



EFFICIENCY THROUGH CONNECTIVITY

PT Kalbe Morinaga Indonesia



SMART FACTORY

Program





MANUFACTURING FACILITY

Building
(Land)



26,828 m²
(52,000 m²)

Production
capacity



37,200
ton/year

Warehouse
capacity



8,400 pallet

Number of
Production Line



5 lines

Spray Drier

Powder Handling

Packing

Warehouse

LINE OF PRODUCT



PT. KALBE MORINAGA INDONESIA
Kawasan Industri Indotaisei Sektor 1A Blok Q,
Cikampek 41373, Karawang - Jawa Barat
Telp (62-264) 350680
Fax (62-264) 350679





Provider of an integrated healthcare solution
through its 4 business divisions:



KALBE established
in 1966



**Prescription Pharmaceutical
Division (23% contribution)**

PT Kalbe Farma Tbk
PT Hexpharm Jaya
Laboratories
PT Dankos Farma
PT Finusolprima
Kalbe Vision Pte Ltd
Innogene Kalbiotech Pte Ltd



**Nutritionals Division
(30% contribution)**

PT Sanghiang Perkasa
([Kalbe Nutritionals](#))
PT Kalbe Morinaga
Indonesia
PT Kalbe Milko Indonesia



**Consumer Health Division
(17% contribution)**

Kalbe OTC
PT Bintang Toedjoe
PT SakaFarma Lab
PT Hale International
Kalbe International Pte Ltd

