







factbird.com

USER GUIDE Production Insights

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USER GUIDE Administration - Overview

Administration

Elements

- Users: Create user
- Groups: Manage user groups
- Roles: Manage user access and permissions
- Sensors: Inputs e.g. sensors, cameras, PLC cables
- Devices: IoT boxes claimed to your system
- Lines: A line consists of one or more sensors

FACTBIRD	USERS	GROUPS		ROLES	SENSORS	DEVICES		LINES	
Factbird-demo									
Search for Email or name	First name	Last name	Groups	Created		Last Modified	Status		
factbirdblackbird@gmail.com	Blackbird	US	1	7/18/2022, 4:48 PM		7/18/2022, 4:49 PM	CONFIRMED		
						Row	s per page 10 👻	1 - 1 of 1 <	1

USER GUIDE Administration - Claim Devices and Add Sensors

Claiming devices

1

Claim your devices in Factbird

- 1. Go to "Administration" page.
- 2. Go to the "DEVICES" tab and click the + icon.
- 3. Type in your "Device ID" and click "CLAIM".

	FACTBIRD						FACTBIRD ONBOARD	ING COM	0
(10)	Factbird-Onboarding	USERS	GROUPS	ROLES	2 SEM	DEVICES	LINES		
⊛ ∹{	Q Search for device	Claim device			×				Q
	Hardware ID か	Device ID *					Status		
		_							
			Factbird* Duo DeviceID: 123404 MIF MAC: 0122456739248 Version: XX Input: DC 24/0714	Factbird ApS Controles FCCID: PM10985 Controles FCCID: SP11FIBAMMENT FCC C C <u>S</u>		0 (< <		2	
					3			+	
••			-	_	CLAIM				
в									
E									

4. Device successfully claimed!

	FACTBIRD		
61 4	blackbird-demo	USERS OROUPS ROLES SENSORS DEVICES LINES	ORGANIZATION
(···)	Search for device		م
÷	Hardware ID 🛧	Claim device ×	Status
	0252ad5519842301		⊿
	04c843c4bde36cbe68b94049f4f65eda	C Device successfully claimed!	
	0a8154e6e94e2301	Factbird Duo (ID: 5cb786a33dd42301). To start using your Factbird please add a sensor.	
	0acff72c34b92f0af7813b97ec323053		⊿
	0af07840e0f22301	Factbird Duo	⊿
	1335	Factoird	⊿
*	1375	Factord	
E	1855	Factbird	⊿ +

Adding sensors

2a

Add sensors

If you have just claimed a device, start from this pop up.

- 1. Click "SET UP SENSOR".
 - 2. Click Port.
 - 3. Type in "Name and Description" and click "CREATE SENSOR".



USER GUIDE Administration - Claim Devices and Add Sensors

Adding sensors

2b

Add sensors

If you already have a device claimed:

- 1. Click "DEVICES" tab from Administration page.
- 2. Click on the device and then click on "ADD SENSOR".
- 3. Click Port-1 or Port-2, type in the name and the description, click "DONE".
- 4. It will be marked as "Created".

You can view the sensor on "SENSORS" tab.

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0013d1506	b4f2301			
STATUS Onine BOOTLOADER VERS 3.00		Set up sensor	TIME X	
Device Config		3 Port - p1_1	× 2	
SENSORS	Q Search	Port - p1_2	~ ADD SEN	SOR
	Tag name 🛧	Port - p2_1	Actor	is.
		Port - p2_2	Resigning 5 × 101 (1)	
			DONE	

FACTBIRD				0
Blackbird ApS	Set up sensor	×	ORGANIZATION	
0013d1506b4f2301 🗡 🛢	Port - pl_1			
STATUS	Name* Filler 1			
востьское меняюм	Description Filler 1 counts			
Device Config	Permitted Groups Select additional groups that may access this sensor			
SENSORS Q. Search	CREATE SENSOR		ADD SENSOR	
Tag name ↑ 1			Actions	
	Port - p1_2	{	Rowsporpage 5 × 1 of 1 < 1 >	
	Port - p2 2			
	Do	ONE		

USER GUIDE Administration - Set up Wi-Fi

Getting the Factbird device online with Wi-Fi

Preparation

- Depending on your IT policy, when connecting via Wi-Fi, your IT department may need to authorize the device to access the company network (e.g., by whitelisting it). The information <u>here</u> can be shared with your IT department to help ensure a smooth installation.
- To set up Wi-Fi, ensure the Factbird device is connected to the mobile network by checking if the device's status LED remains solid green. Only after ensuring that the device is online, you can move on to the next step and set up Wi-Fi.

2

Wi-Fi setup

- 1. Navigate to "Administration", then select "DEVICES" tab.
- 2. Click on the device you wish to connect.

