

# **DX Strategy and Human Resource Development in Business Transformation**

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29<sup>th</sup> Jan. 2025

**Idemitsu Kosan Co.,Ltd.  
(IKC)**

# Contents

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- 1. Company Introduction of IKC**
- 2. DX Initiatives**
- 3. Introduction of Implemented Initiatives**
- 4. DX Human Resource Development**

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# **1. Company Introduction of IKC**

## **1-1. Company Overview**

## **1-2. Business Management Strategy**

# 1-1. Company Overview

## Business Domains



Petroleum



Basic chemicals



Functional materials



Power and renewable energy



Resources

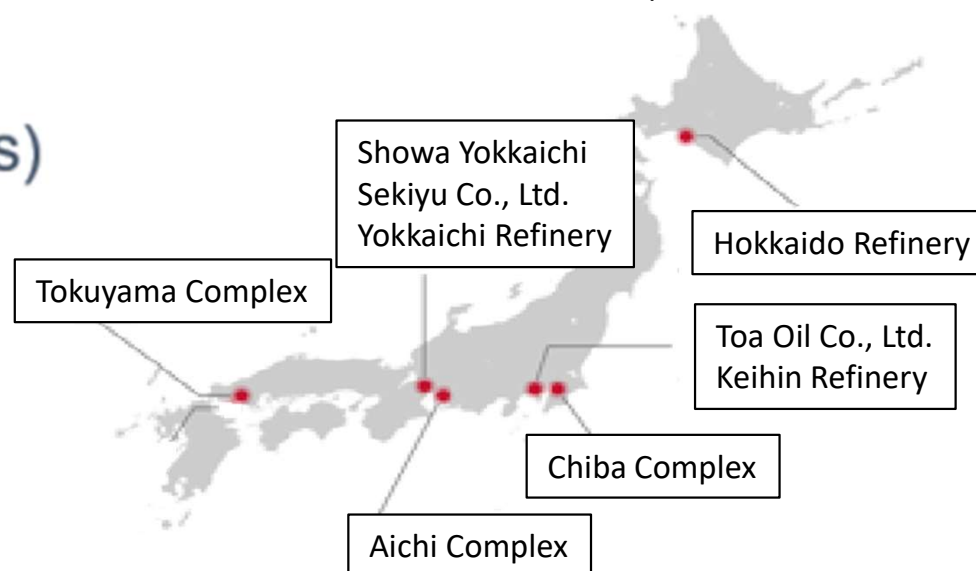
**Consolidated Net Sales : ¥ 8.7 trillion (\$58 billion) @¥150/\$**

**Operating + Equity Income : ¥ 363.0 billion (\$2.4 billion)**

(Data as of March 31, 2024)

6 Manufacturing Bases in Japan  
(Oil Refining & Petrochemical Plants)

CDU Capacity  
825,000 barrels/day  
Ethylene production capacity  
997,000 tons/year



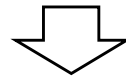
# 1-2. Business Management Strategy

## Our Business Environment Forecast for 2050

Energy system  
based on CN society

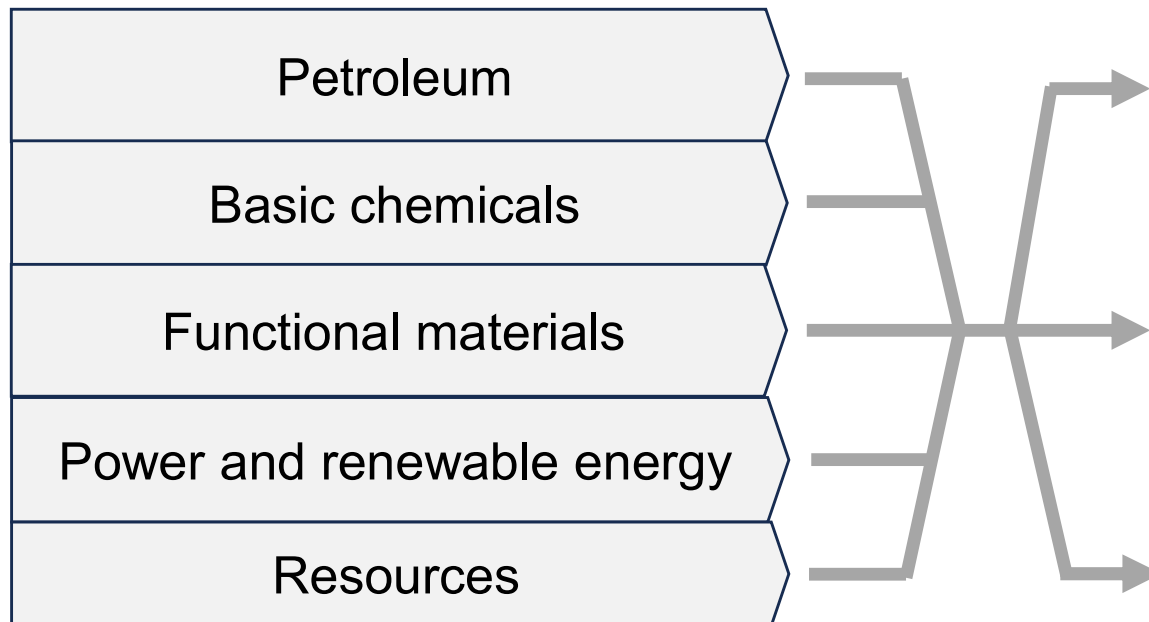
Entrenched  
circulatory society

Discontinuous  
technological  
innovation (with digital)



