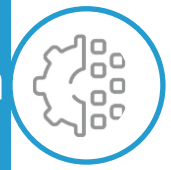
NEXT DNA

㈜넥스트디앤에이 회사 소개서

Data

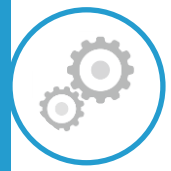
NEXT DNA

Digital Transformation



- Digital Twin Technology based on RAMI 4.0(AAS)
- Data Analysis, Machine Learning, AI
- IIoT, Predictive Maintenance, Plug & Produce

AAS Based PDA

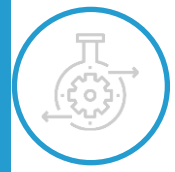


- AAS (Asset Administration Shell), AASX, CDD, Ecl@ss
- PDA (Process Data Acquisition), APROL, OPC UA
- Data Storage based on AAS, Edge, Cloud

Digital Factory

- Digital Factory based on AAS
- Smart Factory Level 1 ~ 5 (KOSMO)
- Solution for Brownfield

AAS R&D



- AAS Demo System
- AAS Application
- AAS Testbed

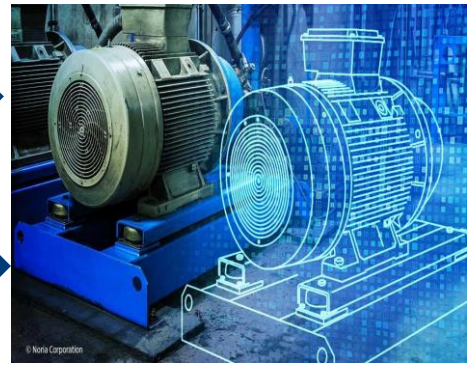
Digital Transformation

디지털 변환

OPC UA, AAS

실시간 연결

OPC UA, TSN



Physical Factory

Digitalized Factory

Data Acquisition

- RAMI 4.0(AAS)
- Sensor, Robot, Process Data
- OPC UA, TSN, 5G
- Real Time Data Acquisition
- Edge, Cloud, IT

