Blackbird Introduction

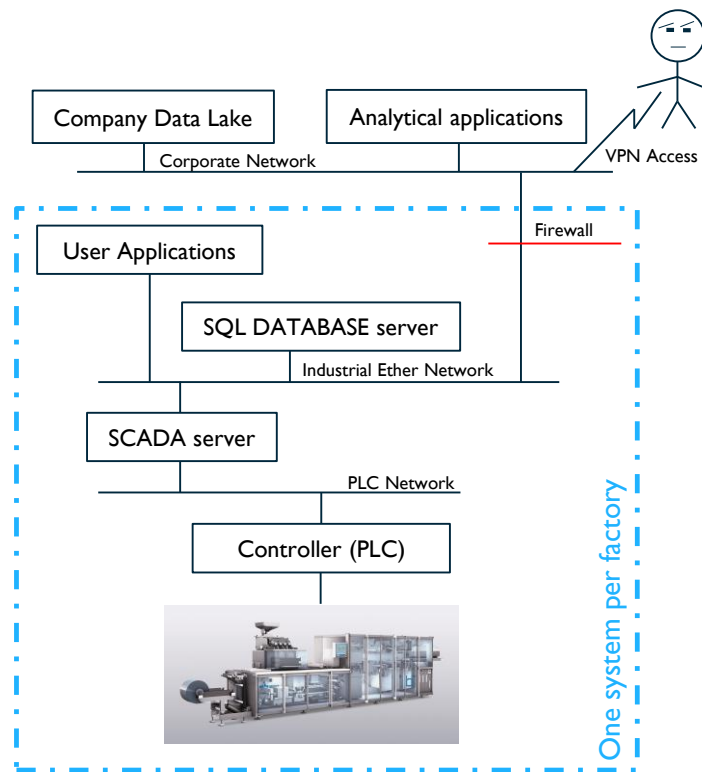**BLACKBIRD**
SMART DATA COLLECTION

The challenge for most companies

65% of all industry processes are not connected to anything!

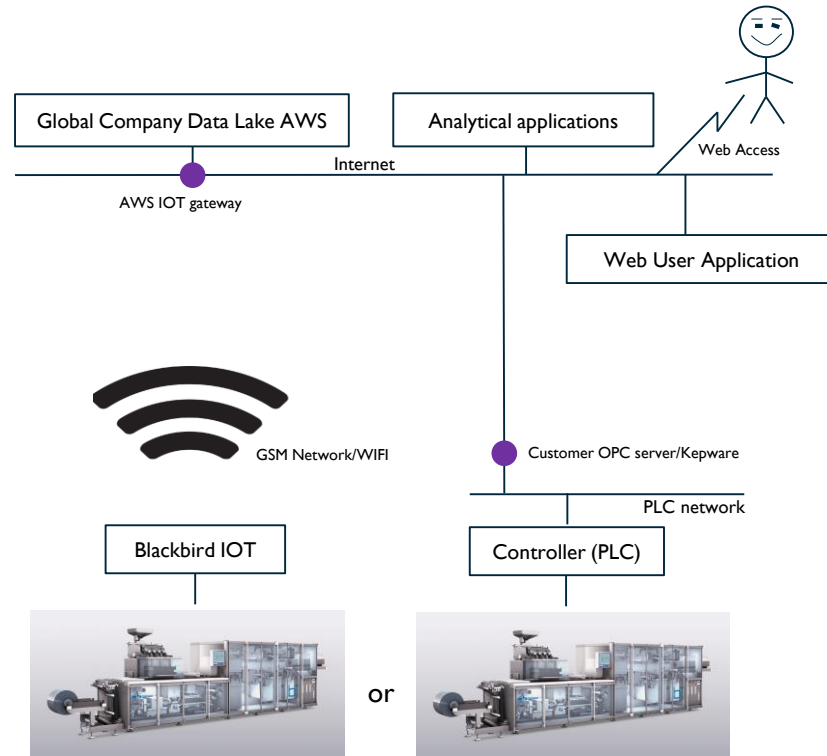* Source, Industry 4.0 Study made by McKinsey & Company