## Business transformation opportunities for Idemitsu

### Existing Businesses



### Three Business Domains towards 2050

- **Energy one step ahead**  
Carbon-free ammonia / hydrogen  
Synthetic fuel / chemicals  
CCUS
- **Diverse resource conservation/  
circulation solutions**  
Electrification solutions  
Bio / life solutions  
ICT solutions
- **Smart 'Yorozuya'**  
Diverse energy & mobility services

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## **2. DX Initiatives**

### **2-1. Corporate DX Strategy**

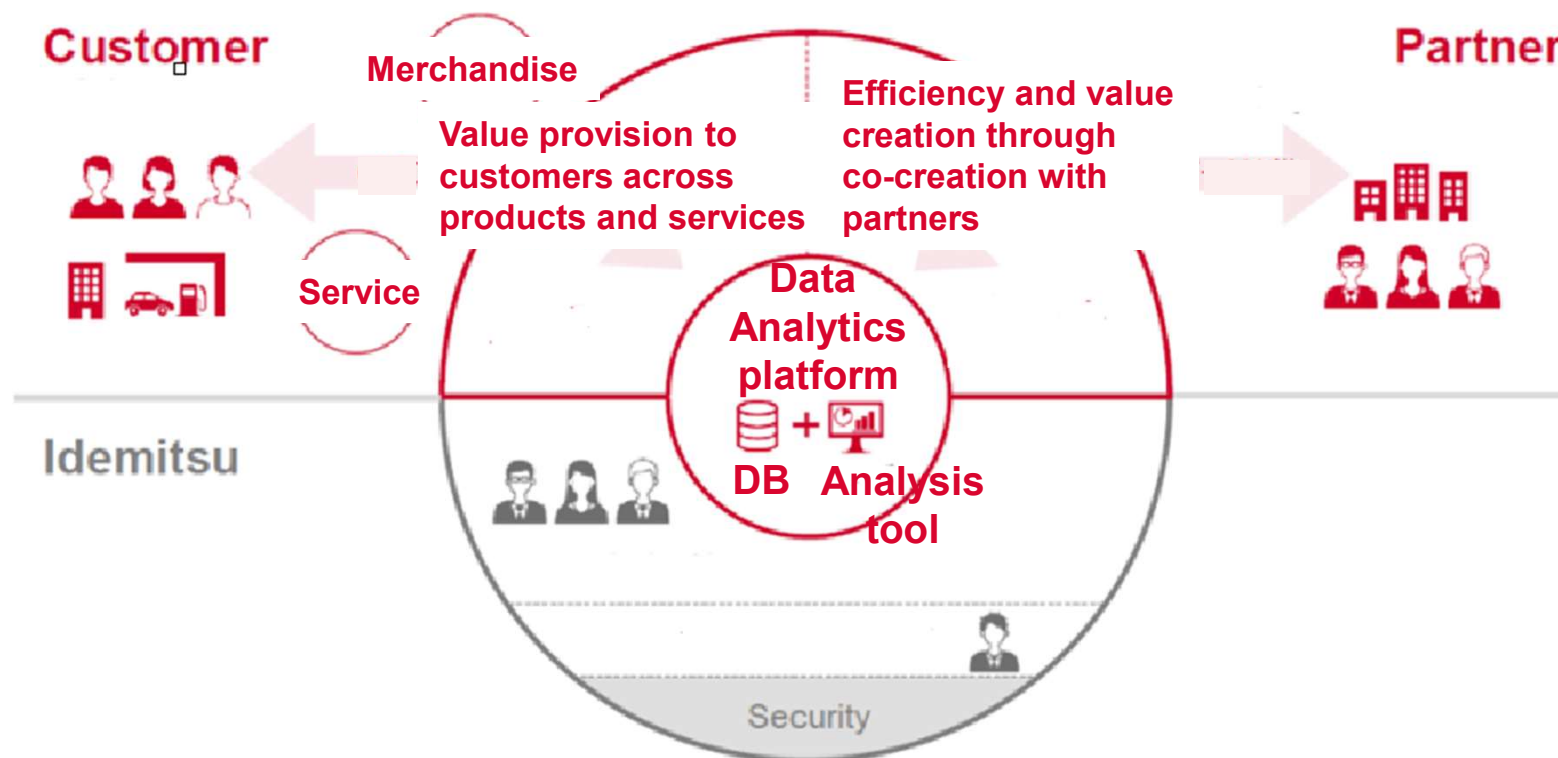
### **2-2. DX Strategy and Initiatives of the Manufacturing Technology Department**