	FACTBIRD							TICIANA TIGA®FACTBRD.COM	0
81 く	Blackbird ApS	USERS	GROUPS	ROLES	SENSORS	DEVICES	LINES	ORGANIZATION	
(1-1) 😧	Search for device								۹
ä	Hardware ID \uparrow		Туре		Nar	me		Status	
	0013d1508b4f2301		Factbird Duo						
	00187eb94d2a2301		Factbird Duo					0	
	018fcee08a082301		17						
	02dfa77f6abe4e458a11bd0758b40387		Factoird Duo					4	
	05018c0e47dc4f5ab28403b80bbbb4a8		PLC					Ø	
1	0778e355c18d2301		Factbird Duo					0	
U	07863a4c8d322301		Factbird Duo					⊿	
	078e3c0fdb834c08b748f2a4b7585c87		Factbird Duo					Ø	
	07b38789f5e82301	1							

- 3. In "Device Config", go to the "WIFI" tab.
- 4. Click on "ADD CONNECTION", input the Wi-Fi name and password, then click "SAVE" and enable Wi-Fi.
- 5. The status icon will change once connected and the Factbird device's LED changes from steady green to steady blue.



USER GUIDE Administration - Create Users

Creating users

Create new users

- 1. Go to the "USERS" tab on "Administration" Page.
- 2. Click the + icon.
- 3. Fill out Email and choose "Groups" by clicking +. e.g. Choose SUPER.
- 4. Clicking "CREATE USER" sends the welcome email to the user.
- 5. Once the user activates the user account from the welcome email, it shows **"CONFIRMED"** on the USER tab.



USER GUIDE System Configuration - Sensor Settings

Sensor settings

Go to sensors settings

- 1. Click on "Sensors" from the menu on the left side of the view
- 2. Click on the three dots and select "Sensor settings"

	Type to search				✓ Tef1 →	•
posimin w	Machine Trial		2	Register Stops Analytics Sensor settings	1 of 1	¢
	0 08:00AM 09:00AM 10:00	DAM 11:00AM 12:00PM (Date	01:00PM 02:00PM 0:	зобри		

Set production speed

Now that you are in "Sensors settings", go to the "SPEEDS" tab and set your Validated speed and Expected speed.

	Factbird		BLACKBIRD US IRDBLACKBIRD@GMAIL.COM	•	0
Ľ,	A Turk and		territori e		
((+))	Manage sensor settings			×	
0	BASIC INFORMATION	Validated speed in pcs per minute * 200			
	SENSOR SETUP	The equipment is validated to run at 0.3 sec/pcs			-
	SPEEDS	Expected speed in pcs per minute * 100			
	STOPS	The equipment is expected to run at 0.6 sec/pcs All fields marked with an astenik (*) are required.			
	STOPS MAPPING				
	LINE SETUP				
	MISSING DATA ALARMS				
44 603		X discard changes 🗸	UPDATE SENSOR CONFI	GURATION	
E					
E					, I.I.

USER GUIDE System Configuration - Sensor Settings



- Validated speed (green line): Max production speed = Highest speed (used for calculating speed loss and OEE)
- Expected Speed (black line): Expected production speed while running (used to calculate target)

Set up custom label for live graph and choose visualization options

Go to "DATA" tab to customize visualization.

FACTBIRD			
Q Type to search			19at53 < 1 2 3 7 →
Qa7e2ca-p1	♡ :	11de154d3ff32301 Test device - Dielete if found	⊿ :
200		200	
a contraction of a cont		т пок зак нак до ти <u>и</u> X	200M 0230M 1000M 1230M 1100M 1130M 1200M
26d8b27-p1 BASIC INFORMATION	Data unit * Pcs		♦ :
SENSOR SETUP SPEEDS DATA	Custom label of the data unit PCS Chart data fitter		_
CARDAM OSCOM OSCIM	Average speed Displays the average speed over the selected scale		водам сезідам Ісодамі Ісодамі Ігодам Ігодам Ігодем
3240381-p1 STOPS MAPPING	Chait speed scale pcs/min	•	♡ :
200 MISSING DATA ALARMS			
0	Date	X DISCARD CHANGES 🗸 UPDATE SENSOR CONFIGURATION	DOGAM ODJIGAM TOJGAM TOJGAM TIJGAM TIJGAM TZIGPN
38dd6e9-p1	♦ :	58aa5ff port 1 test device sterre	♦ :
100		200	
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- Data unit: Counter is Pcs.
- Custom label of the data unit: e.g. Pcs, bottle, pack, foot.
- Chart data filter: How you want to visualize data on the graph. "Average speed" is recommended for counter sensors.