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SMART DATA COLLECTION

Most companies collect data like this

Most companies collect data like this

Company Data Lake

Analytical applications

VPN Access

Corporate Network

Firewall

User Applications

SQL DATABASE server

Industrial Ether Network

SCADA server

PLC Network

Controller (PLC)

One system per factory
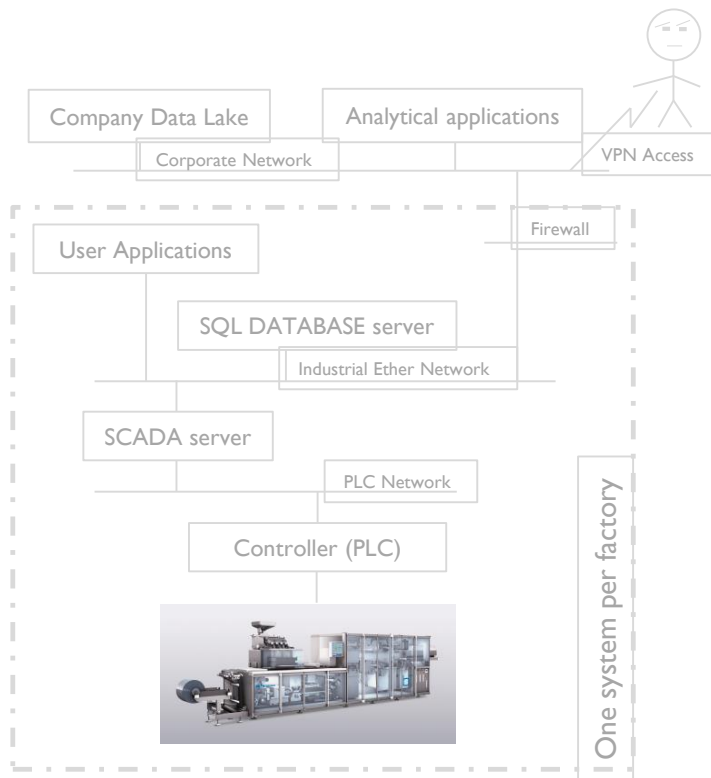
Blackbird provide smarter options

Global Company Data Lake AWS

Analytical applications

Web Access

Internet

AWS IOT gateway

Web User Application

GSM Network/WIFI

Customer OPC server/Kepware

PLC network

Blackbird IOT

Controller (PLC)

or

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Blackbird - Access to data – Plug & Play
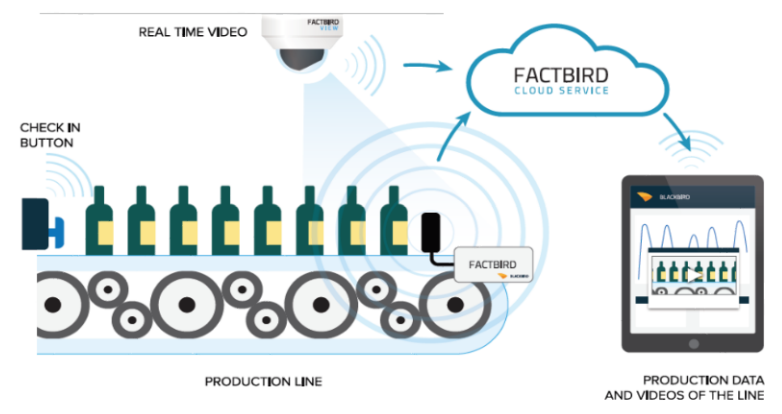
Quick, plug and play implementation without complexity of other IT integrations

Immediate access to valuable and actionable data from your production environment

Scalable solution that require no special SW installation and allows you access to data from anywhere

Low monthly subscription and little maintenance cost if any

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6

Blackbird – How it works

Factbird collects data from sensors or cables (e.g. number of units produced, temperature of materials etc.) and send the data directly to the Blackbird-cloud.

