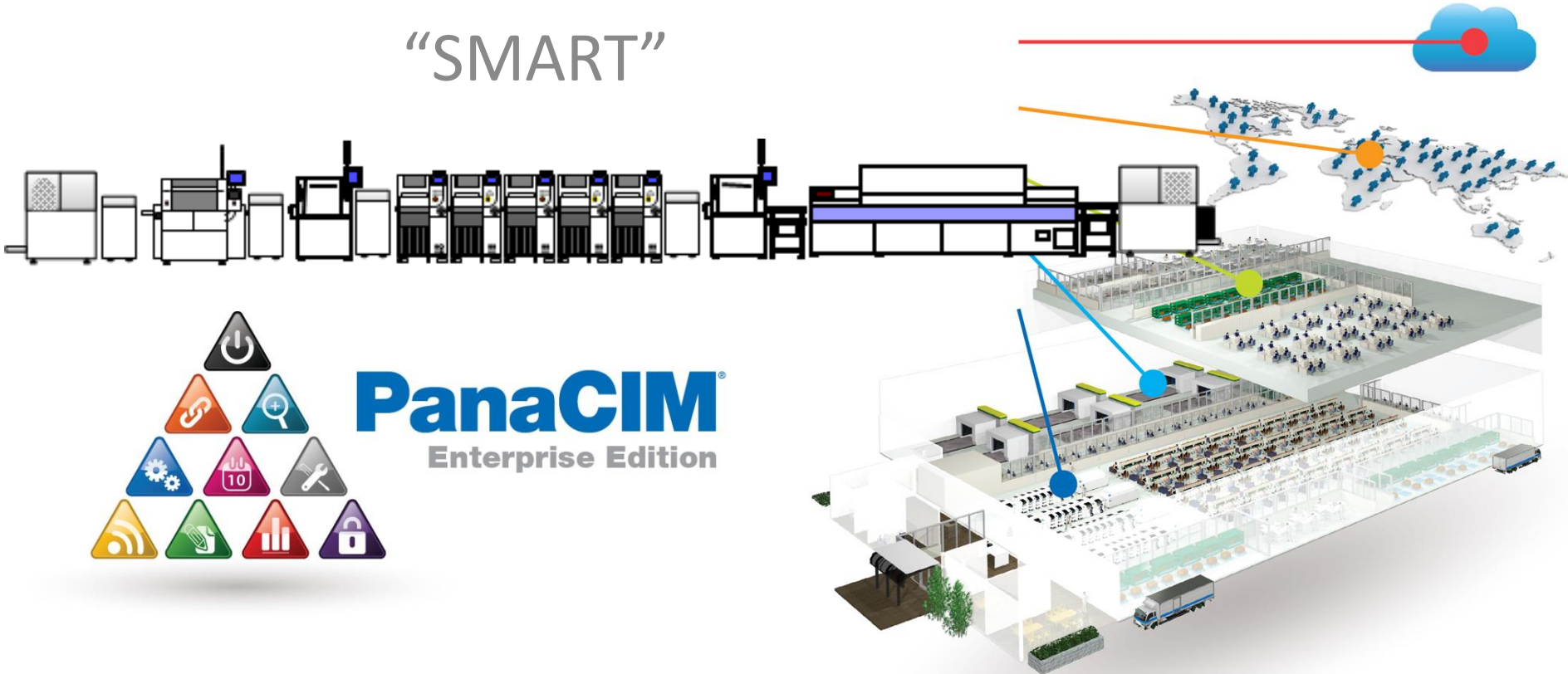


PANASONIC XXXX Day..

"SMART"



