



# V-factory

## Industry 4.0



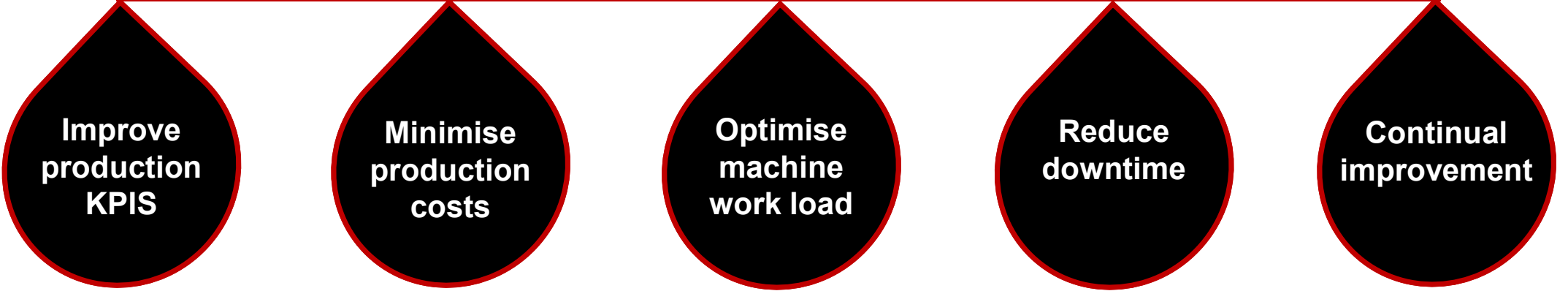
*“Oil changed the world in the 1900s. It drove cars, it drove the whole chemical industry. Data, I look at it as the new oil. It’s going to change most industries across the board.”*

**Brian Krzanich – INTEL CEO**



Established in 1946  72 years of data collection!