# 2-1. Corporate DX Strategy

~Towards realizing a company that actively utilizes DX~

**Creating New Values**

Promotion of data utilization  
→ Accelerate future business development




**30% Increase in Productivity**

Simplification & digitization of business processes  
→ Creating new values


## 2-2. DX Strategy and Initiatives of the Manufacturing Technology Department

Aims to achieve in the existing core businesses

- Stabilizing operations and maintaining profitability
- Operational efficiency improvement

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- Organizing Smart Industrial Safety system
  - Digitalization of information
  - Streamlining field operations
  - Data-driven decision-making
  - Strengthening cyber security



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- Development of an Integrated Management System for TA
  - Enhancement of asset policy
  - Visualization of appropriate long-term maintenance planning
  - Business process reengineering and optimization

Efficiently executing each implementation item using DX technology



**Allocate the created added value (time, money) to business transformation**



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# **3. Introduction of Implemented Initiatives**

**3-1. Development of Virtual Integrated Database**

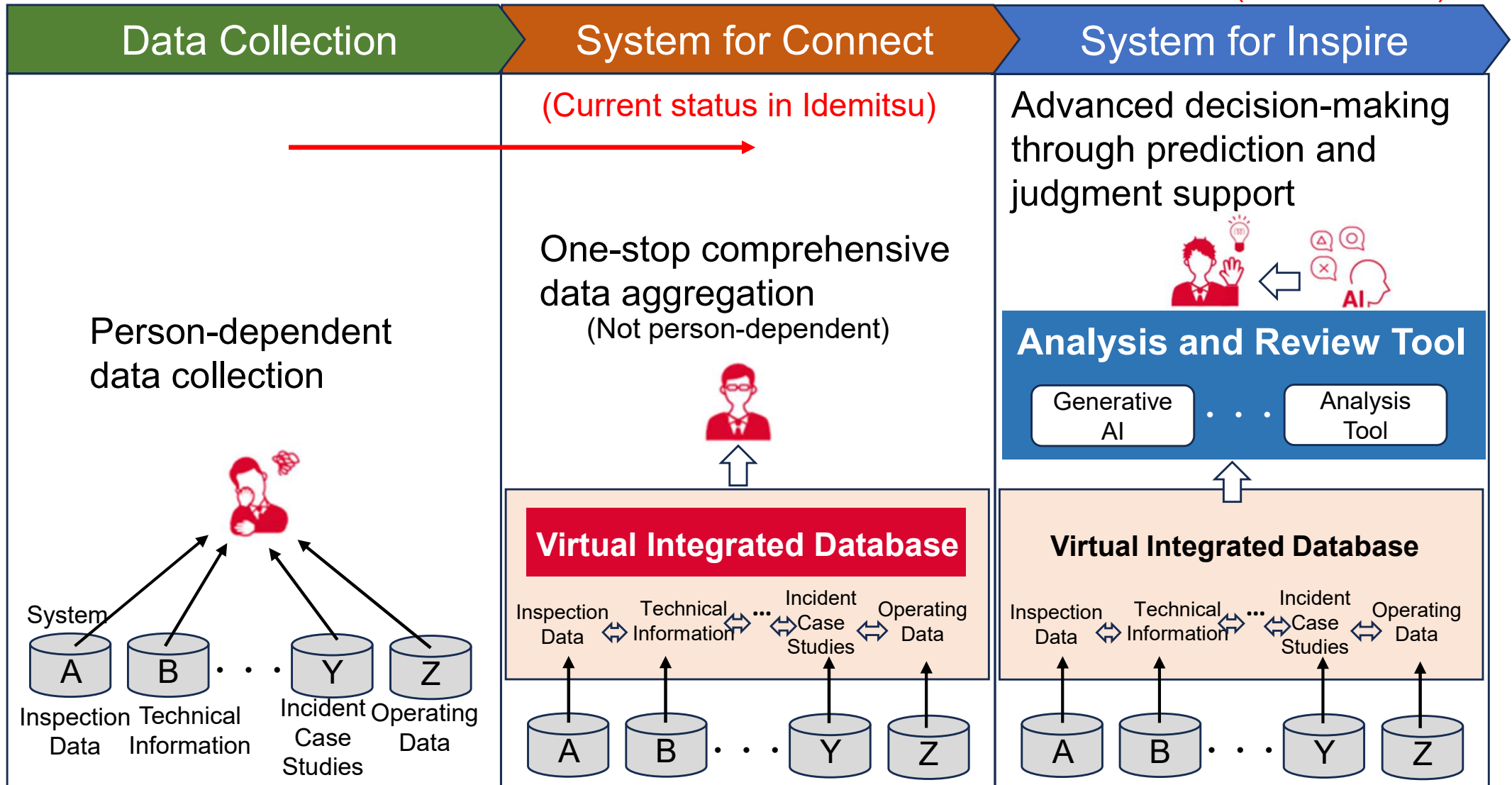
**3-2. Implementation Case of Cognite and Target Vision**