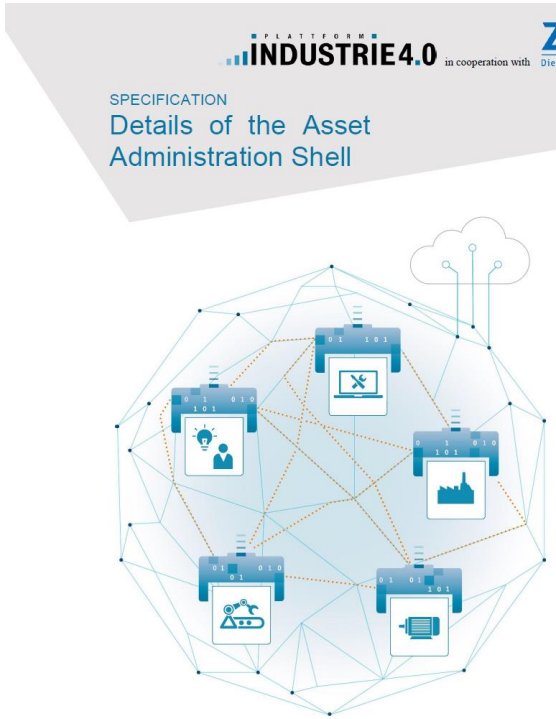
Data Analysis

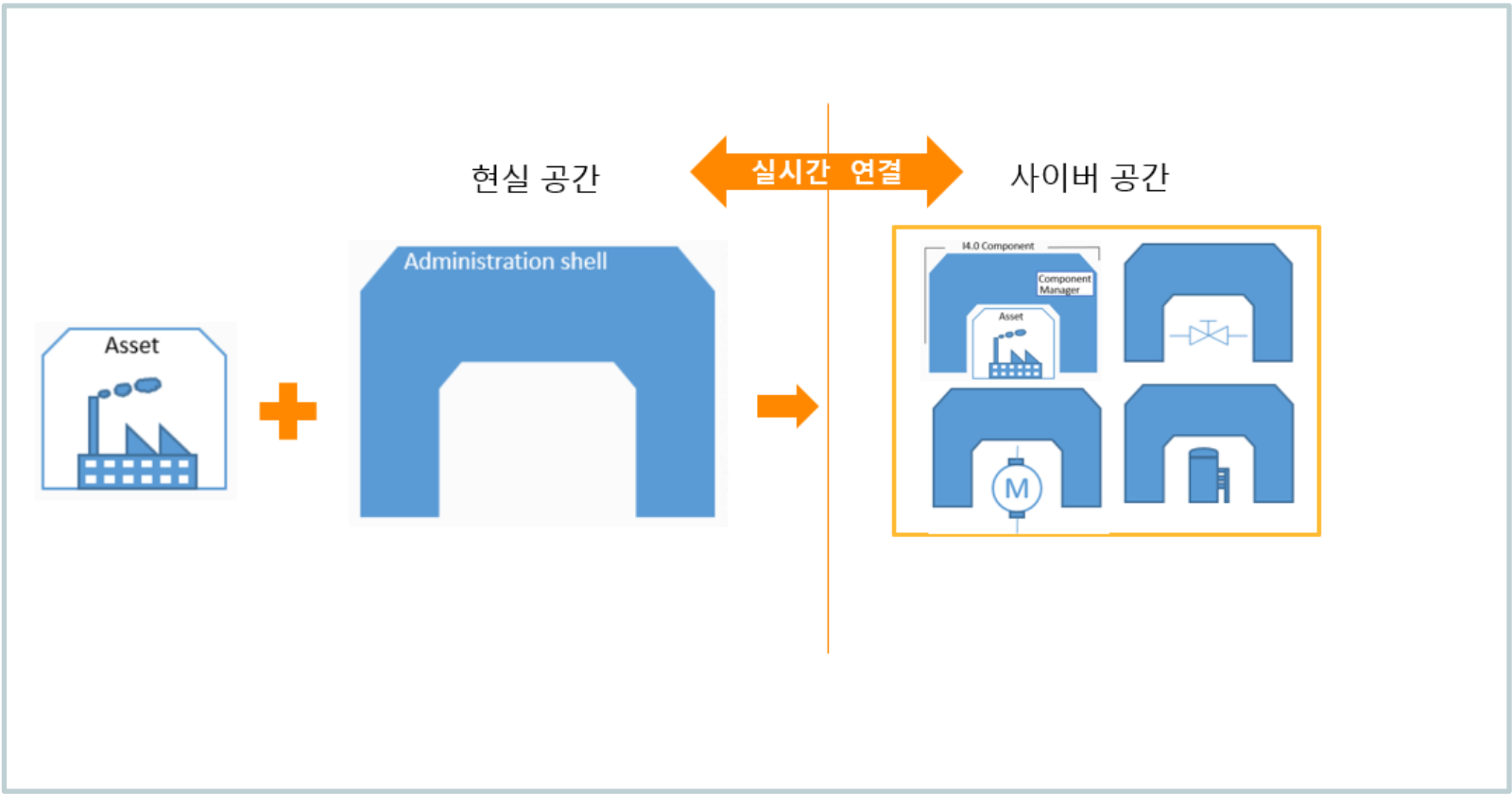
- AAS based Digital Twin
- Machine Learning
- Artificial Intelligence
- Big Data
- Industrial Platform

Data Services

- Predictive Maintenance
- Applications, e.g. Plug & Produce
- Overall Equipment Efficiency
- Industrial IoT
- 3D, VR, AR

AAS (Asset Administration Shell)