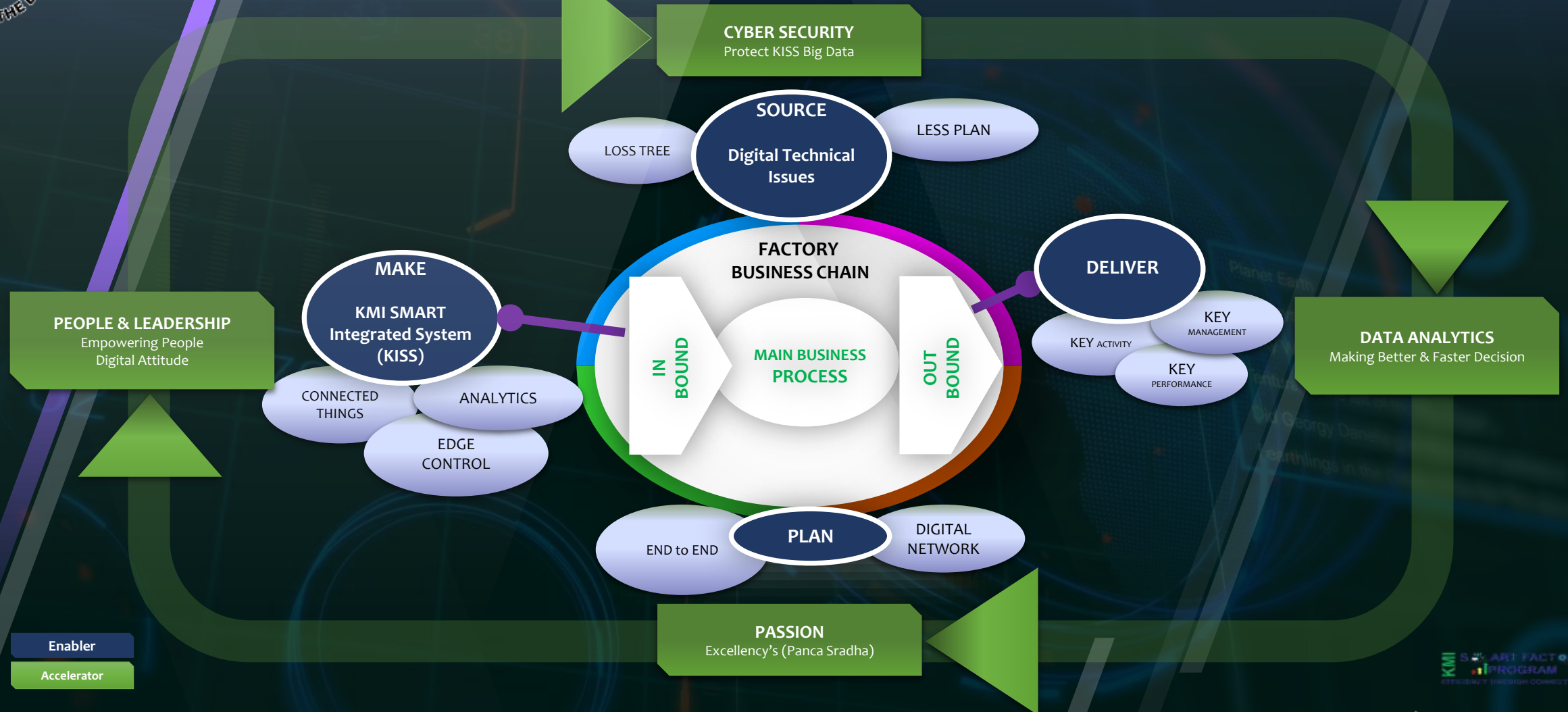


**Distribution and Logistics
Division (30% contribution)**

PT Enseval Putra
Megatrading Tbk
PT Enseval Medika Prima
PT Milenia Dharma Insani
PT Medika Komunika
Teknologi (KlikDokter.com, Kli
k-Apotek.com)
PT Karsa Lintas
Buwana (KalbeStore.com)
PT Cakra Radha Mustika