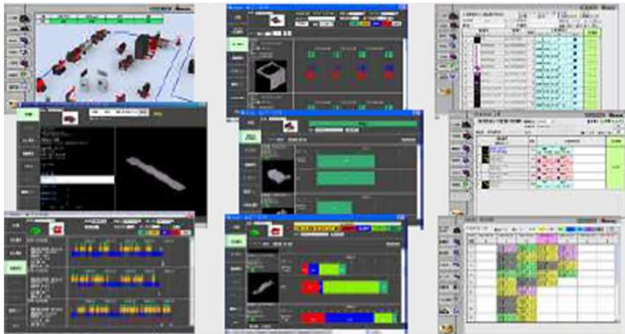
**OUR CUSTOMER'S BENEFITS**



***“Growing together with our customers”***

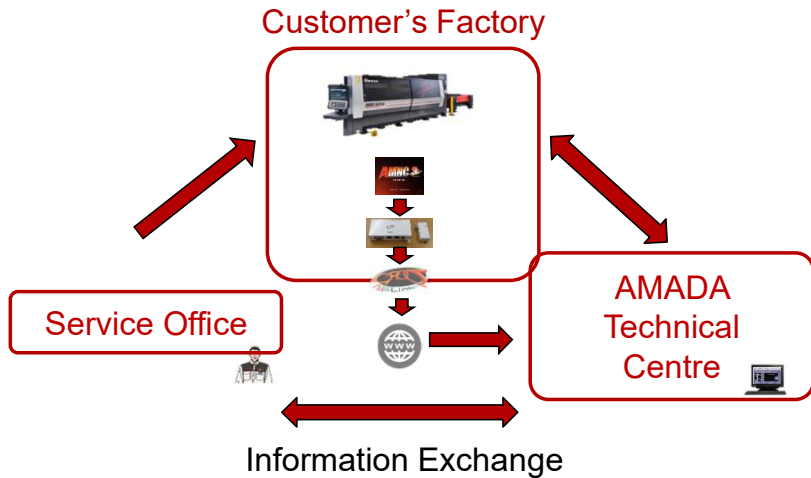
# Product Evolution

## vFactory (2005)



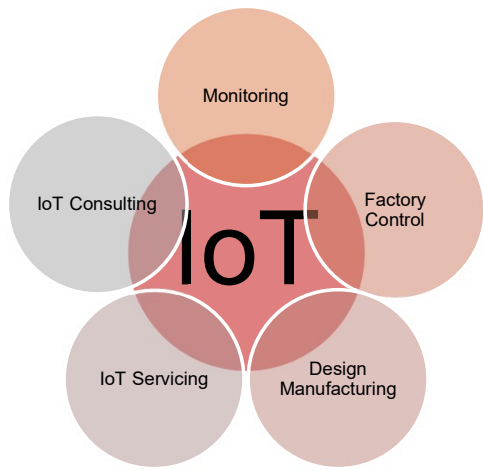
- Features:**
- Factory overview
  - Process results
  - Material flow
- Discontinued product
  - Production monitoring

## ADIS/ADSS (2015)



- Features:**
- Monitoring of serious alarms
  - Machine condition
  - Remote alarm diagnosis
  - Change from reactive to proactive support
- Monthly generated production reports
  - Proactive machine monitoring

## V-factory (2018)



- Features:**
- vFactory features (1-2)
  - ADSS features (1-4)
  - Real time data
  - Improved concept
- Industry 4.0 software with enhanced production monitoring
  - Proactive machine monitoring and connection
  - Faster and more accessible data

# V-factory CONCEPT (2018)

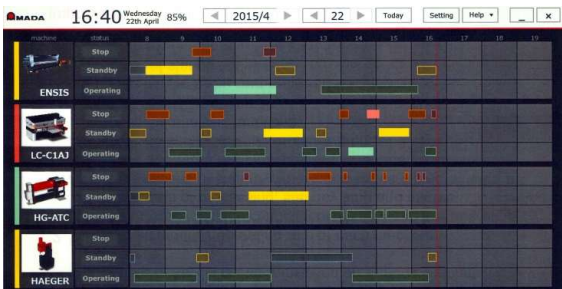


**HARDWARE PRODUCT:**  
**V-factory Connecting Box**



V-factory Connecting Box

**SOFTWARE PRODUCTS:**  
**My V-factory online platform**  
**KAIZEN**



Kaizen

**OPTIONAL PRODUCT:**  
**V-Monitor**



Drive Recorder



My V-factory

|                                                                                       | Model       |            | Oper...                | Machine Con... | Daily Mainten... |
|---------------------------------------------------------------------------------------|-------------|------------|------------------------|----------------|------------------|
|   | AE-255NT    | EAE2550080 | 0%                     | ✓              | -                |
|  | EM-36122RB  | 36155017   | AS3MP30040<br>PR33003P | 0%             | ✓                |
|  | EMK-3510MII | EEK3500010 | 0%                     | ✓              | -                |
|  | LC-2515C1AJ | 42611114   | 0%                     | ✓              | -                |

Machine Condition



# V-factory - Data Flow



## Production



## Data collection



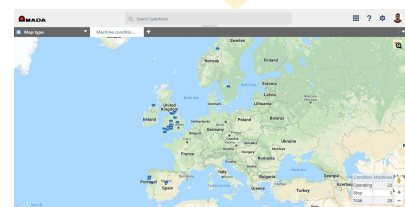
## V-factory Connecting Box



**My V-factory website**



**PRODUCT**  
for customer use



**AMADA Remote Navigation**

**PROACTIVE SERVICE**  
provided by AMADA



# Machine Data Collection



Energy

Machine  
Depreciation

Maintenance

Assist Gas

Tooling

Material



Running Costs

Setting charges

pricing

| Start Time | ending time | charge per 1kWh [£] |
|------------|-------------|---------------------|
| 0:00       | 1:00        | 0.120               |
| 1:00       | 2:00        | 0.120               |
| 2:00       | 3:00        | 0.120               |
| 3:00       | 4:00        | 0.120               |