Federal Ministry for Economic Affairs and Energy

Federal Ministry of Education and Research

중소벤처기업부

KOSMO 스마트제조혁신추진단

Standardization

PLCopen motion control

<AutomationML/>
The Glue for Seamless Automation Engineering

MQTT.ORG

OPC UA

OPC UA OVER TSN

IEEE
Advancing Technology for Humanity

Edge Computing CONSORTIUM

IEC

industrial internet CONSORTIUM

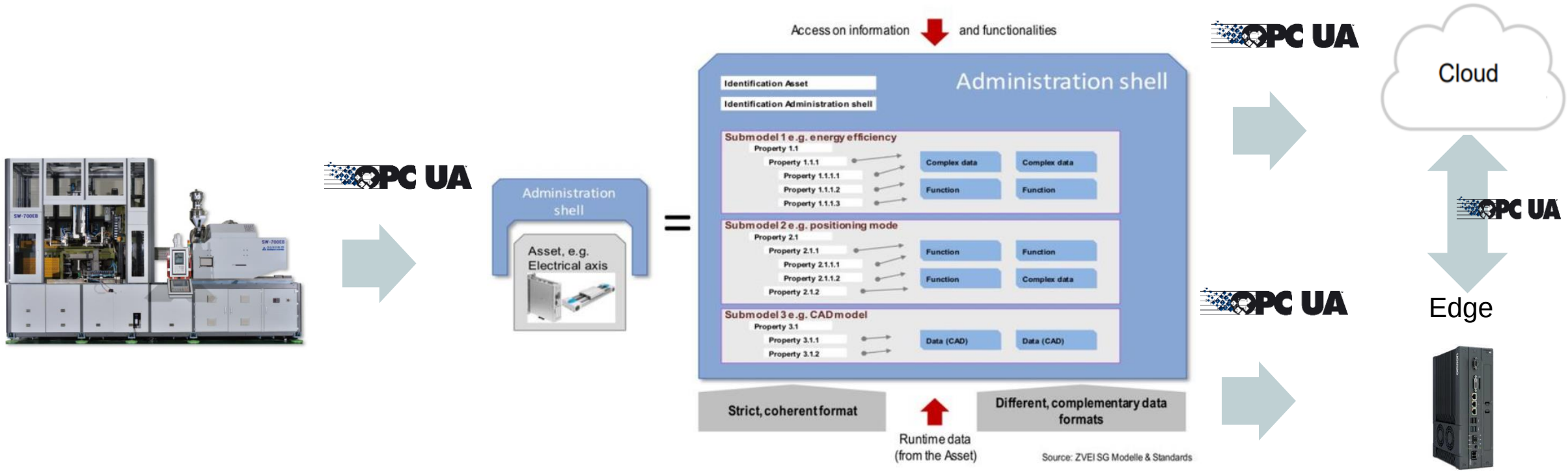
PLATTFORM INDUSTRIE 4.0

Standardization

AAS Based PDA

AAS (RAMI 4.0)

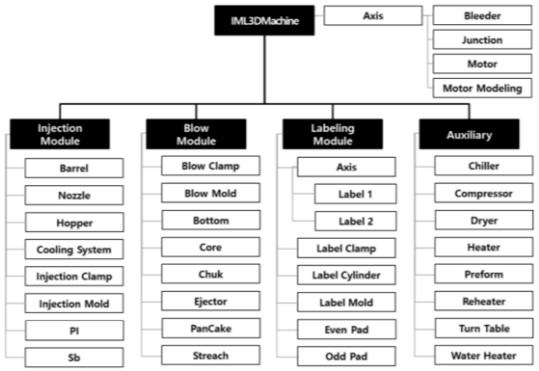
- Virtual representation of all the information and functionalities of an asset.
- Provides a standardized communication interface for information exchange.



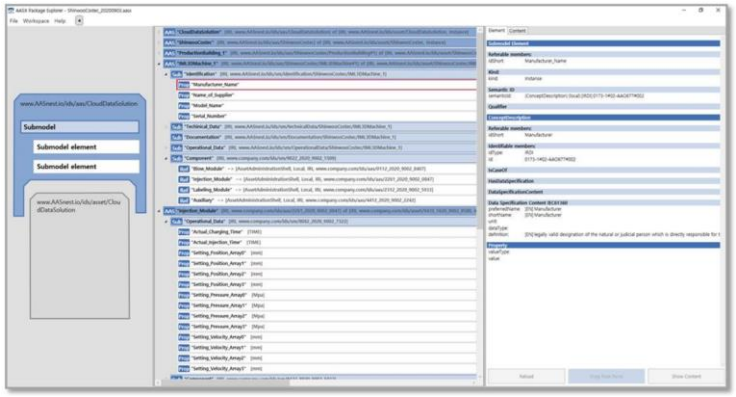
Digital Factory

AAS 기반 제조 데이터 수집 저장 체계 구축 (KOSMO 과제_신우코스텍㈜)