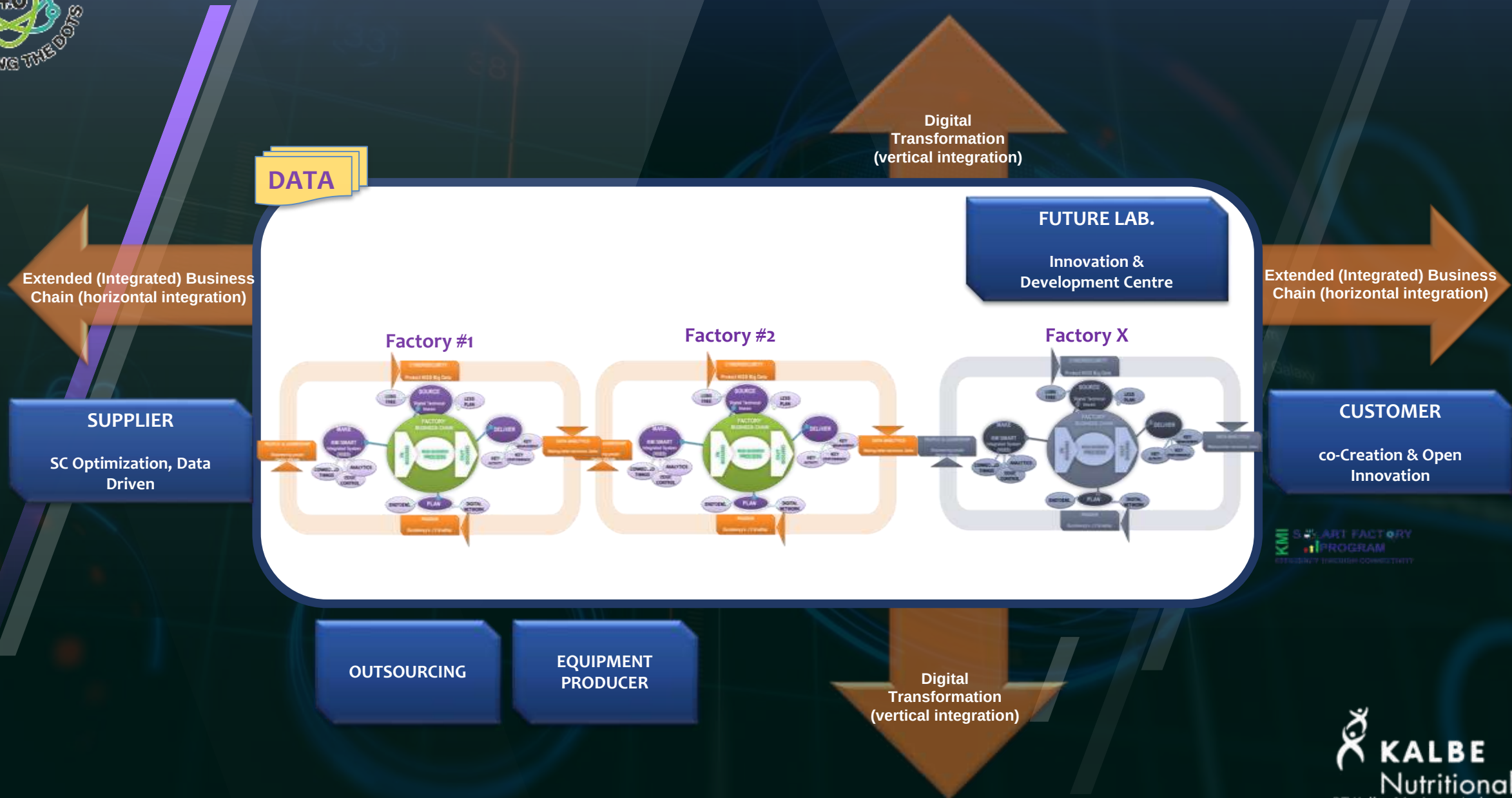
SMART FACTORY ROADMAP



KMI SMART FACTORY PROGRAM
EFFICIENCY INNOVATION CONNECTIVITY

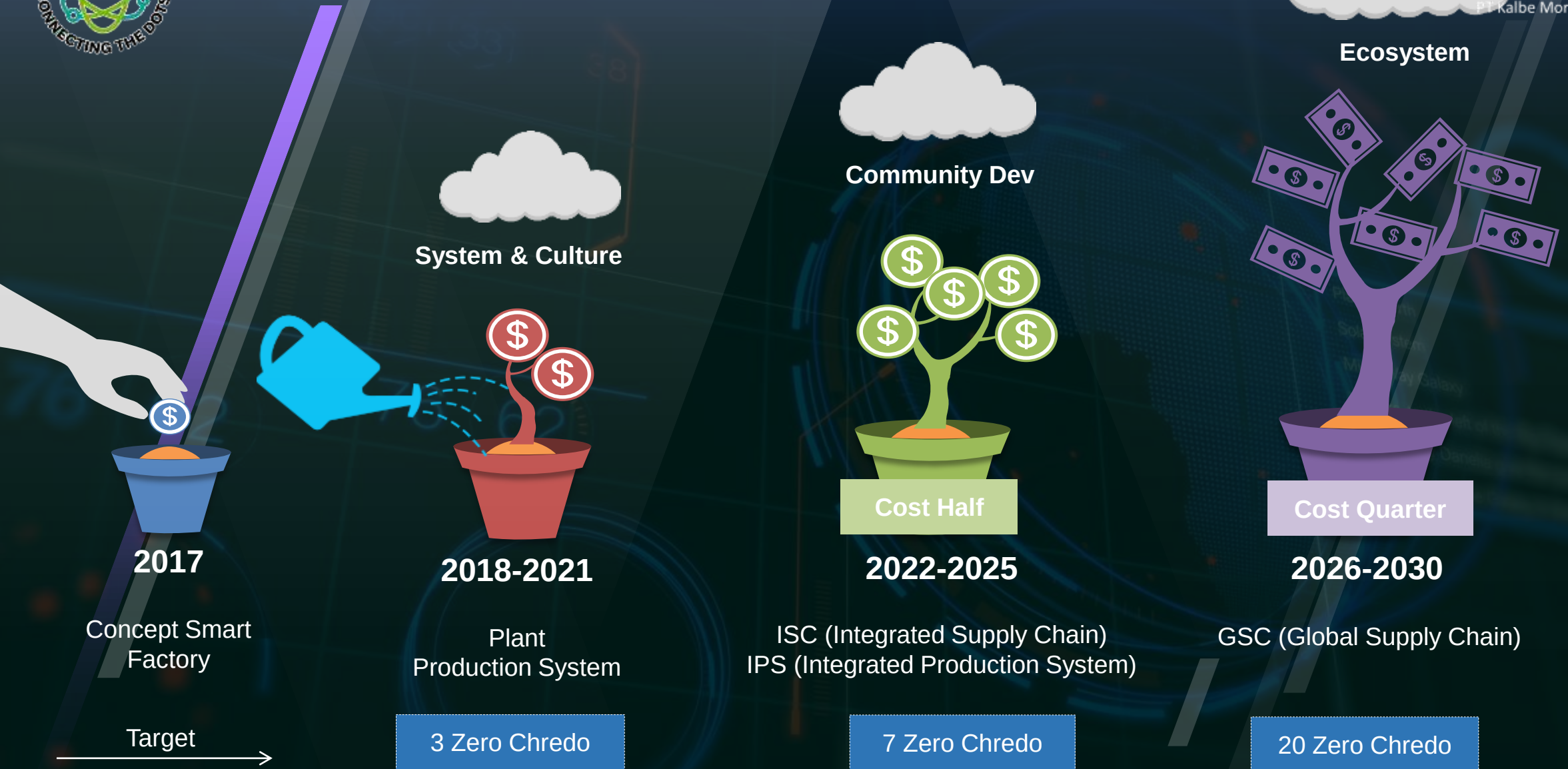