The Blackbird-cloud app analyzes and visualizes the data in real time, which can be accessed from smartphones, tablets and PCs.

PRODUCTION LINE

PRODUCTION DATA
smartphones, tablets and PCs
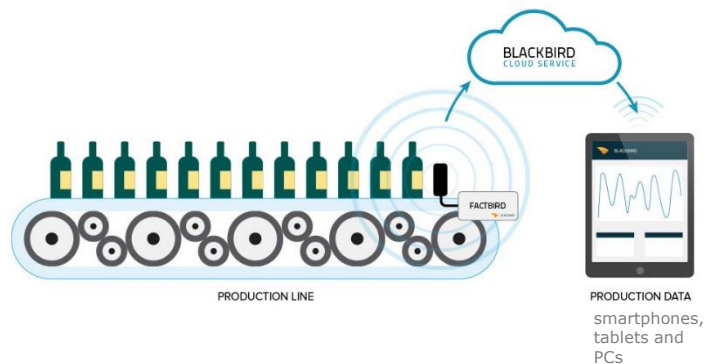
Software: cloud-based web-analytics for production optimization

Live production data & KPI's

Analog 4-20 mA signals & alarms

Time stamped video documentation

Stop cause analytics

OEE analytics

Batch & shift live dashboard

Hardware - Wireless plug and play devices to retrofit existing machines

FACTBIRD VIEW

FACTBIRD DIGITAL

FACTBIRD ANALOG

BLACKBIRD CHECK-IN

FACTBIRD PRO

SENSOR   PLC CABLE

PUSH BUTTON   iBUTTON READER   WIRETAP

Blackbird – selected customer overview

- Founded Sep 2015

- IIoT HW backed with SaaS model

- AWS IIoT Cloud structure

- 16 languages, installations in 27 countries

- +200 million data entries per day

- All development done in-house in Copenhagen

- Largest customer - 360 lines

- Main shareholder Emendo Consulting Group

8

User case – Food industry - Chicken factory

Factbird digital

Quick implemenation was the key. Data is bringing insights.

- Production sites in Sweden, Finland and Denmark.
- CEO was frustrated to see the implementation of production IT system was taking so long... He saw Factbird at a meeting and set it up on the spot.
- CEO started to get the data = insights, and started to ask many questions.
- Now more than 30 Factbirds are installed in all the plants to count the number of the chickens.

User case – Pharmaceutical - Oversea factories

Factbird digital Factbird View Software customization

Mamaging remote factories (Algeria, Russia) with fresh data every day.

- Pharma industry has to have a local factory to be able to sell locally.
- As a part of the vertual factory project: managing remotely located facotries (Egypt, Iran, Algera, Russia...), Factbirds were installed in several factories.
- Now the customer can monitor each factory's performance every day with fresh data from Factbird, consequently being able to cut down cost of travelling.

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User case – Automotive

Factbird digital ERP-integration

Factory is digitized and connected.

- The factory has more than 40 injection moulding machines and manual assembly stations but no data was collected.
- The customer was not happy with their production schedule system (Epicor).
- 40+ Factbirds were installed and Factory Overview-custom dashboard was developped.
- Customer's Navision system is integrated to Blackbird system.
- The mass production is now seamlessly managed with the live data integrated with customers ERP-system.

User case – Food - Ketchup, frozen food production

Factbird digital
Factbird analog

Started to use one Factbird. Now they are using 13 to monitor critical processes.

- The customer started to use Factbird to monitor the production units in real time.
- His colleague from quality department started to use Factbird to monitor the tempratures of the baking ovens.
- Another colleague from utility department started to use Factbird to monitor water consumption and found out there was a leak and wasting lots of water every month.