기계에 대한 KPI 정리



KPI 별 AAS 화 적용

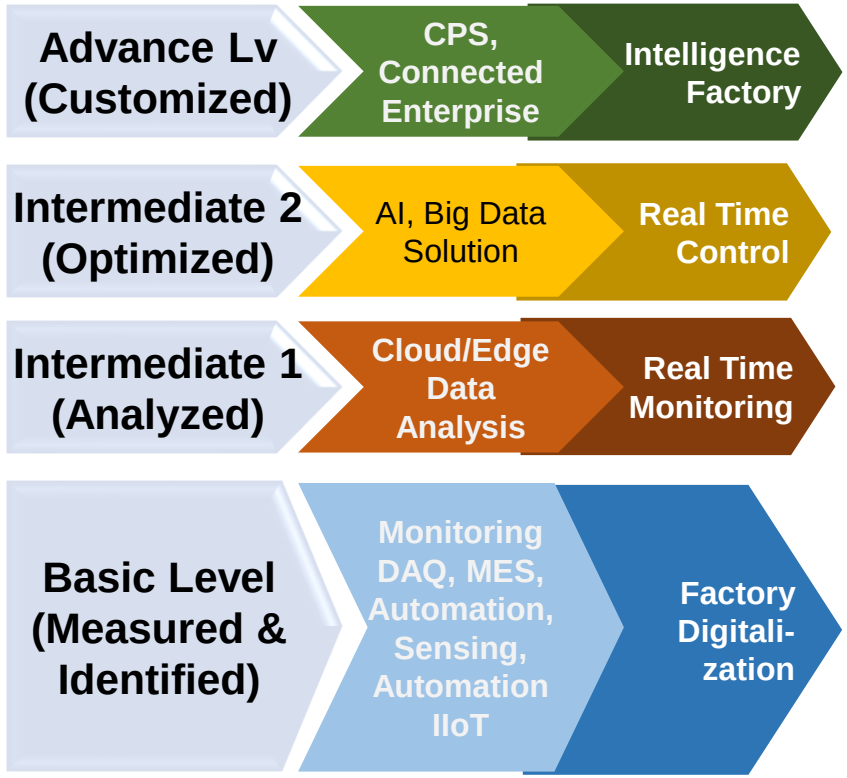


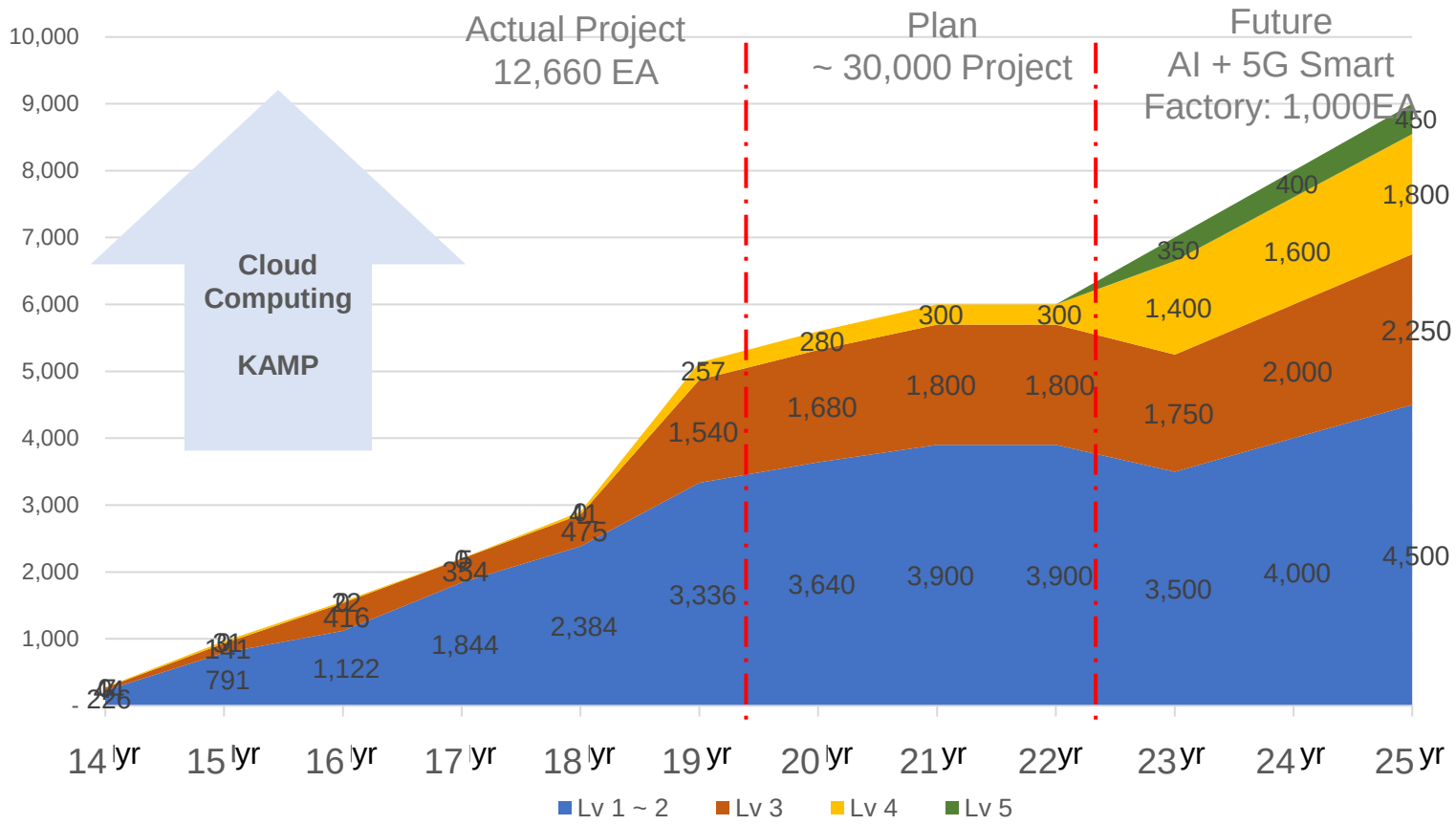
3D를 이용한 Digital Twin 적용

KPI: Key Performance Indicator

KOSMO Smart Factory Implementation Plan

- Smart factory maturity model with 4 levels, Basic level is for factory digitalization, Data driven level from Intermediate 1
- Actual 12,660 Project by 2019, 80% of the project implemented MES, ERP, and Automation System.





Creation of economic value by storing manufacturing data on a cloud computing platform.