USER GUIDE System Configuration - Sensor Settings

-		$\Lambda \Lambda \Lambda$
	Manage sensor settings	
	BASIC INFORMATION	Enable finding stops 0
10:00AM	SENSOR SETUP	Value threshold for when the sensor is thought of as stopped *
	SPEEDS	Producing less than 0 pcs per minute will be considered a stop.
	DATA	Minimum stop duration in seconds * 10
igest Non St	STOPS	All future stops will need to be at least 60 seconds long before it is defined as a stop. The minimum length of a stop is defined by the version of your Factbird.
		Stop registration threshold in seconds * 10
le Time	STOPS MAPPING	You will only be prompted to register stops that are 180 seconds or longer.
ie ruite	LINE SETUP	Subtract cycle time from stops
	MISSING DATA	All fields marked with an asterisk (*) are required.

Key parameters:

• Minimum stop duration in seconds:

The sensor will start logging a stop if a count is not detected for more than the value in "Minimum stop duration in seconds".

• Stop registration threshold in seconds:

The user will be prompted to register stop causes if stops are more than the value in "Stop registration threshold in seconds". Any stop shorter than this threshold will be automatically registered as "Micro-stop"

• Example:

If a sensor does not detect a count for more than 60 seconds (60 in "Minimum stop duration in seconds"), the system will start logging a stop. If stop continues for more than 600 seconds (600 seconds in "Stop registration threshold in seconds"), the system will prompt the user to register a stop cause.

Subtract cycle time from stops toggle:

Cycle time subtraction works by subtracting the cycle time before determining whether there is a stop in Factbird. The cycle time is derived from the "**Validated speed**" of the sensor, batch, or product. Examples are:

- In the case of long cycle time production (e.g., 15 minutes for one product, 30 minutes for another), using this function with the batch function enables you to detect stops by product.
- In the case of a fast production line (short cycle time), using this function enables you to calculate downtime more precisely. For example, instead of logging a stop for 10 seconds, you subtract a cycle time of 6 seconds and log the stop for 4 seconds.

5

Confirm the sensor setup

Go to "SENSOR SETUP" tab, confirm the setup.

- "Data multiplier": The number in this field is used to multiply the sensor value.
- "The type of wiring for the attached sensor": Choose the type of the sensor connected.
- "Debounce value" (applicable for counter): A debounce value of 5000 µs (5 milliseconds) is set by default. A debounce value of 5000 µs (microseconds) means the device will ignore signals shorter than 5 milliseconds.

BASIC	Data multiplier * 1		
SENSOR SETUP	Future incoming data from the sensor will be multiplied by 1. Old data will n batches / products as well	of be affected. If you change this value, remember to change larget line speeds for	your
SPEEDS	The type of wiring for the attached sensor PNP	•	۲
DATA	The mode of the attached sensor Counter	÷	۲
STOPS	Debource velue in us * 5000		
STOPS MAPPING	Rolover value *		
LINE SETUP	03330		
MISSING DATA	Counter can reset (e.g. on power off or manually)	Rolover threshold * 300	
ALAGAN	All fields marked with an asterisk (*) are required.		
	Energy Meter		
	Enable if the sensor is an energy meter. The sensor will not have a stops find	er and the data will be shown as a consumed ressource.	

- "Rollover value" "Rollover threshold": For Factbird DUO, please leave the default values for the Rollover value (65536) and Rollover threshold (300) unless adjustments are required for custom hardware or a specific use case. The Rollover value is defined by the maximum number that can be counted by the hardware. The Rollover threshold is defined by the maximum number that can be counted within one sample and used by the system to discern instances of hardware power cycling or rollovers.
 - For a specific case, e.g., using a PLC:
 - Rollover value: In the case of a 16-bit counter, the maximum value it can count is 2^16 (two to the power of sixteen). The Rollover value should be set to 65536.
 - Rollover threshold: If the line-validated speed is 100 pcs/min and the sample rate is every 5 seconds, the maximum number within one sample is 100 pcs / 60 seconds× 5 seconds=8.33 pcs. Normally, it is recommended to double the value to get a good threshold. In this case, 16.
- The "Counter can reset" checkbox should be always selected for Factbird DUO.



Validate the data

- 1. Confirm "Produced" amount in KPI. This shows the number of items produced.
- 2. Confirm output is lower than the green line "Validated speed".

actbird					
← Ke Factbird Live Demo	LIVE	REGISTER STOPS BATCHES	ANALYTICS C	EE TRENDS SENS	iors I
2 ⁴ 1H 4H 8H 12H	24H 48H 72H 1W 🕅	n			- -
< 1000 C				<u> </u>	
Botherin					
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uced @	Number of Stops	Average Stop Length @ 34.8 min	Downtime 69.7 min	Value Adding Time	Value Adding Time While Mann
Mean Time Between Failures	Werage Produced Per Minute	Average Produced Per Hour	Average Produced Per Day 1658759.5 Bottles/day	Average Produced Per Week 11611316.6 Bottles/week	Cycle Time 6

- Green line = Validated speed
- Black line = Expected speed

Understanding lines and sensors

What is considered a 'Line' in Factbird?