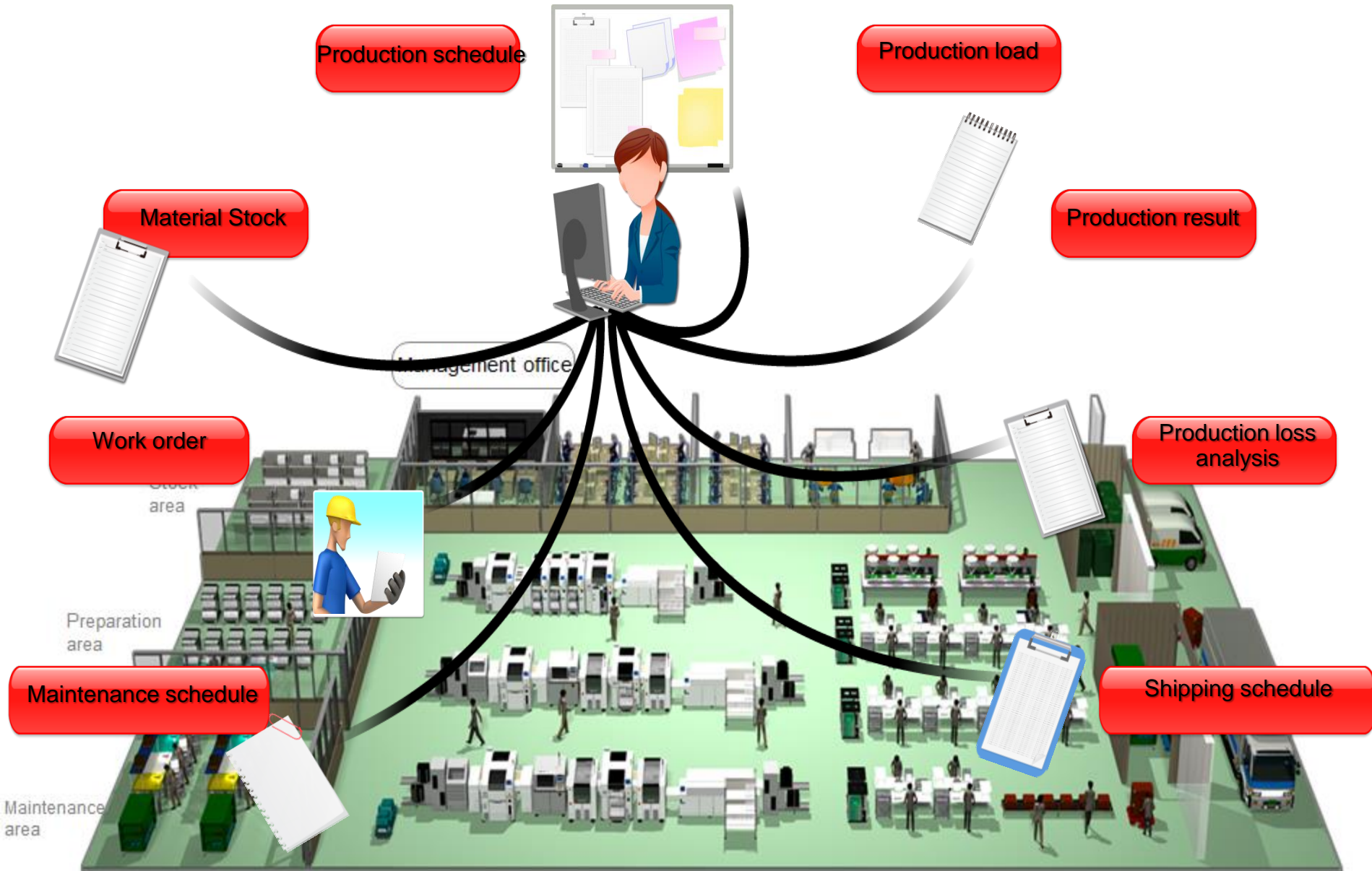
What are these Devices

What are the other “SMART” do you know..

- 1.SMART Electrical/Water Meter**
- 2.SMART Fire/Smoke Detector**
- 3.SMART Car**
- 4.SMART Vacuum (Robotic Vacuum)**