Source : 스마트팩토리 추진단

AAS R&D

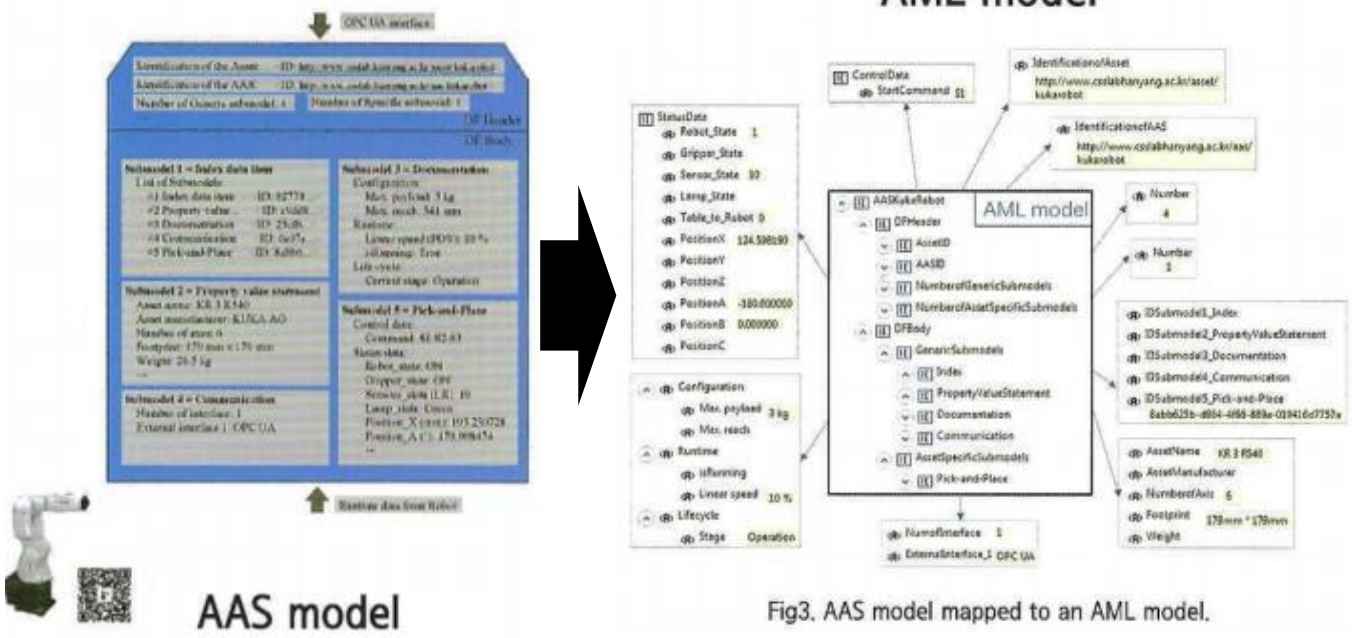
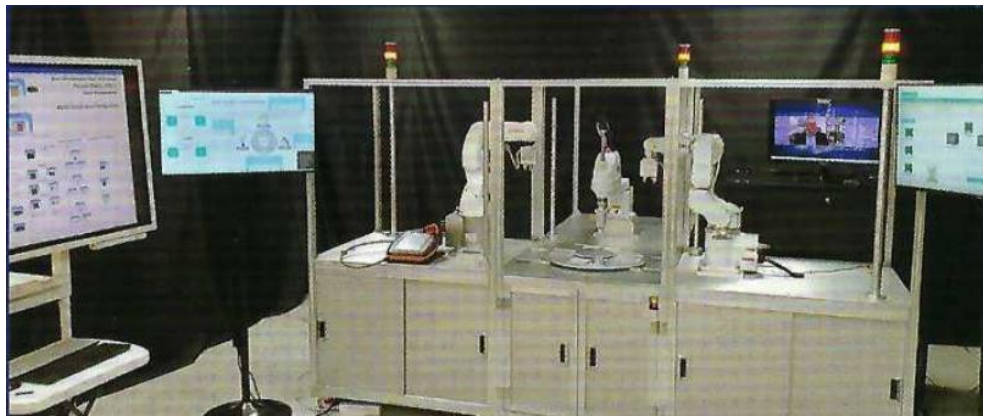
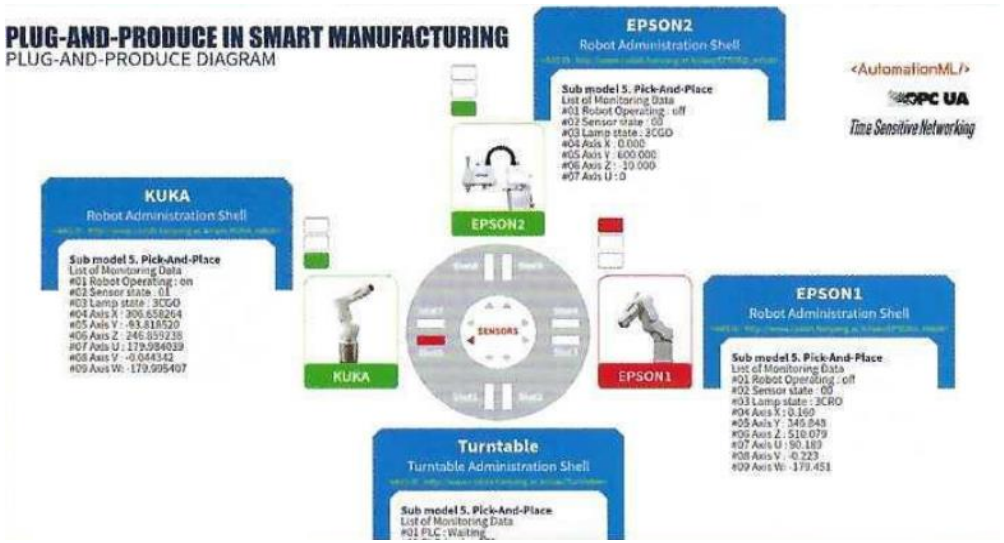


Fig3. AAS model mapped to an AML model.