SMART FACTORY ROADMAP





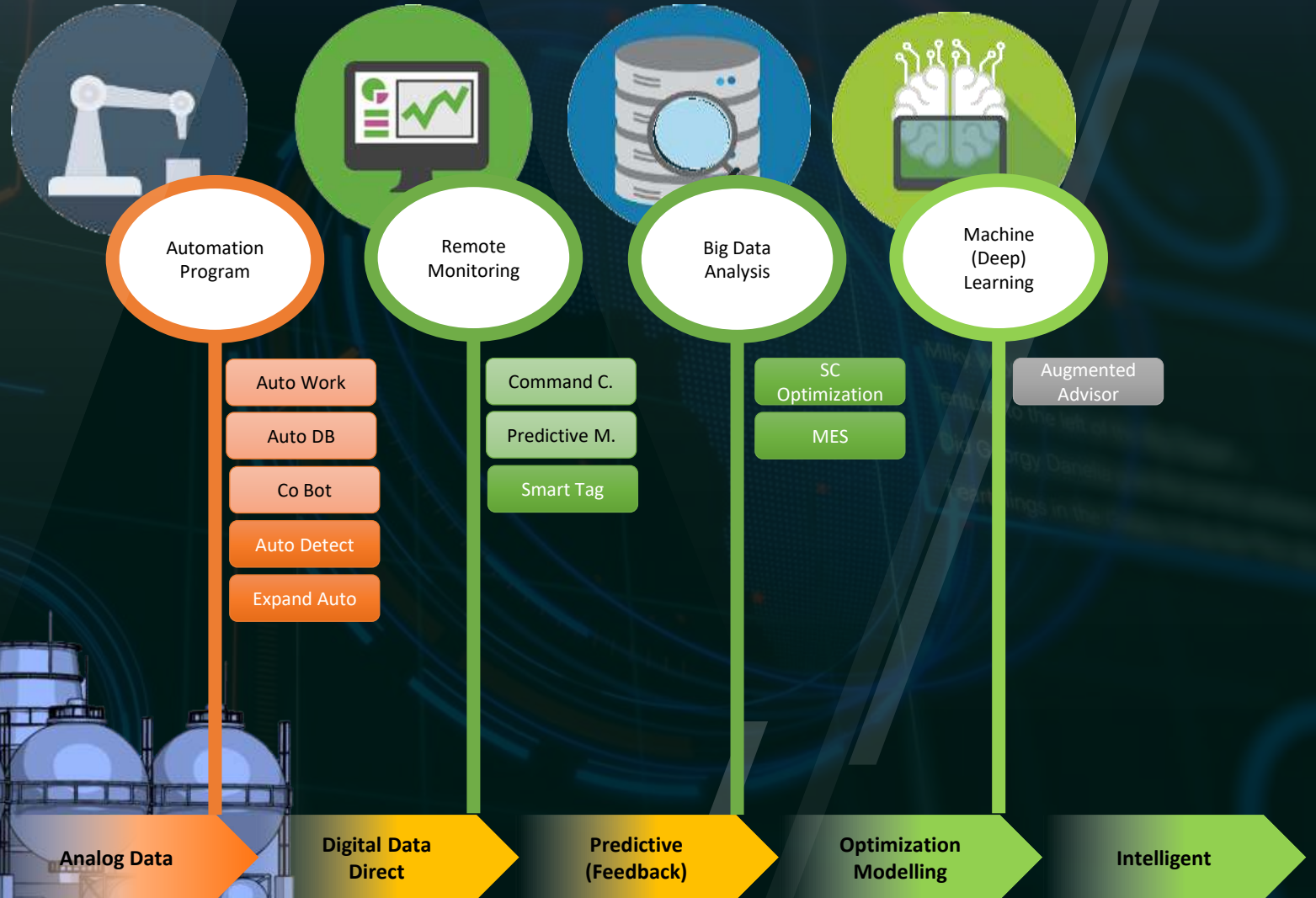
SMART FACTORY ROADMAP



SMART FACTORY ROADMAP

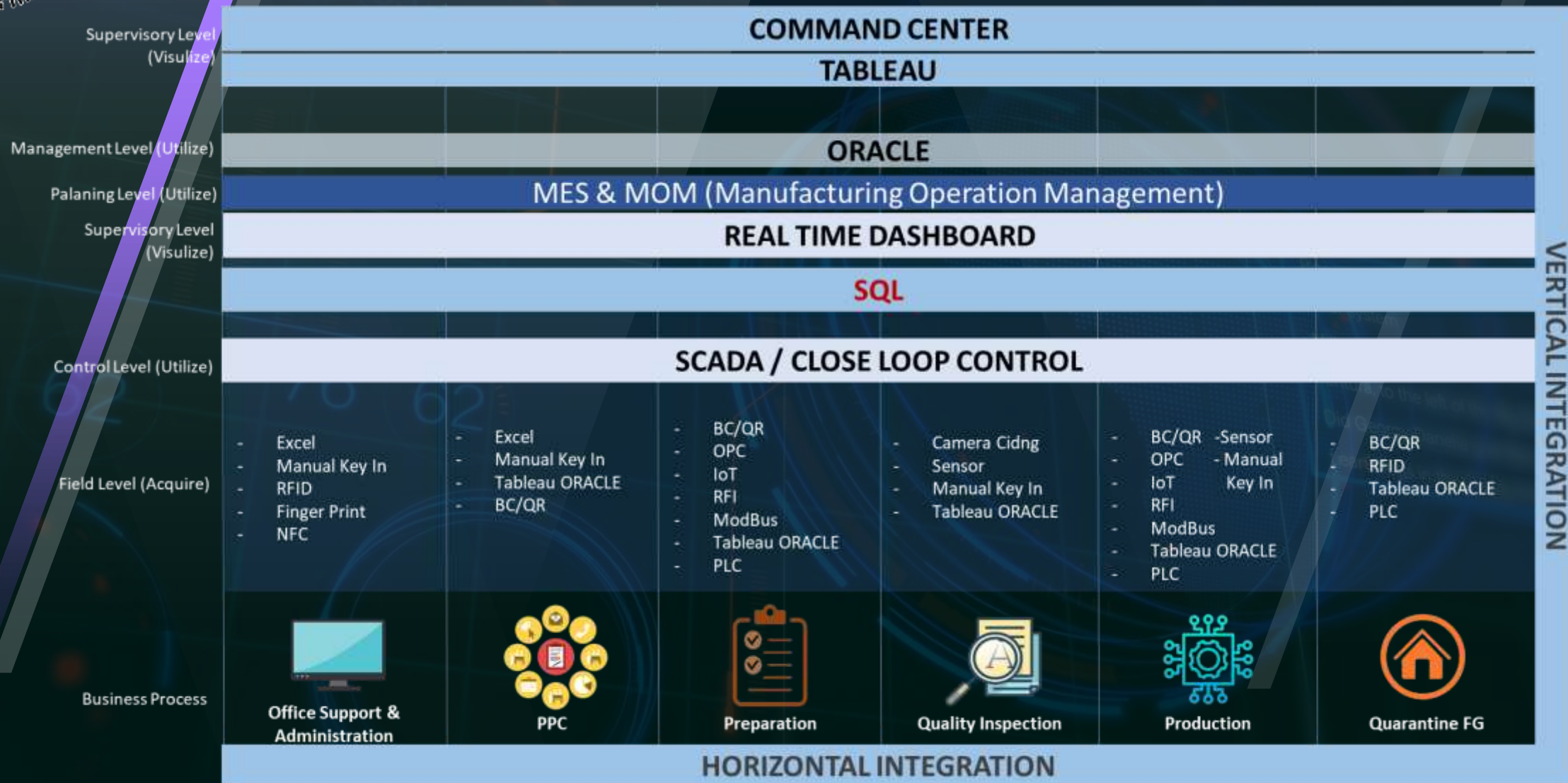