- 5.SMART Home Control System**
- 6.... I can keep going..**

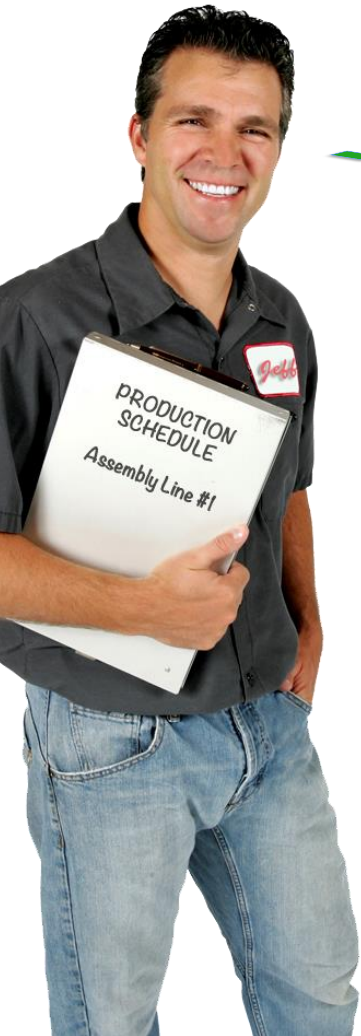
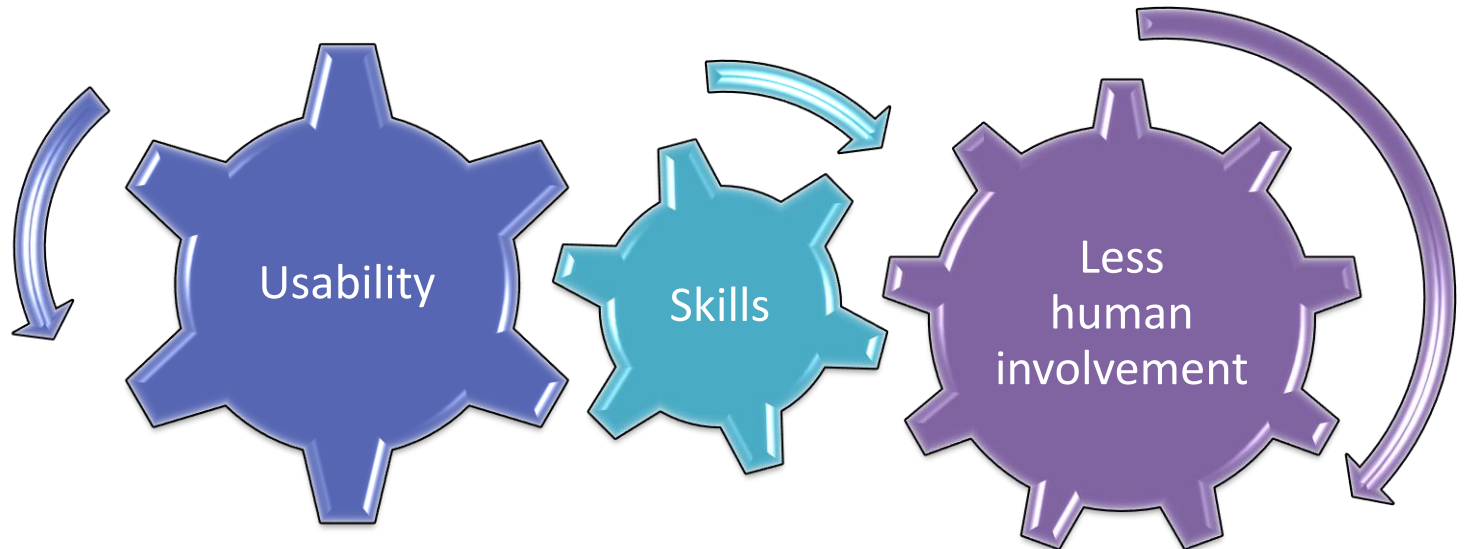
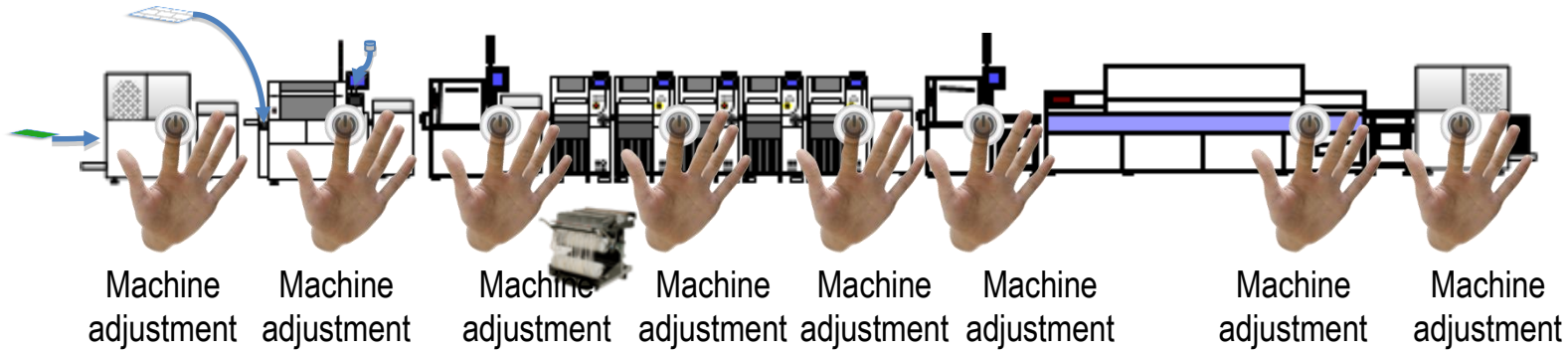
Is your Factory “SMART”?