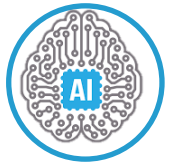


3 Robots AAS 구축 과정 및 적용

Service & Research

NEXT DNA

- AI R&D
- Engineering Services
- RPA

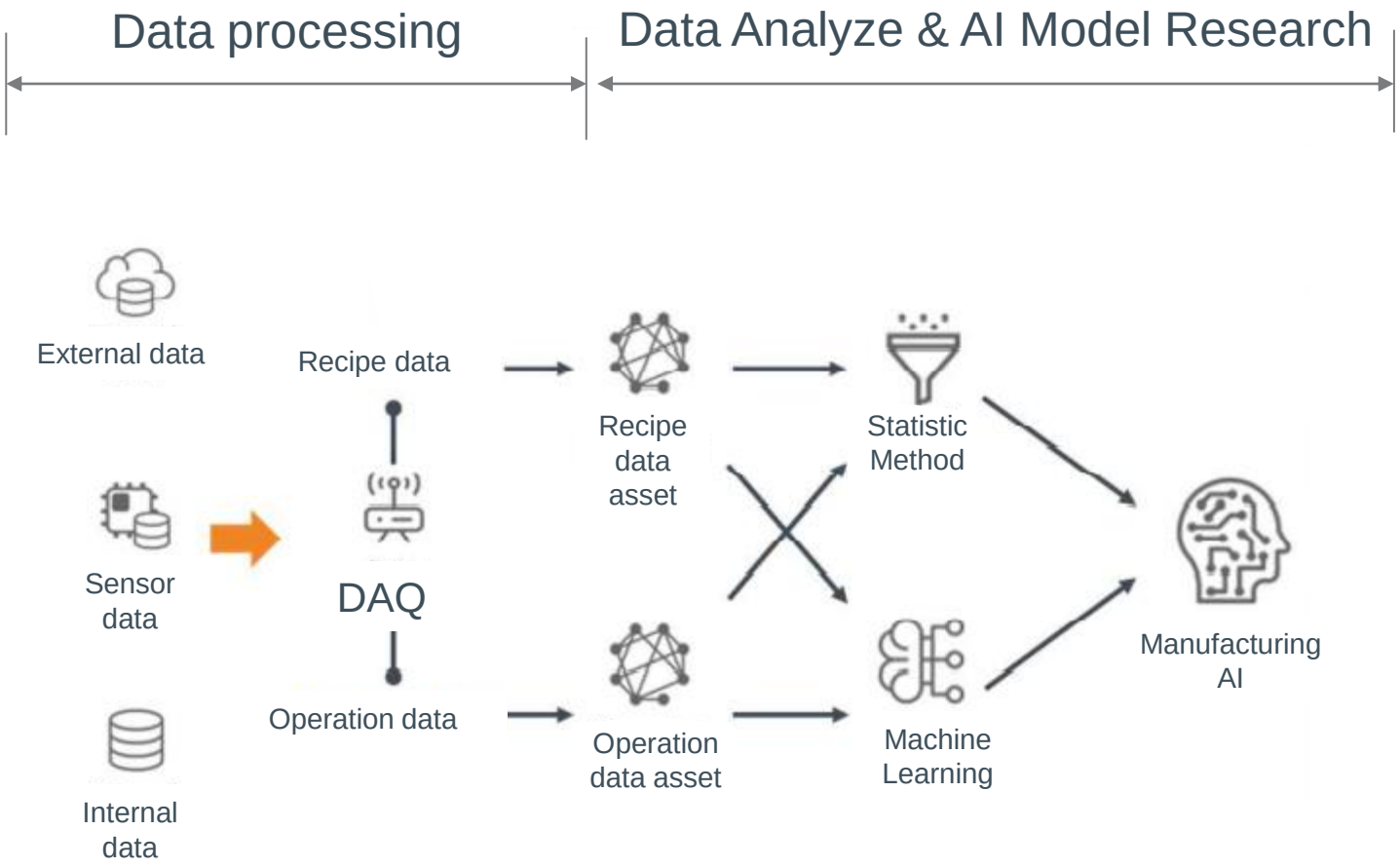


- AI Solution Research and Development

- Trak Engineering
- AGV Engineering
- AAS Conversion & Validation
- Engineering in Automation and Robots

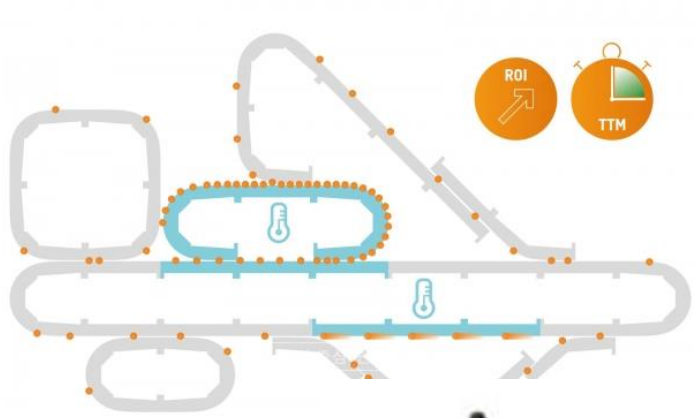
- RPA Consulting & Development
- AI + RPA(IA) fusion Research & Development