**3-3. Utilization of Digital Technology for Smart Industrial Safety**

# 3-1. Development of Virtual Integrated Database

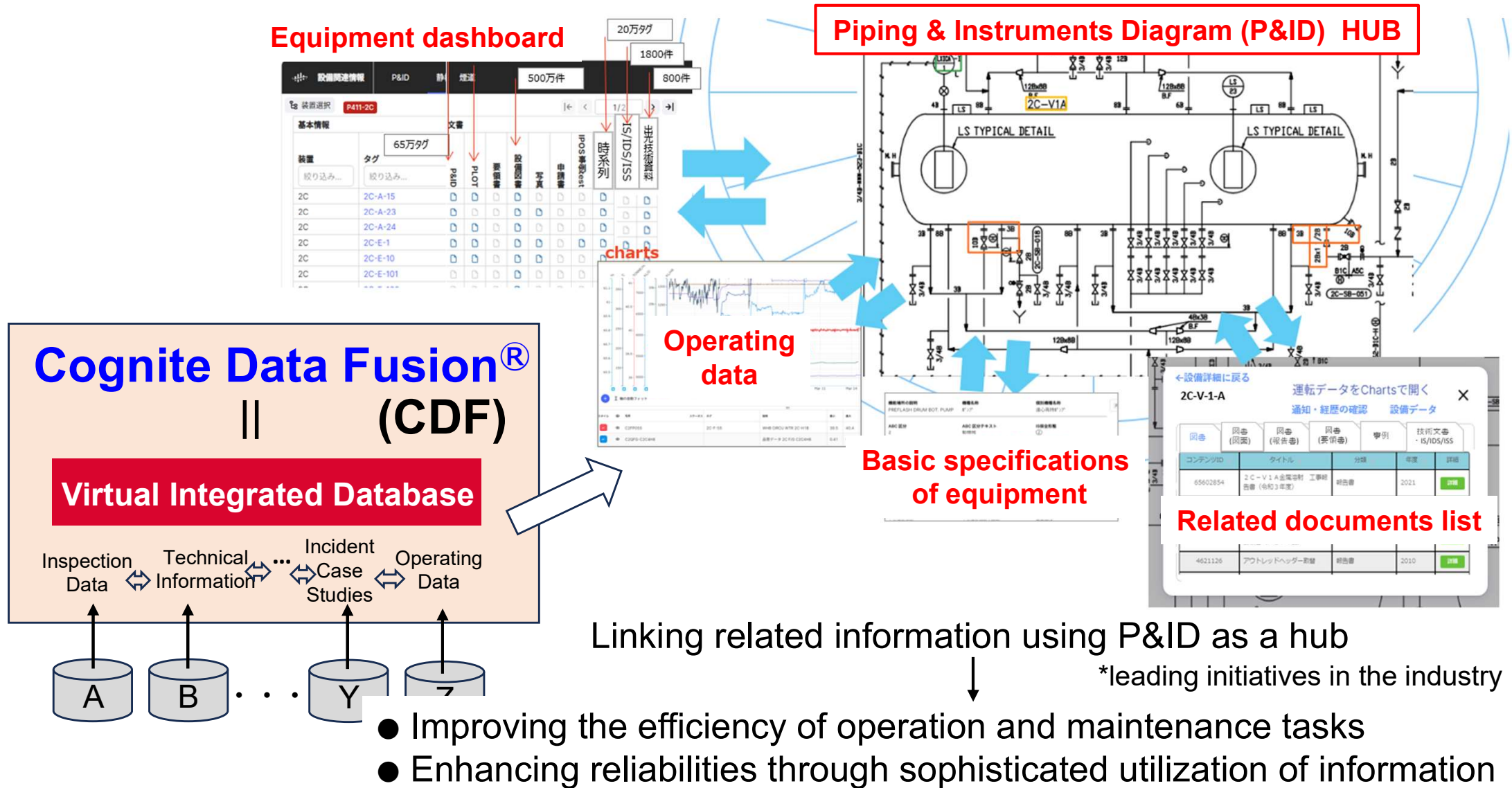
## Concept of Virtual Integrated Database

(Future Vision)