Today's Manufacturing (Traditional Method)

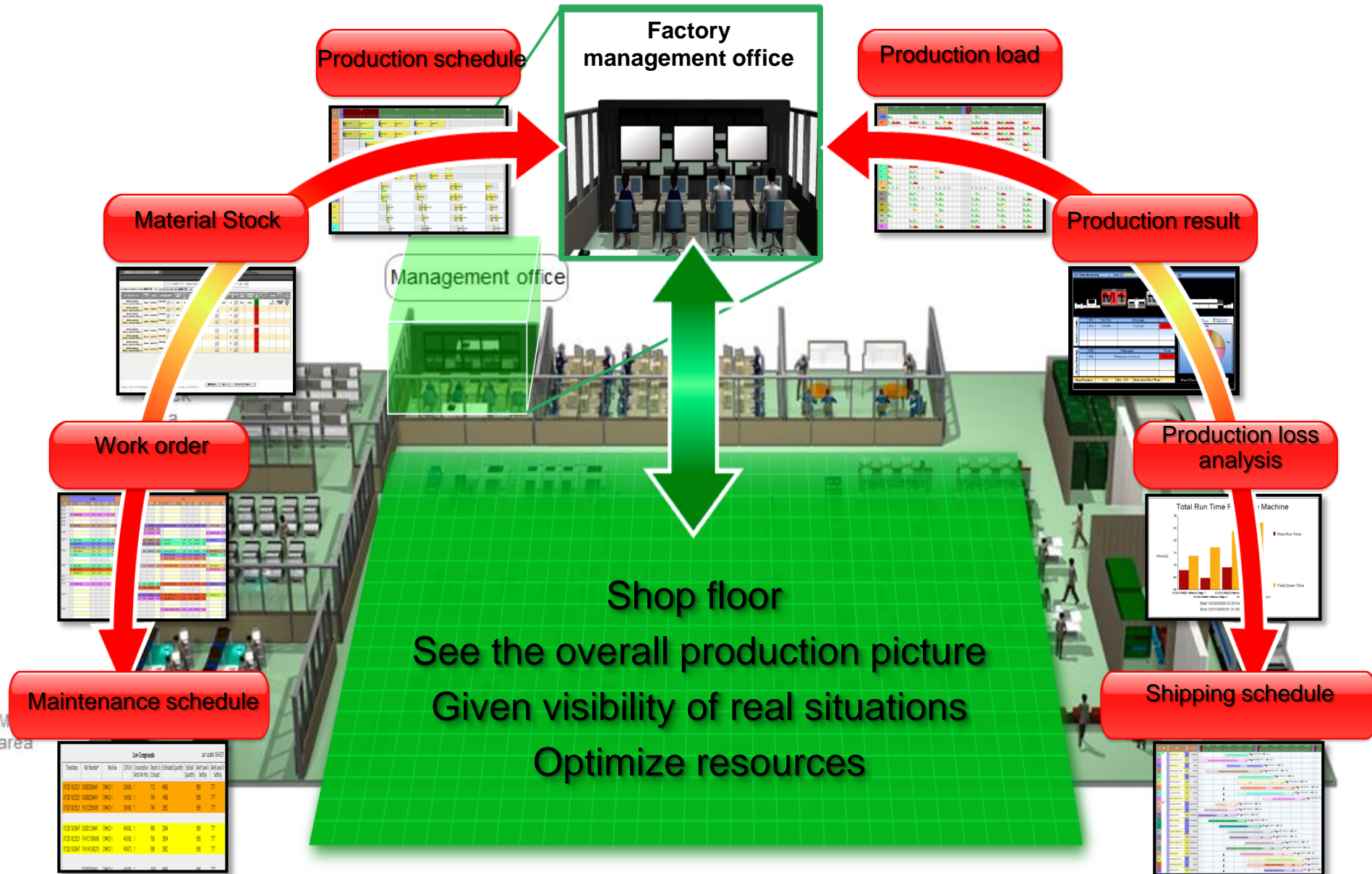


Today's Manufacturing

Engineer/Operator involvement

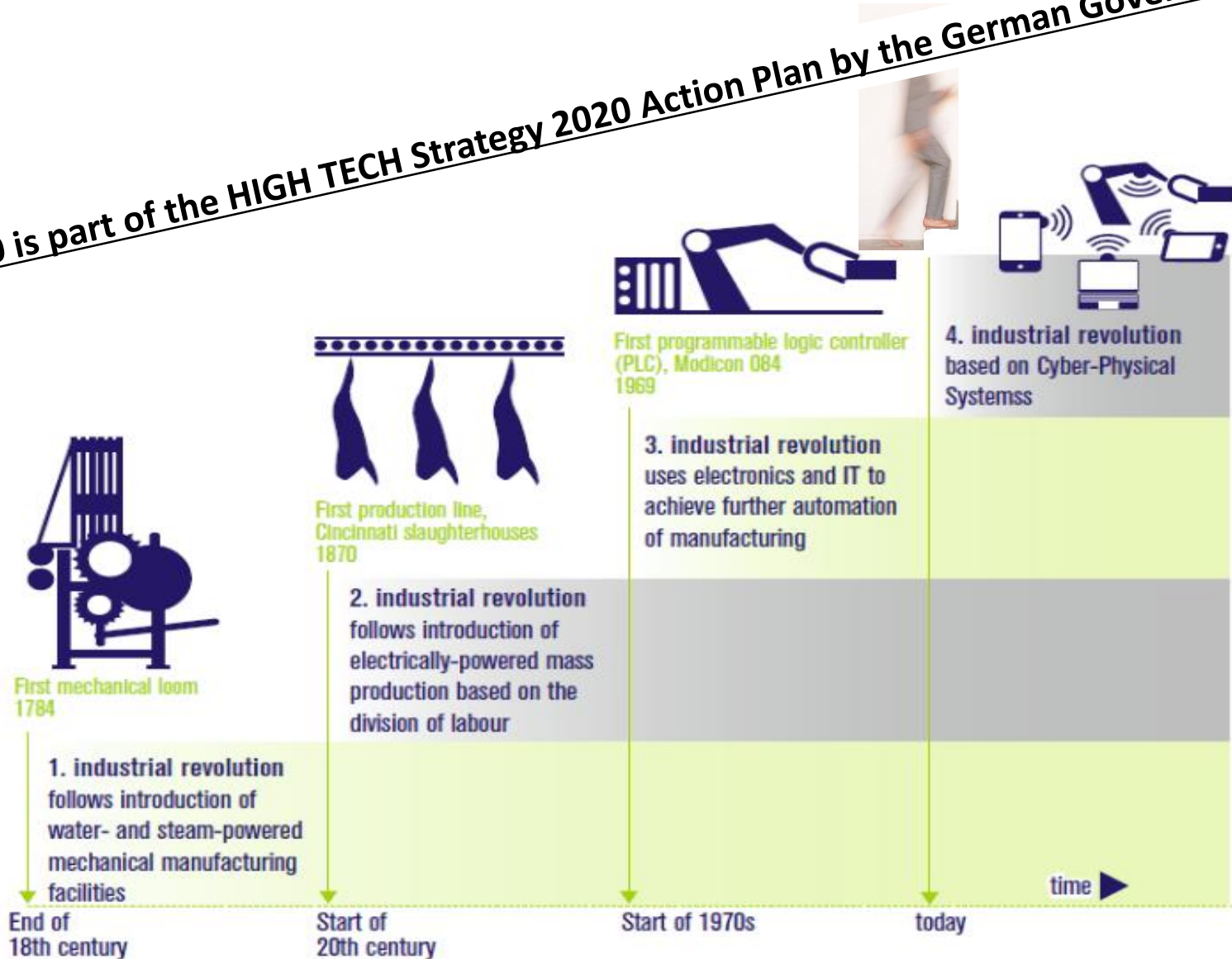


Ideal Current Manufacturing



Journey Towards “SMART Factory”

Industrie 4.0 is part of the HIGH TECH Strategy 2020 Action Plan by the German Government



How to Reach "SMART" Level

Change Order!

Production schedule

Factory management office

Production load

Material Stock

Production result

Work order

Production loss analysis

Maintenance schedule

Shipping schedule

Re-scheduling & issue work instructions based on orders & resources

Lot Components									
Material	Part Number	Rate	2014 Calendar Week Schedule (quantity)	Ship Date	Material	Rate	2014 Calendar Week Schedule (quantity)	Ship Date	Material
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100
100	1000	1000	1000	1000	100	1000	1000	1000	100



How to Reach “SMART” Level

Work order

Work order to each work area

Picking order
PanaCIM (Material
control)

Offline setup order
PanaCIM (Setup)

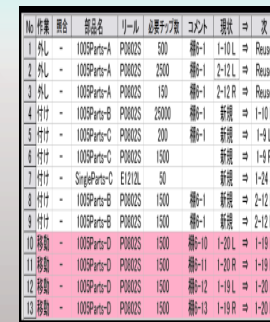
Supply order
Setup navigation



品名	数量	単位	場所	担当者	日付	時間	ステータス
100SP-Part-A	500	個	1-10 L	Reuse			
100SP-Part-A	2500	個	1-12 R	Reuse			
100SP-Part-A	150	個	1-12 R	Reuse			
100SP-Part-C	2500	個	1-10 L	Reuse			
100SP-Part-C	200	個	1-10 L	Reuse			
100SP-Part-C	1500	個	1-10 R	Reuse			
SinglePart-C	50	個	1-24 S	Reuse			
100SP-Part-B	1500	個	1-10 L	Reuse			
100SP-Part-B	1500	個	1-10 R	Reuse			
100SP-Part-D	1500	個	1-10 L	Reuse			
100SP-Part-D	1500	個	1-10 R	Reuse			
100SP-Part-D	1500	個	1-10 L	Reuse			
100SP-Part-D	1500	個	1-10 R	Reuse			

