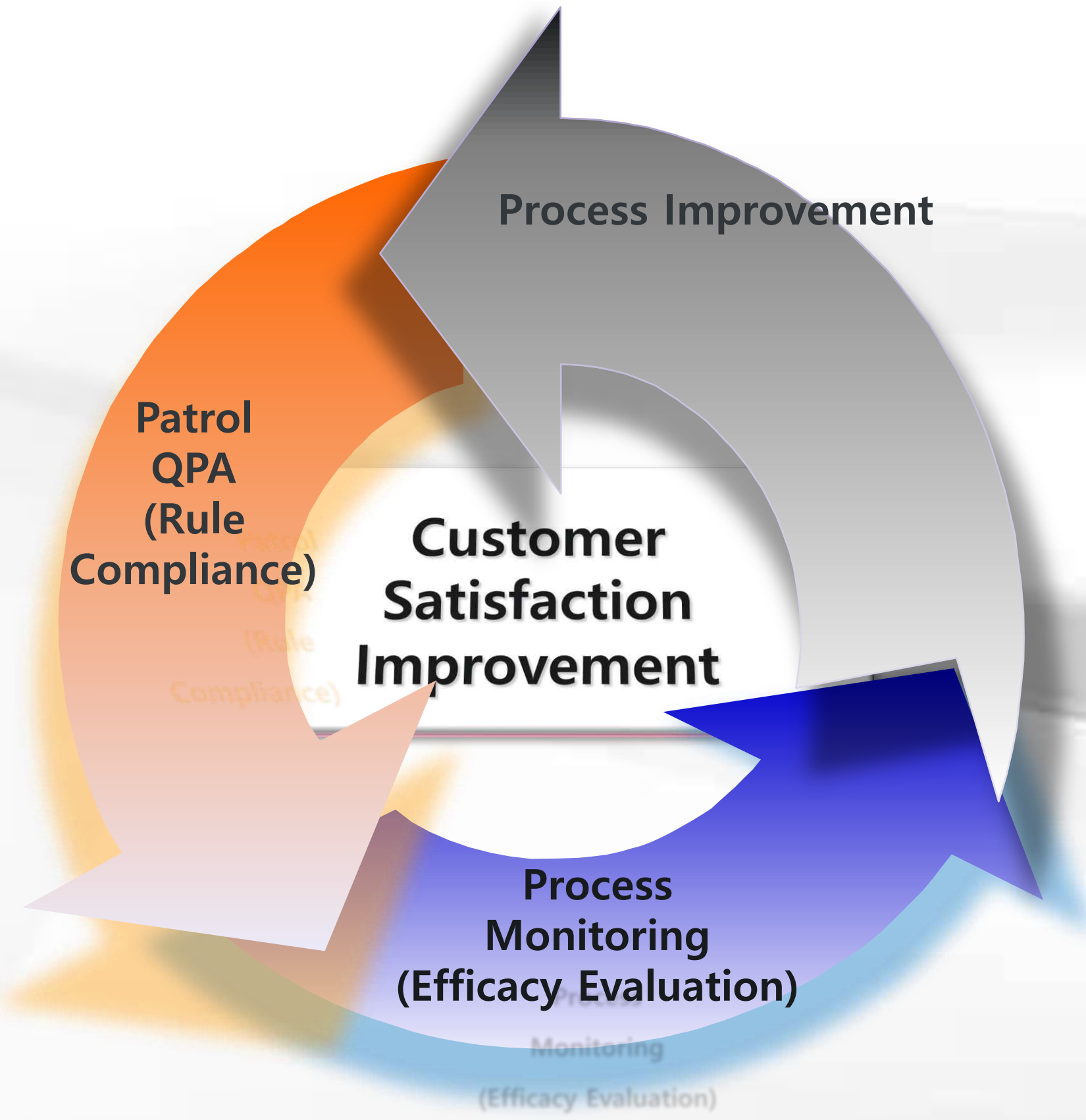
## Vibration Diagnosis

- Vibration data collection system with 3-axis acceleration smart vibration sensor
- Vibration data-based motor (or vacuum pump) status determination system
- Smart vibration sensor-based diagnosis, and securing soundness through prediction (failure, lifespan)