currency unit setting

currency unit £

unit display position previous amount ▲

Show Charge

☒ Show Processing Cost

Setting charges

depreciation expenses per hour [£] 10.000

mainte. cost per hour [£] 5.000

assist gas(Oxygen) cost per square meter [£] 0.150

assist gas(nitrogen) cost per square meter [£] 0.150

assist gas(air) cost per square meter [£] 0.150

tool cost per one hit [£] 0.002

tool cost per one tap [£] 0.010

| No. | Material Name | Material Type Name | Thickness [mm] | Material cost per kg [£] | Comment |
|-----|---------------|--------------------|----------------|--------------------------|---------|
| 1   | AL1.6         | AL                 | 1.600          | 5.7                      |         |
| 2   | SPC1.2        | SPC                | 1.200          | 0.7                      |         |
| 3   | SPC1.3        | SPCC               | 1.300          | 0.7                      |         |
| 4   | SPC1.6        | SPC                | 1.600          |                          |         |
| 5   | SPC2.0        | SPC                | 2.000          |                          |         |
| 6   | SPC2.3        | SPC                | 2.300          |                          |         |
| 7   | SPCC2.0       | SPCC               | 2.000          |                          |         |
| 8   | SUS1.2        | SUS                | 1.200          |                          |         |
| 9   | SUS2.0        | SUS                | 2.000          |                          |         |