SMART FACTORY PHASE 1

FACTORY TRANSFORMATION

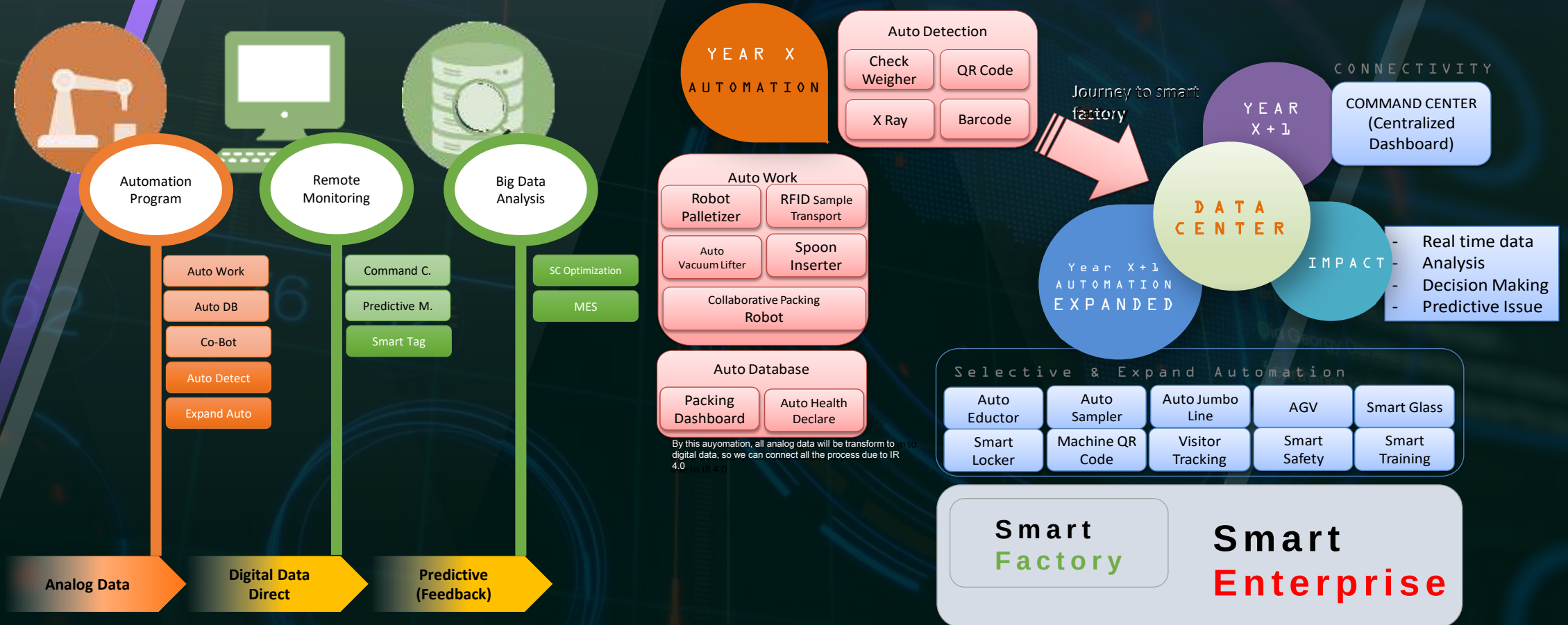




SMART FACTORY ROADMAP



OVERALL STATUS



Automation

From Analog to Digital shop floor



Current Condition :
Access anywhere,
anytime, anyone & any
devices



SCADA Connect to Historian
(for comprehensive monitoring, ability to control by remote)