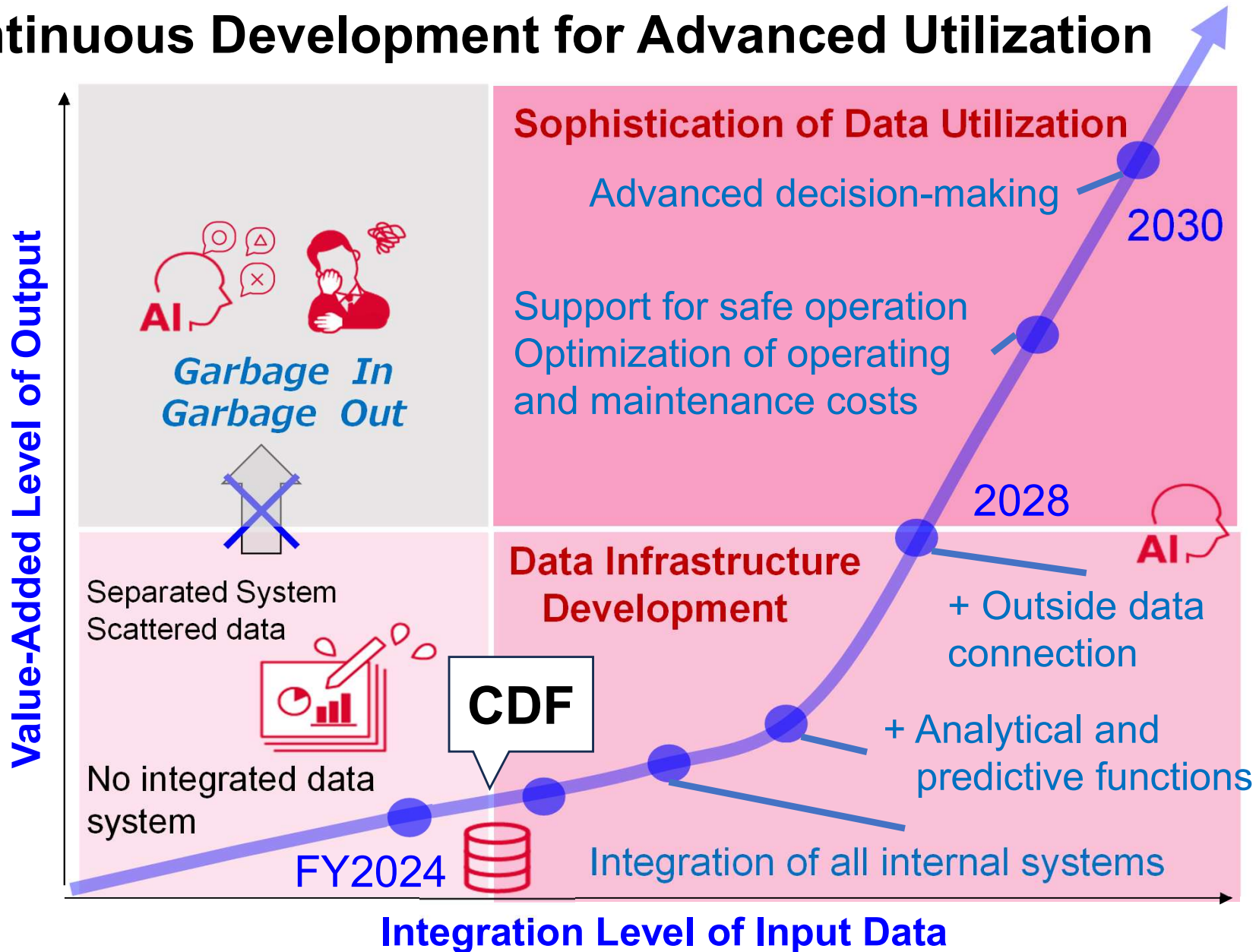
# 3-2. Implementation Case of Cognite and Target Vision