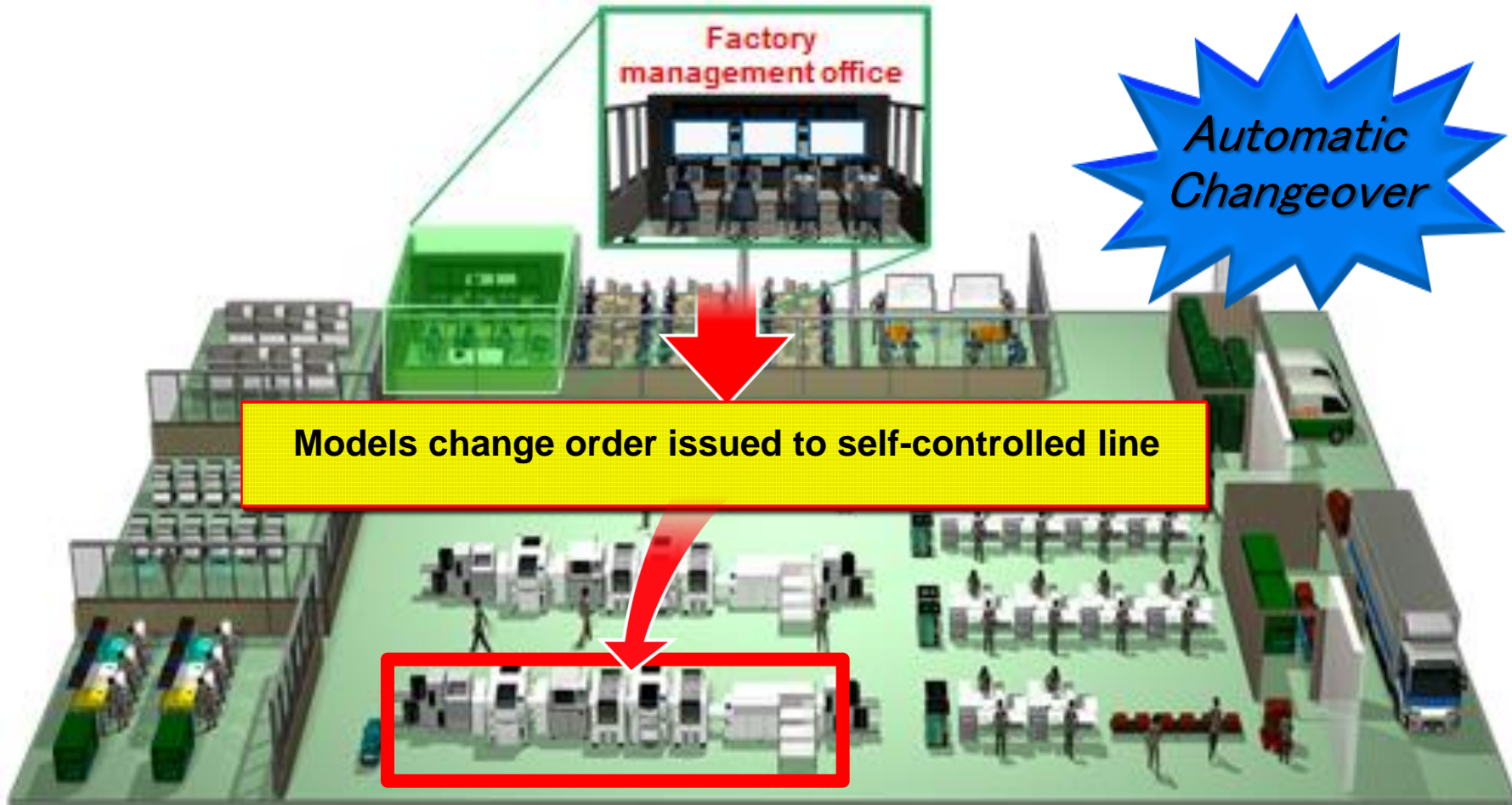


MC	PU	部品番号
M2	20001L	01L300
M2	20001R	01R300
M2	20002L	25L300
M2	20002R	25R300
M2	20003L	26L300
M2	20003R	26R300



No.	作業	部品名	リール	必要チップ数	コスト	現状	次
1	付	100SP-Part-A	P8002S	500	個	1-10 L	⇒ Reuse
2	付	100SP-Part-A	P8002S	2500	個	1-12 R	⇒ Reuse
3	付	100SP-Part-A	P8002S	150	個	1-12 R	⇒ Reuse
4	付	100SP-Part-C	P8002S	2500	個	1-10 L	⇒ Reuse
5	付	100SP-Part-C	P8002S	200	個	1-10 L	⇒ Reuse
6	付	100SP-Part-C	P8002S	1500	個	1-10 R	⇒ Reuse
7	付	SinglePart-C	E1212L	50	個	1-24 S	⇒ Reuse
8	付	100SP-Part-B	P8002S	1500	個	1-10 L	⇒ Reuse
9	付	100SP-Part-B	P8002S	1500	個	1-10 R	⇒ Reuse
10	移動	100SP-Part-D	P8002S	1500	個	1-10 L	⇒ 1-10 L
11	移動	100SP-Part-D	P8002S	1500	個	1-10 R	⇒ 1-10 R
12	移動	100SP-Part-D	P8002S	1500	個	1-10 L	⇒ 1-20 L
13	移動	100SP-Part-D	P8002S	1500	個	1-10 R	⇒ 1-20 R

How to Reach “SMART” Level

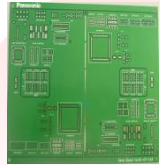


Models change order issued to self-controlled line

**Execution of automatic changeover
by connecting each machine in the line**

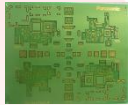
*Automatic
Changeover*

How to Reach “SMART” Level



Model A

to



Model B

Factory
management office

*Automatic
Changeover*

Models change order issued to self-controlled line

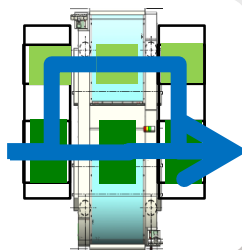
Laser marker

Write the board information and transfer the information to the following machine

PCB loading coordinated with reflow temperature

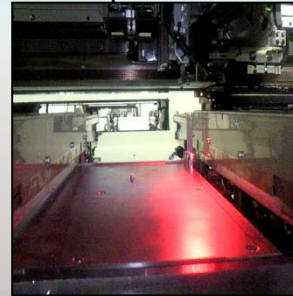
SPD (Dual lane)

Production change the lane to receive the model changeover information



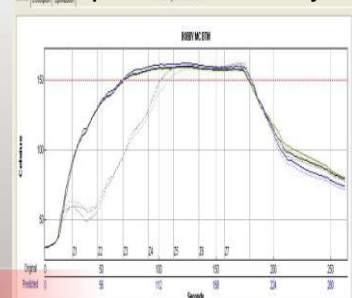
NPM-W

Automatic support pin exchange Correction operation



Reflow

Production start is determined by monitoring the reflow temperature stability



How to Reach “SMART” Level

*Automatic
Changeover*



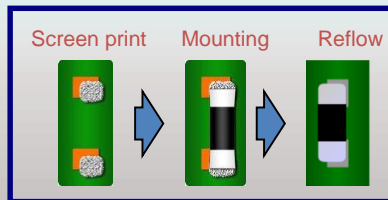
Machine/Level “SMART” Level

Stable Quality



Automatically correction the mounting position by solder inspection data.