PLC Connect to SCADA



HMI



Sensor & RFID



Motor Control

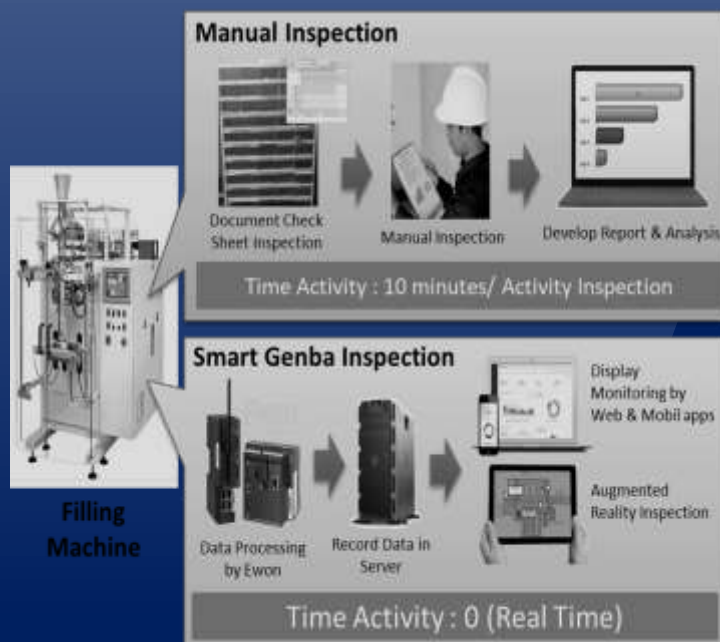


Circuit Breakers

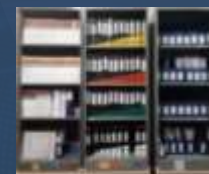
Device connect to PLC

Automation

From Analog to Digital shop floor



Before



Knowledge document not yet integrated on the machine

After



Knowledge document integrated on the machine by scanning the QR Code

Before



Display information less attractive

After

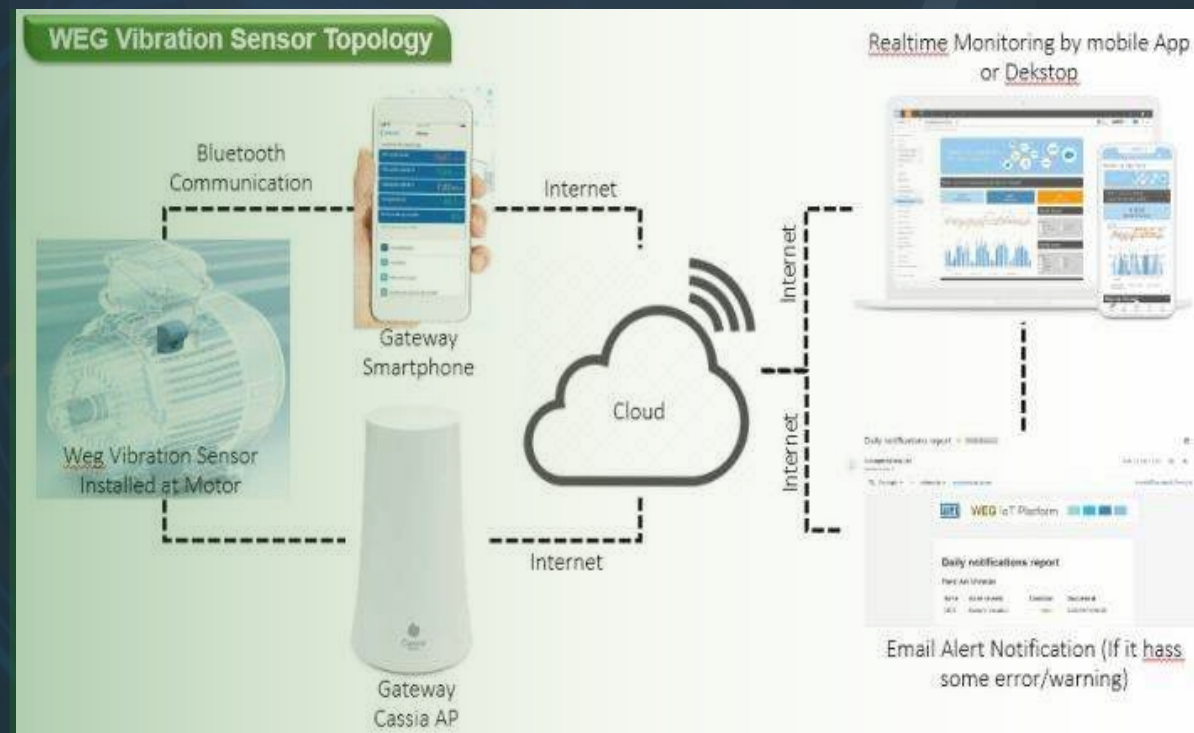
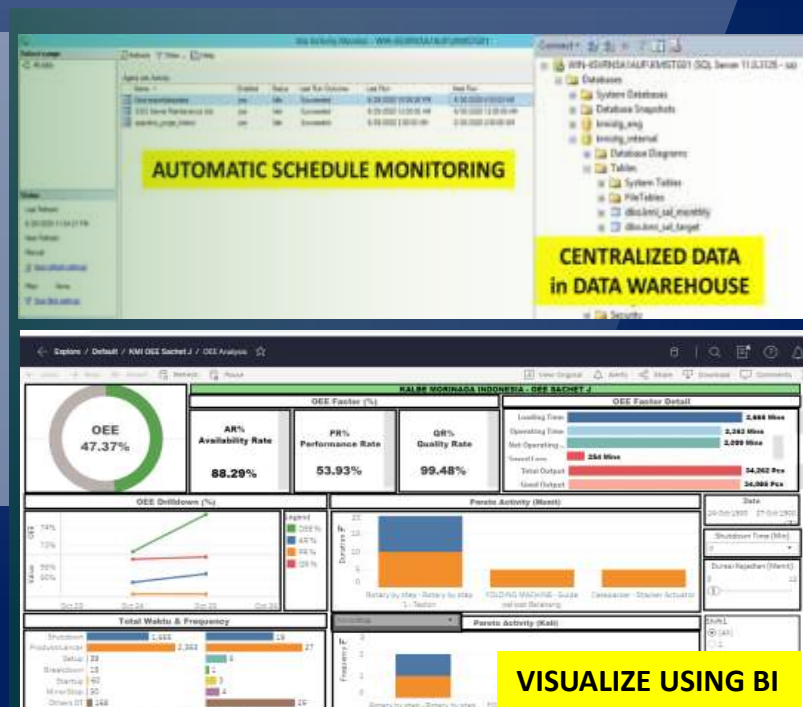