Water consumption - L/min

ID: 207

210 5/min

10:10   18:10

| LIVE GRAPH | HOURLY | HISTORY | REGISTER STOPS | STOPS ▾ | REGISTER BATCHES |

User case – Agriculture - Vegitable seed production

Factbird digital

Improved production capacity by 40% to meet the production order increase.

- The customer needed to meet the order increase by 40% urgently.
- The cleaning line was not equipped with a modern SCADA/PLC system. It is very expensive to get its production data. So Factibird was installed.
- It made it possible for the customer to analyze the data on the clearning line and to optimize the asset to achieve the production increase.

User case – Meat processed food production

Factbird analog

Being able to monitor the tempareture of the cooling room remotely.

- The cooling room tempareture went down in the weekend and wasted the matereial.
- The customer installed Factbird to monitor the temprature in the cooling room and set the alarm on Blackbird software, which sends an sms/email when the temprature goes out of the range.
- Now the customer does not have to worry about the cooling room's condition, as Blackbird will send an alert if anything is wrong.

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More cases and resource / support tools
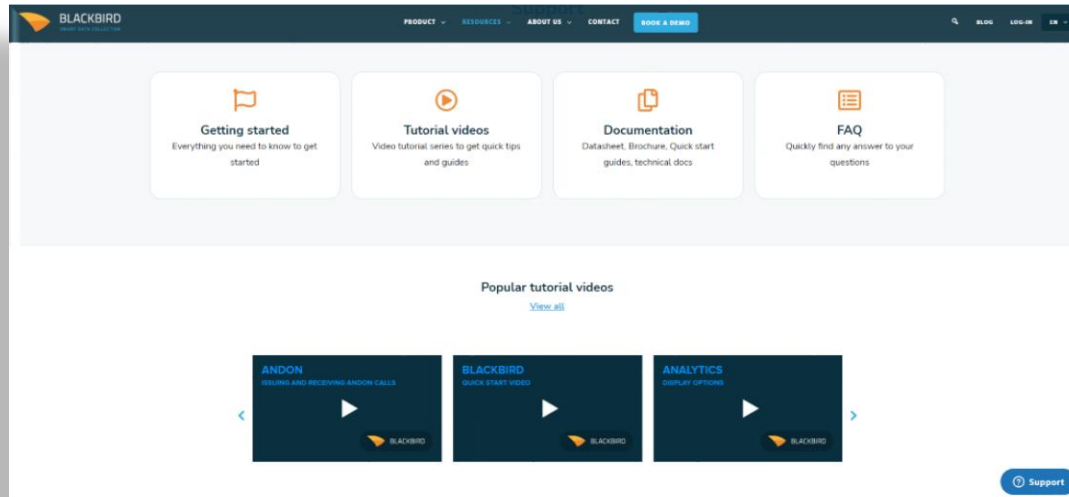
What you get for the fee you pay

Monthly license fee

Hardware one-off fee

Cloud Software License Included items	
Production data from sensors	✓
24/7 access to production data	✓
Hotline support – by email and phone	✓
Cloud server space	✓
User account – as many as you need (up to 100)	✓
Backup of sensor data: 3 years during license period (Video option, 1 month storage)	✓

Cloud Software License Included functions	
OEE	✓
Real time live graph	✓
KPI stats and trend analytics	✓
Hourly efficiency analytics	✓
Downtime monitoring and stop cause registration page	✓
Downtime pareto chart	✓
Batch management function	✓
Batch overview dashboard	✓
Quick performance reporting	✓
Alarm-email unlimited, SMS 100/mo	✓

Hardware fee Included items	
Factbird with SIM card or WiFi module pre-assembled	✓
Sensor and a cable	✓

Thank you for your time

More information on www.blackbird.online & www.emendo.com

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Fast track to Industry 4.0 - How?

Watch our video – John is a production manager
(click below picture or go to https://youtu.be/rg4jIYzS0Yg)