The good production by APC

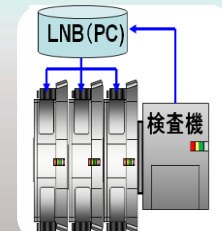


Continuous production after pickup error via automatic recovery



Reference

Automatically correction the mounting position by mount inspection data.
The good production by APC-MFB



Reference

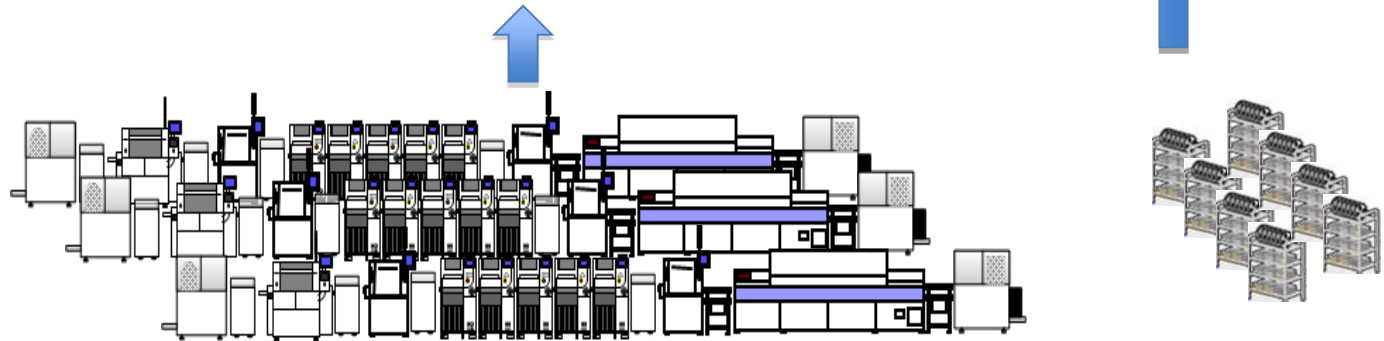
Achieve a good production and stable operation from the first board.

Floor “SMART” Level

Material Visibility & Control



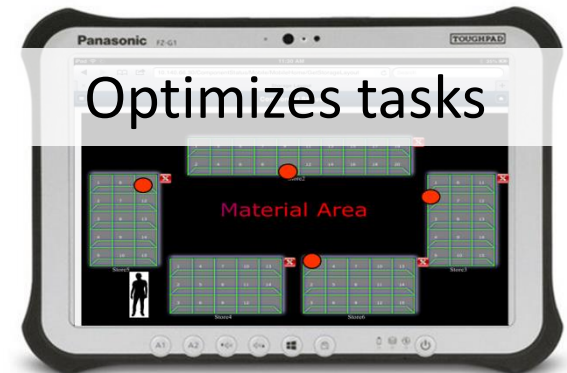
Gathers material information

[illegible]