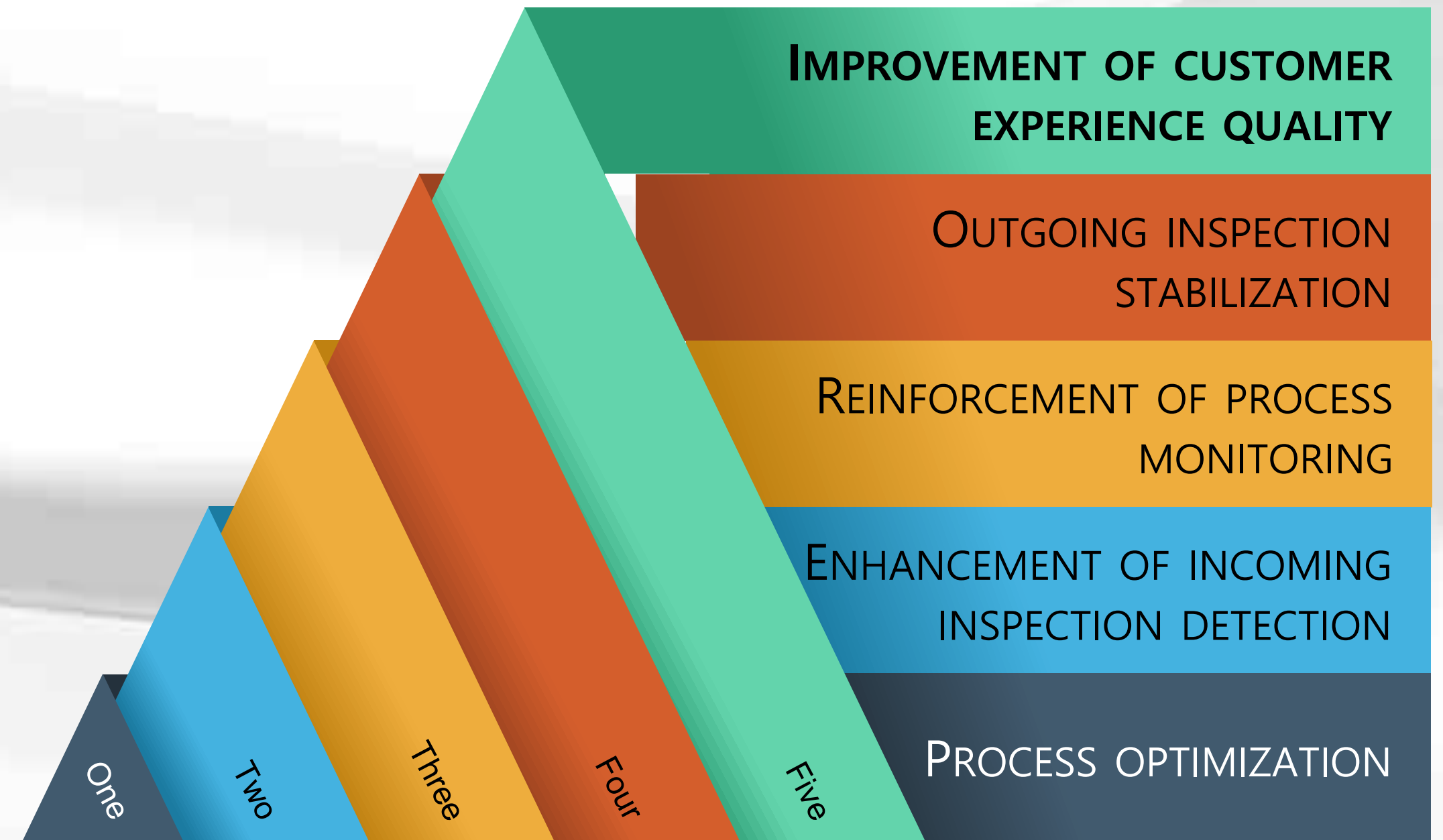




# Q.A



# Q.C





# 12. Company Facilities



SECTION	AREA	FACILITY 1	FACILITY 2	FACILITY 3	FACILITY 4	FACILITY 5
Site Area	1,913m <sup>2</sup> (580 pyeong)					
Building 1 <sup>st</sup> Floor	1,258m <sup>2</sup> (381 pyeong)	Clean Room (CLASS 100) 132m <sup>2</sup> (40 pyeong)	Clean Room (CLASS 100) 132m <sup>2</sup> (40 pyeong)	Clean Room (CLASS1,000) 248m <sup>2</sup> (75 pyeong)	Clean Room (CLASS1,000) 214m <sup>2</sup> (65 pyeong)	Parts Shop & Warehouse 99m <sup>2</sup> (30 pyeong)
		IGS Panel/Box Assembly	Gas Line Welding	Gas System & Gas Module Assembly	Equipment Assembly	Parts & Components Stock and Management
Building 2 <sup>nd</sup> Floor	1,258m <sup>2</sup> (381 pyeong)	Office	Conference Room 1	Conference Room 2	Parts Shop & Warehouse	Vacuum Shop



## Gas/Vac Manufacturing Line



Production Environment	100 class, @0.5 um ↑
Gasline	24.0°C ± 2 / 50% ± 5





**JIN SOLUTION CO., LTD.**

Road Name Address: 98-38, Dongtansandan 7-gil, Dongtan-  
myeon, Hwaseong-si, Gyeonggi-do, Republic of Korea

TEL: 031-371-8700

E-mail: [sales@jinsolution.co.kr](mailto:sales@jinsolution.co.kr)

<http://www.jinsolution.co.kr/>