No. Registered: 9 No. Displayed: 9

New

Material Name A5025

Material Type Name AL ▲

Thickness [mm] 2.000

Material cost per kg [£] 5.7

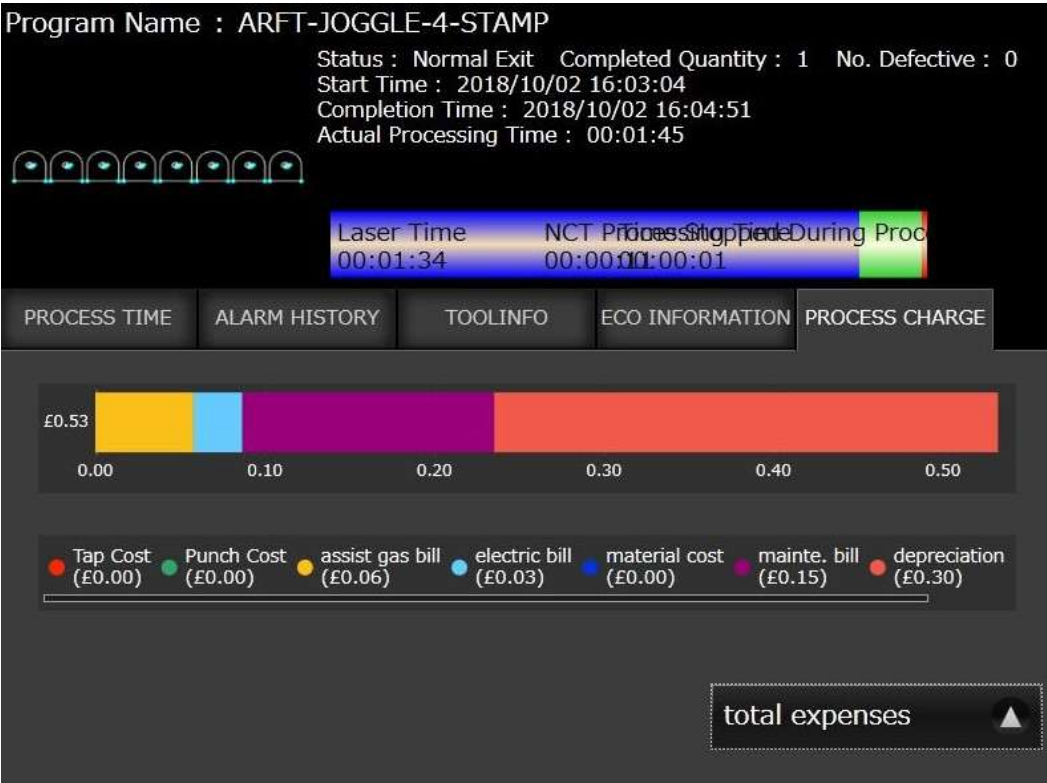
Comment

REGISTER CANCEL

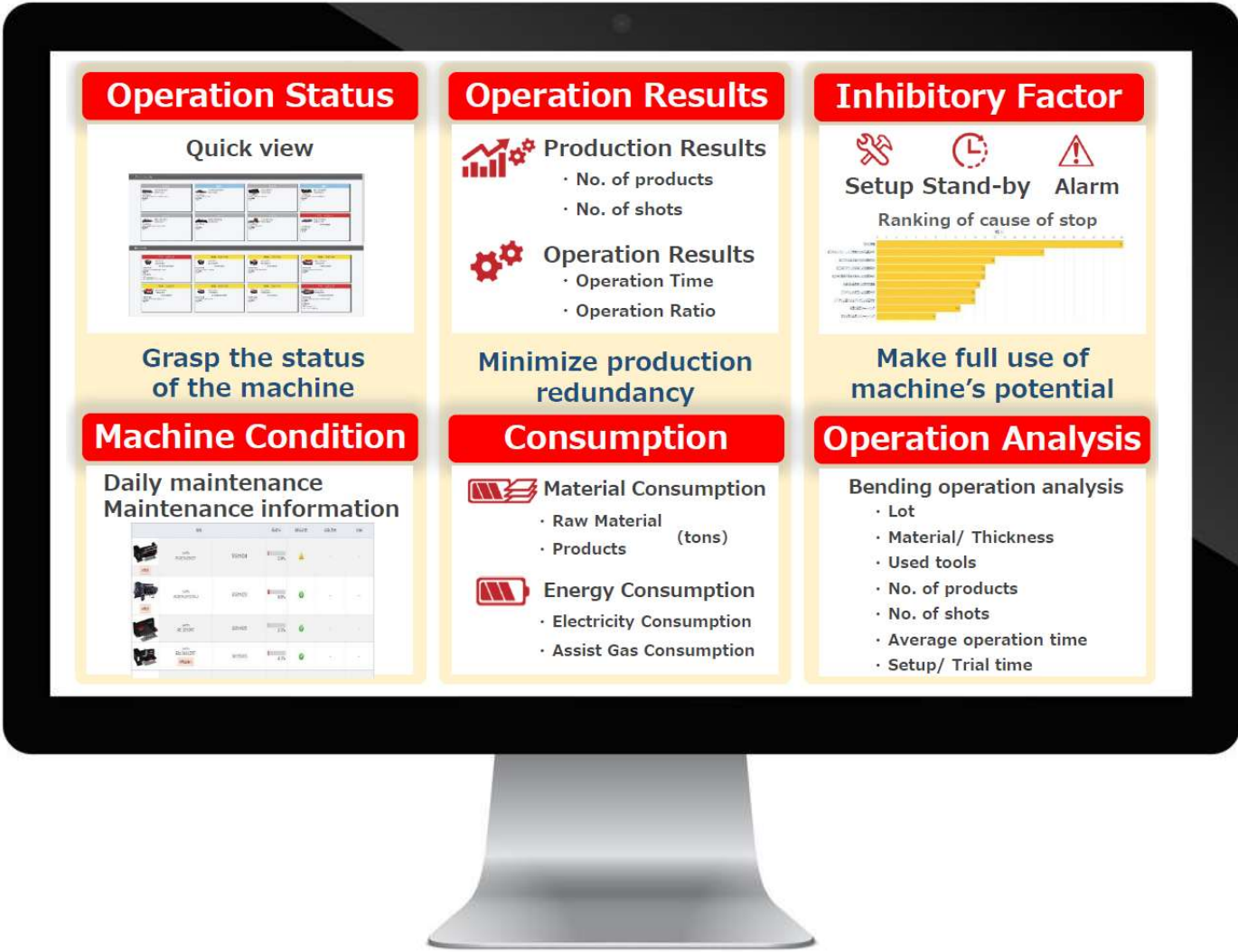


\*Data collection varies by machine type and control generation

# Machine Data Collection - Example



# My V-factory Portal [Operation Information]

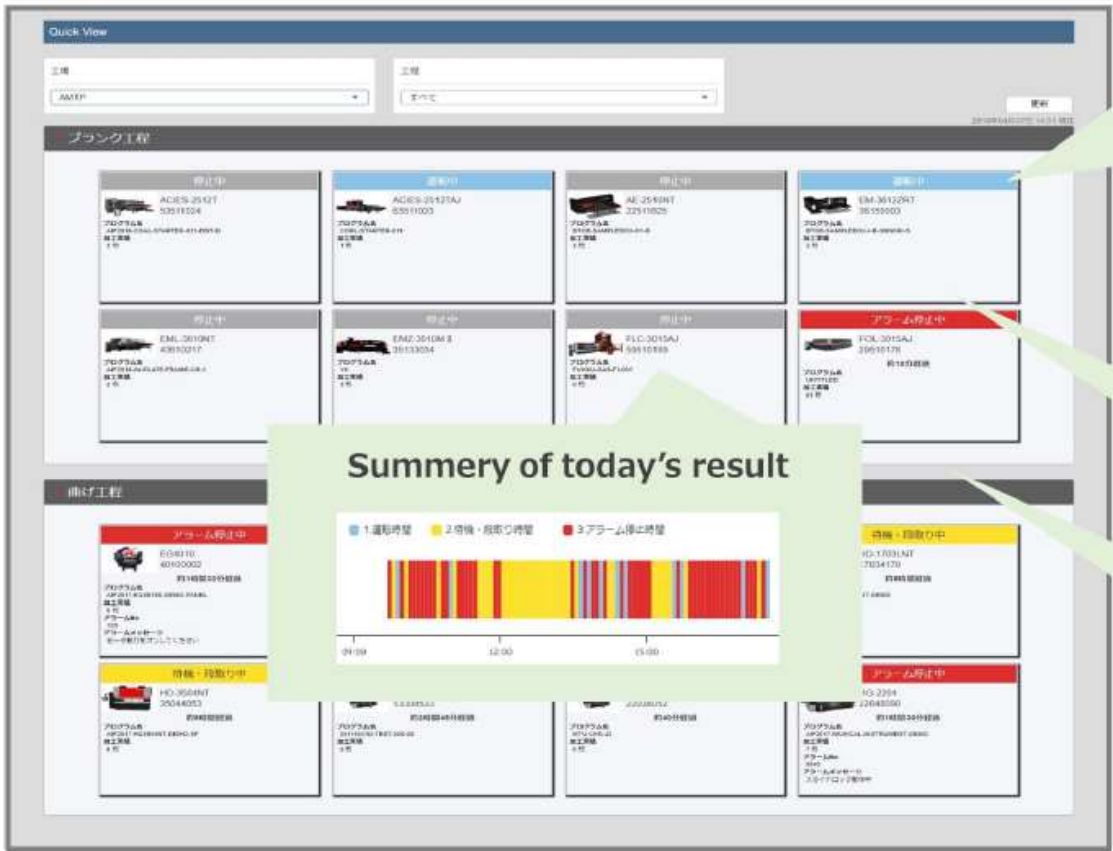
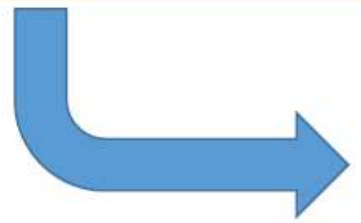


# My V-factory Portal [Current Operation Status]



### Operation Status

Quick view



### Status

Stopped

Stand-by・Setup

Operating

Alarm

It is easy to understand status by color

### Production

Program Name

Results

### Alarm・Stand-by

Elapsed time

## Core benefits;

- **Real time accessible data** to use for continual improvement and improved decision making
- **Increase machine uptime** through Amada proactive machine monitoring and remote connection