Material allocations

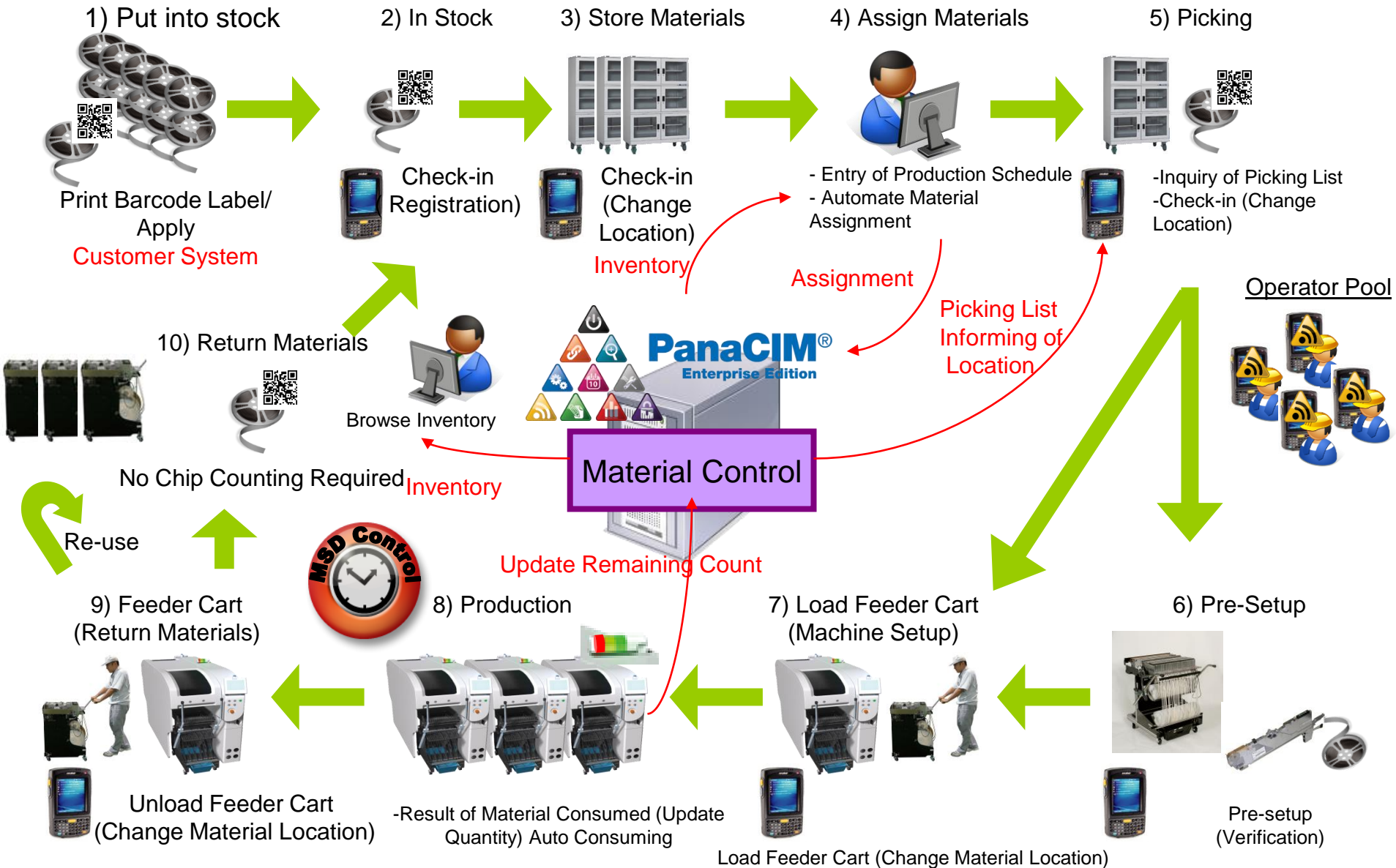


Moisture sensitive devices



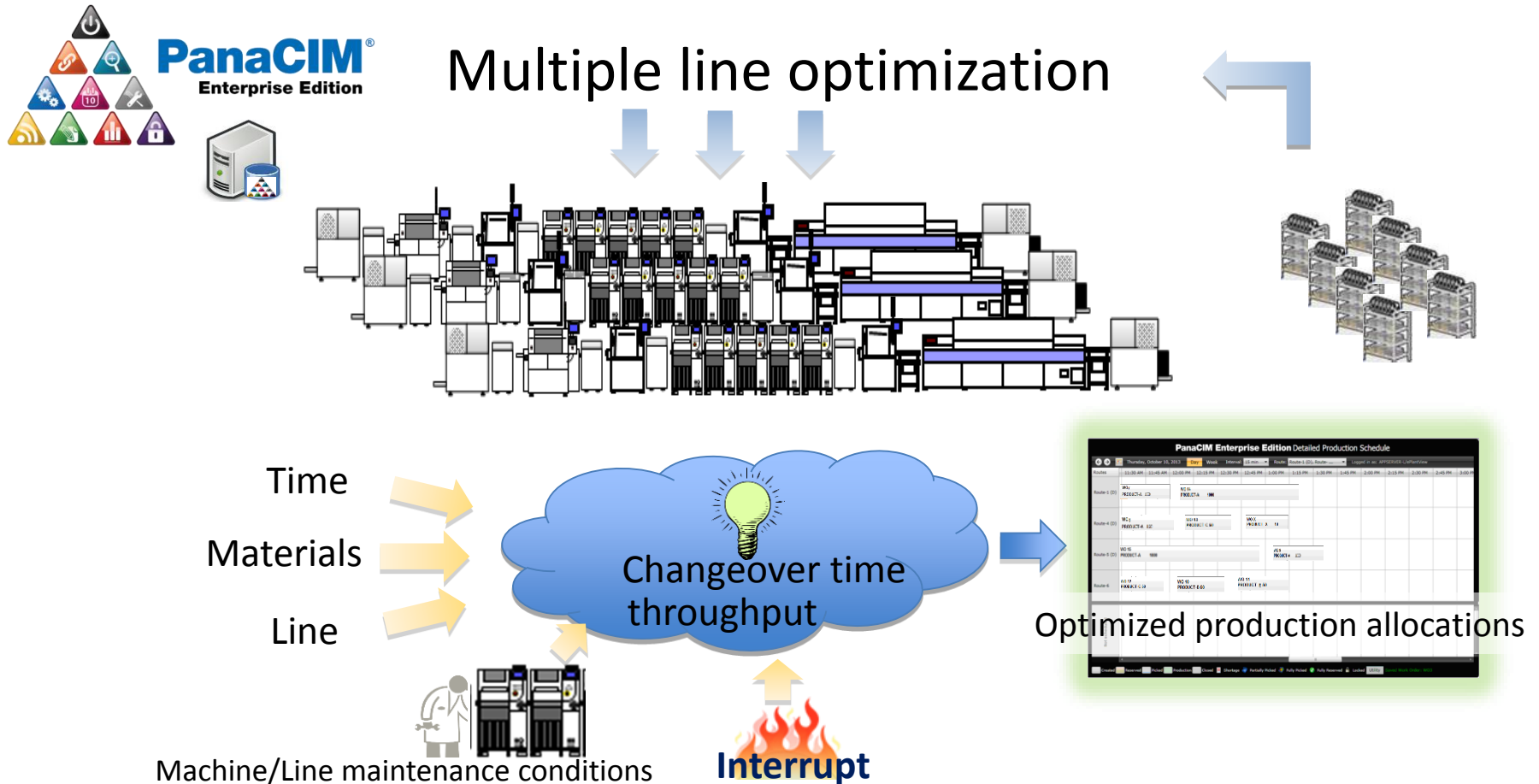
Optimizes tasks

Example : Accurate Parts Management and Allocation



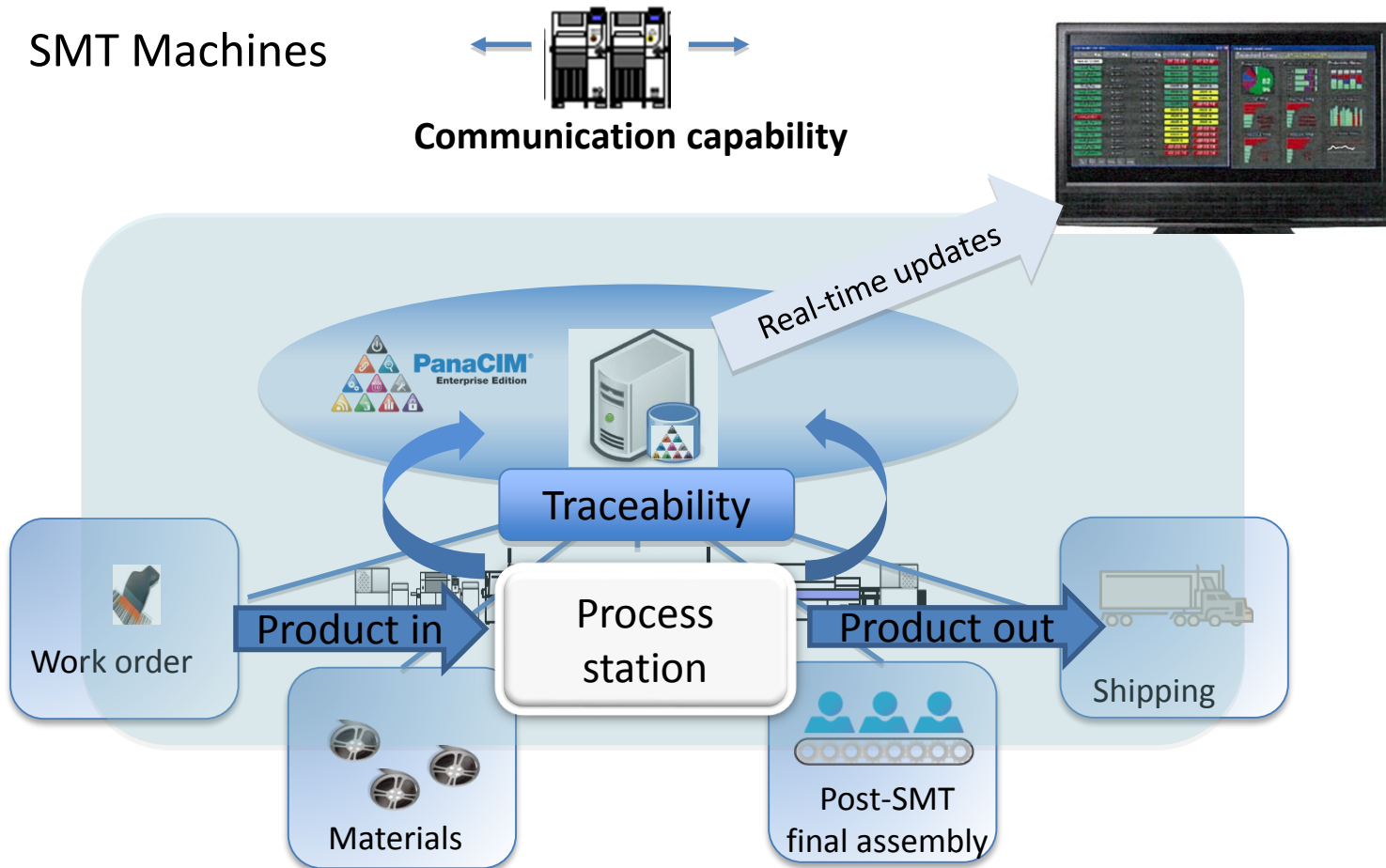
Floor “SMART” Level

Material visibility & control



Floor “SMART” Level

Beyond SMT



Factory “SMART” Level

Factory visibility & traceability

Quality & testing labs