## Building an integrated database with CDF as the core



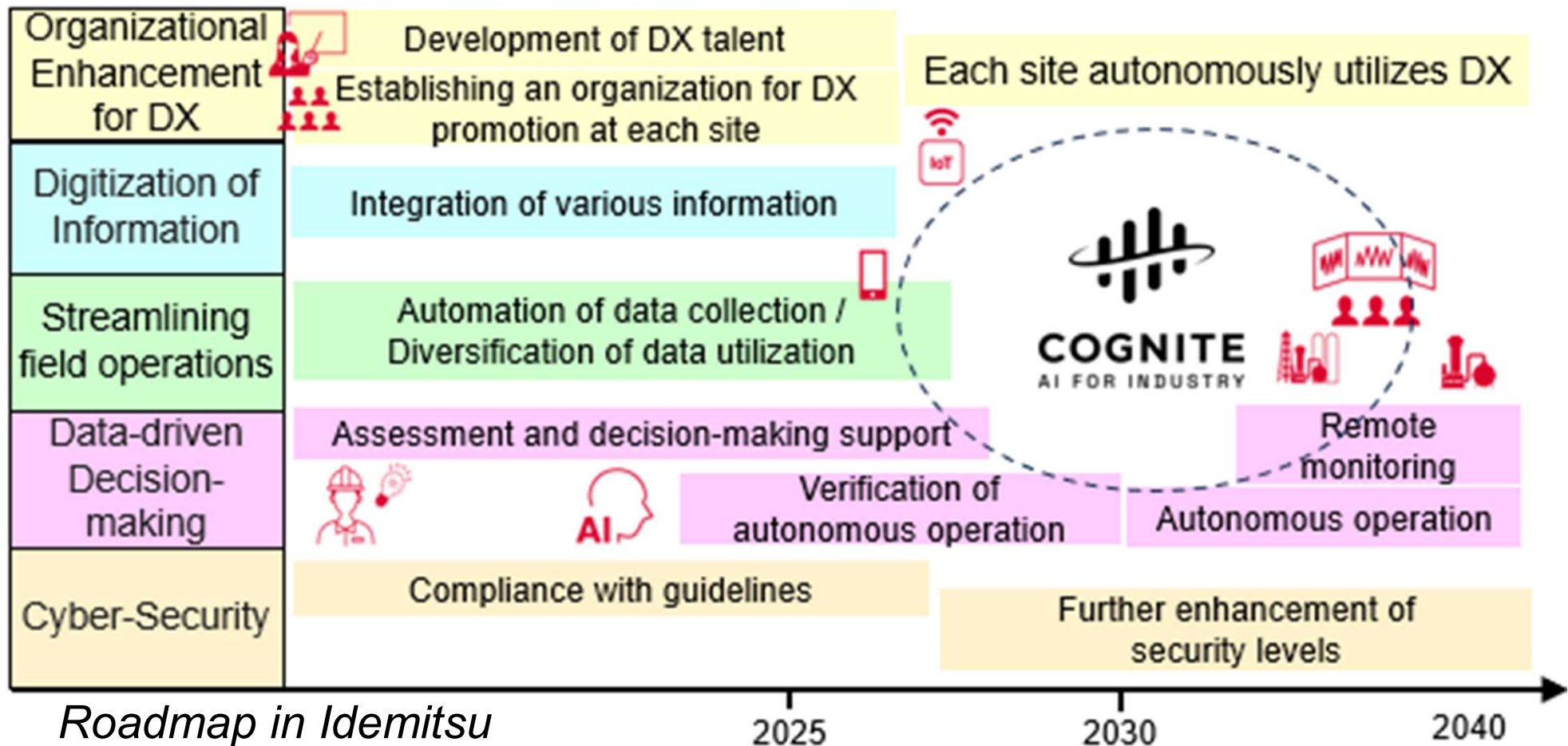
# 3-2. Implementation Case of Cognite and Target Vision

## Continuous Development for Advanced Utilization



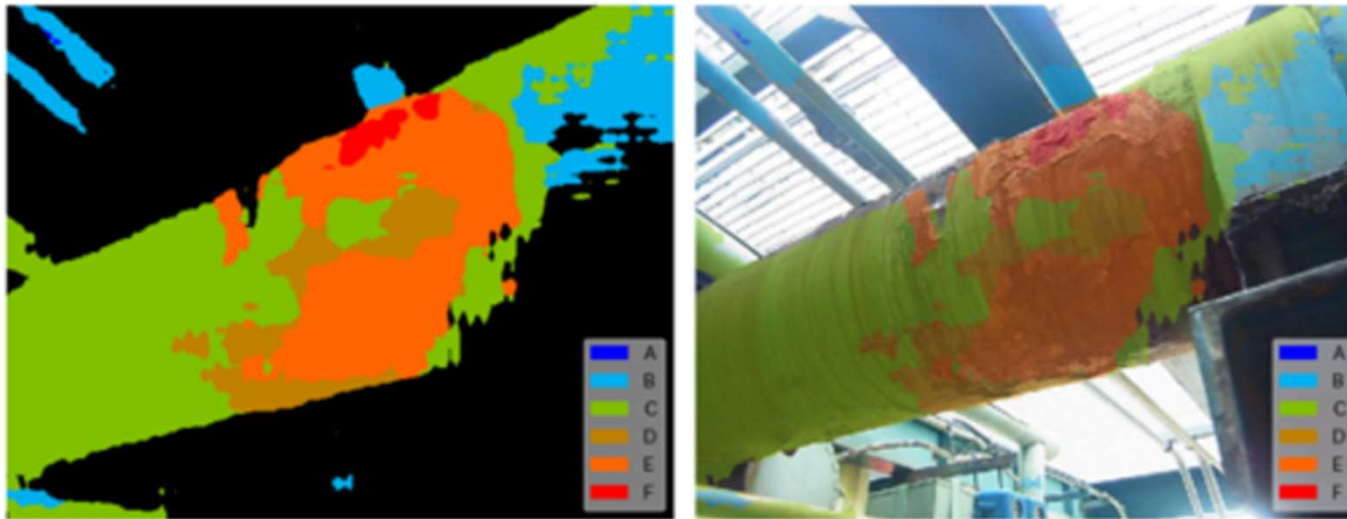
# 3-3. Utilization of Digital Technology for Smart Industrial Safety