AI R&D


Data processing
Data Analyze & AI Model Research
External data
Sensor data
Internal data
Recipe data
DAQ
Operation data
Recipe data asset
Operation data asset
Statistic Method
Machine Learning
Manufacturing AI

Engineering Services

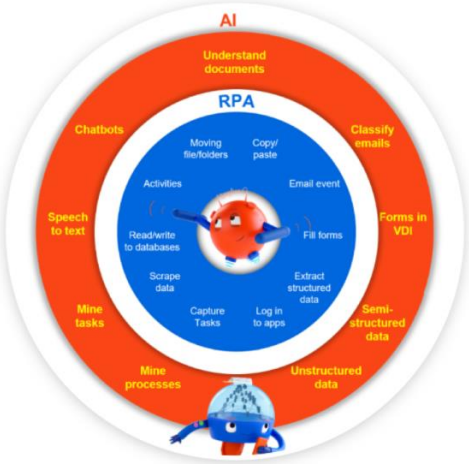
Trak & AGV Engineering

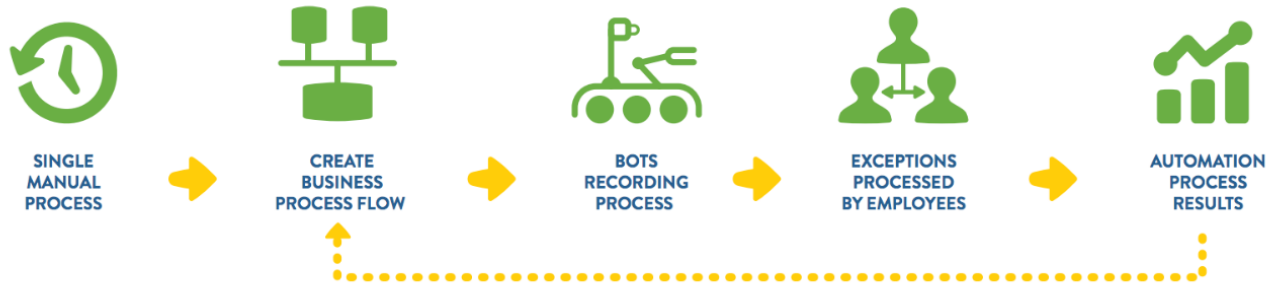


Discrete Automation

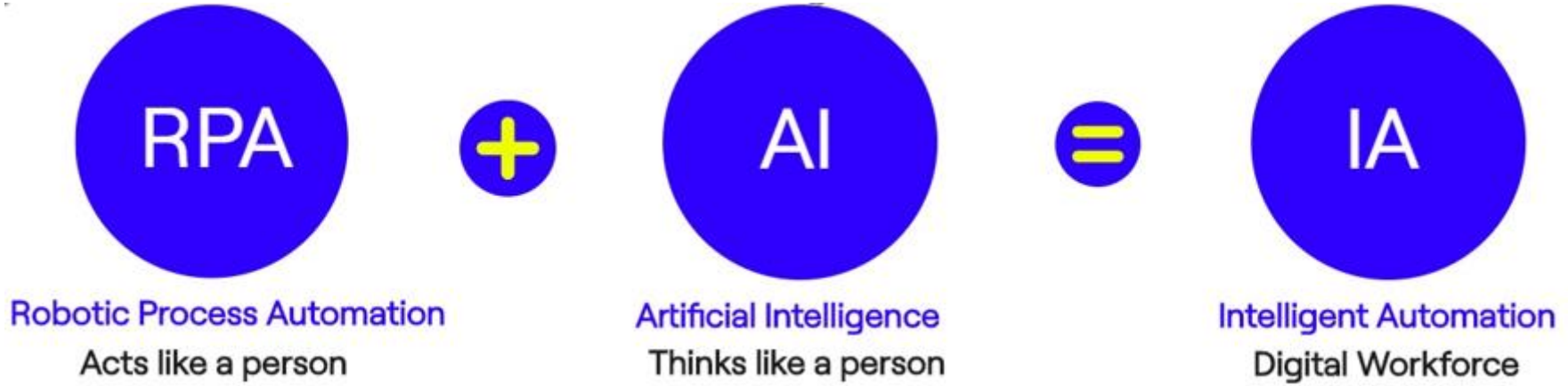
APROL

RPA





RPA Process



Thank You Very Much


Your Partner for NEXT DNA