Maintenance workshop

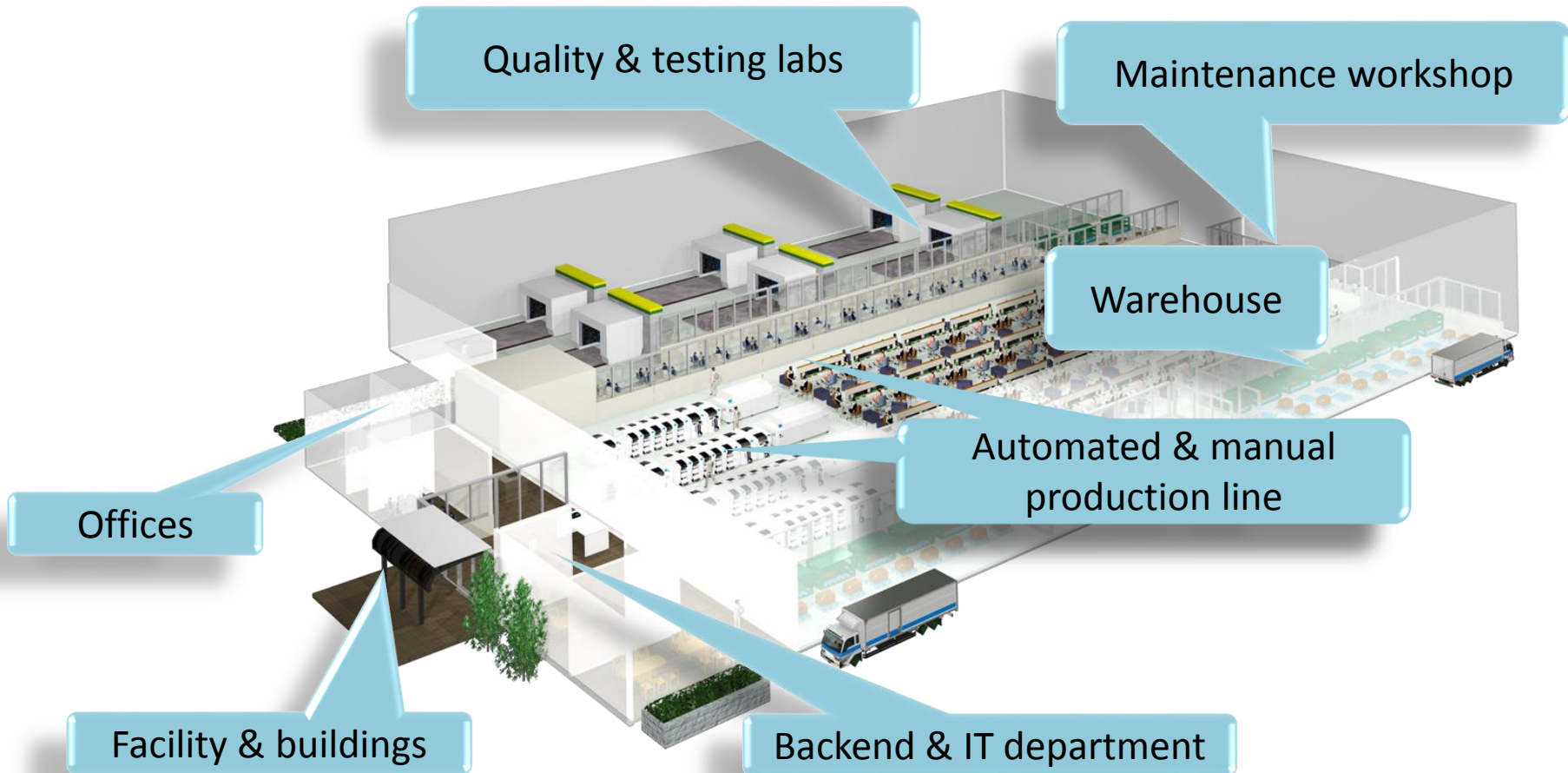
Warehouse

Automated & manual
production line

Offices

Facility & buildings

Backend & IT department



A central image of the Earth, showing the Americas, surrounded by eight blue network cables with RJ45 connectors pointing towards it. The text "The Connected factory is the future." is overlaid on the globe in white.

**The
Connected
factory
is the
future.**

Panasonic