**Smart Industrial Safety** : a concept proposed by the government as an initiative for industrial safety, aimed at ensuring the safety through collaboration between the public and private sectors, **leveraging advanced technologies such as AI and IoT to enhance the safety and efficiency**



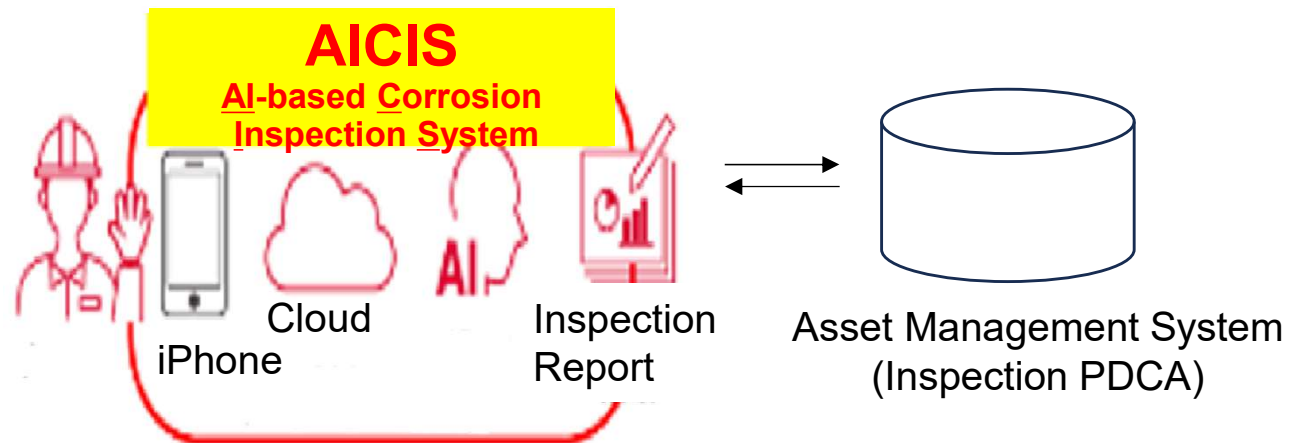
## 3-3. Utilization of Digital Technology for Smart Industrial Safety

### Assessment of External Corrosion Degradation Using Image Processing and AI Diagnosis



Diagnostic imaging – overlaid on photos with corrosion level assessment

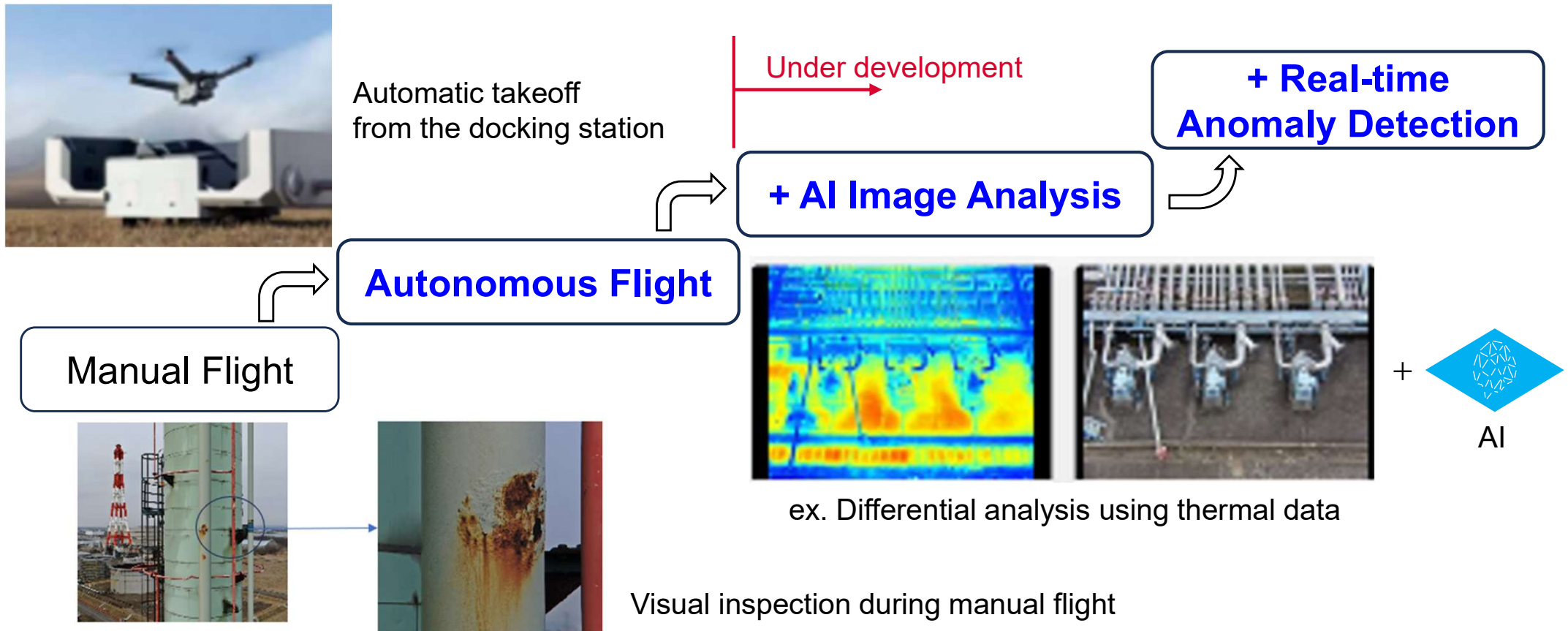
From degradation assessment to inspection record creation in a seamless process