Display information more attractive & interactive

Data Mining

Direct Digital Data Predictive (Feedback)

Data Warehouse



Predictive Maintenance

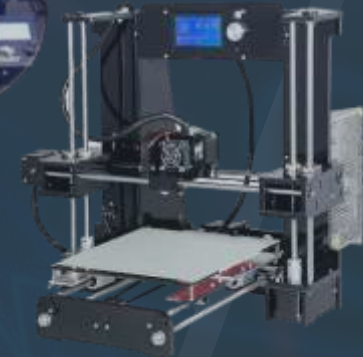
Advance Manufacturing

Collaborative Robot & Additive Manufacturing

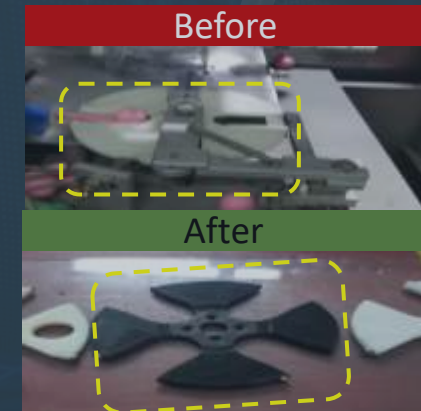
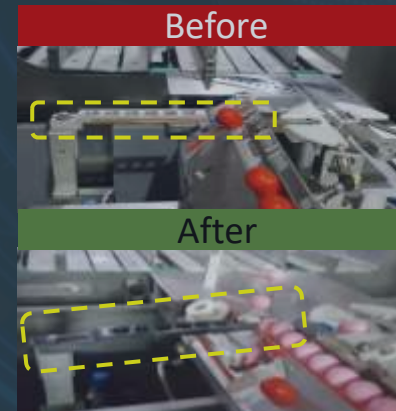


COBOT : Man and Robot work together with safety

No	Part Name	Old Photo	New Photo	3D Printing Model	Material	Quantity	Unit Price	Total Price	Remarks
1	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
2	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
3	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
4	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
5	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
6	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
7	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
8	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
9	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor
10	Bracket for the sensor				PLA	10	1000	10000	Bracket for the sensor



Spare part on new machines have been made with 3D printer machines and are already in use



3D PRINTER : Rapid machine part manufacturing



THANK YOU