# 3-3. Utilization of Digital Technology for Smart Industrial Safety

## Steps for Drone Utilization

- Fully autonomous drone operation by 2030
- Enhance productivity through improved operational methods
- Implement image analysis to reduce human oversight during inspections
- Improve plant operation reliability



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# 4. DX Human Resource Development



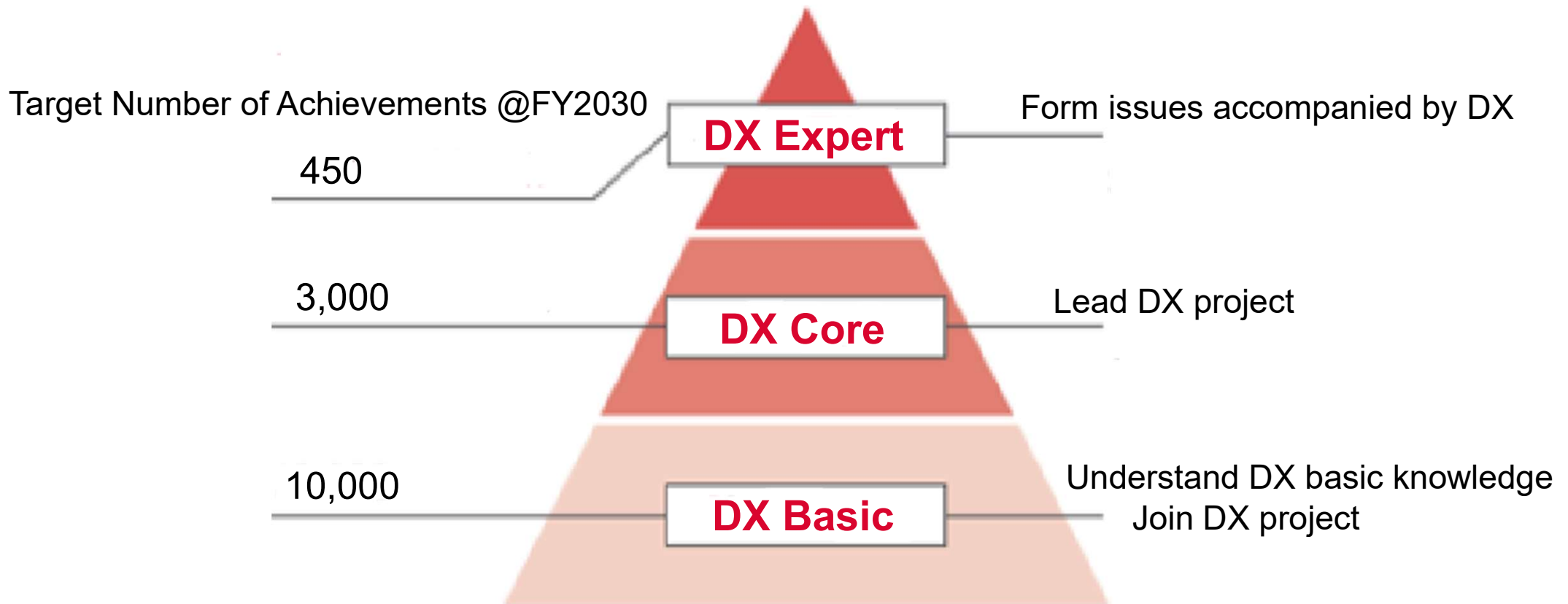
# 4. DX Human Resource Development

## Corporate Challenges :

### Employee Development of “Human Resources Supporting DX”

Step-by-Step development programs to acquire DX knowledge and skills systematically

- e-Learning
- Hands-on training
- Project OJD



Consolidated Number of Employees : 14,000 as of March 31, 2024

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**Thank you for your attention**