- A 'Line' in the Factbird system consists of one or more sensors.
- One line has one OEE and one batch, no matter of how many sensors it consists of.
- Every line has one main sensor for bottleneck and one other sensor to supplement the main sensor's data analysis.
- Line is normally a combination of equipment where the product flows without physically leaving the line.



Sensor for monitoring vibration, e.g., of labeler

Sensor for counting gross numbers

USER GUIDE System Configuration - Create Lines

Creating lines

Cre

Create lines

- 1. Click on "Lines" from the menu on the left side of the view.
- 2. Click on "GET STARTED" or "+".
- 3. Follow the steps to create a line.
- 4. If you have multiple sensors, one of which is a scrap counter, you can select the sensor as a scrap sensor in the "**Line Composition** (optional)" step.



Setting up shift schedule

Set up shift schedules

Click on the three dots of a line and select "Schedule".





Create shifts

Click anywhere on the calendar to create a daily shift for that week; this will recur every week.

Ĩ	FACT	BIRD						
	Line s	chedule						
	Target fo	or week 45 ③			Produced: 60000 🖌 Number	of batches: 12 / OEE ₁ : 75 / OI	EE ₂ : 55 / OEE ₃ : 52 / TCU:	50 🖌 Main OEE OEE1 👻
	K	> 6-12 NOVEMBER 2023						IMPORT SCHEDUL
		Mon	тые 7	Wed 8	Thu 9	Fri 10	Set 11	sun 12
	1:00 AM - 2:00 AM - 3:00 AM -	Night Shift Too Aki - 5:00 Aki	Night shift 100 AM - 6:00 AM	Neiges Shift 100 AM - 600 AM	Night Brit 100 AM - SOD AM	Manning Biett 100 AM - 500 AM		
	5:00 AM -	Day Shift 6:00 AM - 2:00 PM	Day Shift 6:00 AM - 2:00 PM	Day SNR 810 AM - 210 PM	Лау Бил 690 АМ - 200 РМ	Day Shift 600 AM - 12:00 PM		
	8:00 AM -							
	10:00 AM							

FACTBIRD

USER GUIDE System Configuration - Set up Shift Schedules and Shift Dashboard

Fill in the information to create the shift and click on "CREATE".

Create shift		×
Title		
t Title		
A title is required!		
Start day Start hour	Start minute	AM
Start hour of the shift	Start minute of the shift	
End day End hour	End minute	
Monday 2	0	AM
End hour of the shift	End minute of the shift	
Creating it in the active schedule will add it to all weeks the schedule is valid in (week 40, 2023 and forward).		
	X DISCARD CHANGE	S 🗸 CREATE

Visualizing real time shift progress

= FACIBIRL)		NR+SALESDEMO@BLACKBIRD.ONLINE ENGLISH (US)
Type to search			
30H 1H 4H 8H	12H 24H 48H 72H 1W		1-2 of 2 < 1 >
Factbird Live Demo Manufacturing Intelligence Solution		S New Demo Line Machine Uptime er Stops	6
		Batches Analytics OEE	1100AM 1270PM 0100PM 0200PM 0300PM
	Date	Line settings	Date

The shift target and progress will be automatically calculated and visualized.



Display Dashboard on a flat screen



USER GUIDE Live Flow Monitoring

Monitoring live data

Live page

- 1. Click on "Lines" from the menu.
- 2. Choose the desired line.

(iii) 🐇 Factbird Live Demo			
Manufacturing Intelligence Se	stution	S : Kew Demo Line Machine Uptime	
50		,, _,, _	
0 01:30PM 02:00PM 02:30F	M 03:00PM 03:30PM 04:00PM Date	04:30PM 05:00PM 05:30	эм озноорм озноорм о4ноорм о4ноорм о5го Date
		Л	1-2 of 2



Monitor live flow and KPIs

- 1. Choose a time range, such as "Last 24 hours", "1 week", or "Morning Shift" (click the calendar icon for more presets).
- 2. Zoom in on the live graph by dragging and dropping.
- 3. View various KPIs below the live graph. KPIs are dynamic and automatically calculated based on the selected time range.
- 4. Hover over the "?" mark on each KPI for more information.

← C Factbird Live Demo Manufactures intelligence Sourcen		LINE REDISTER STOPS BA	ICHES ANALYTICS OEE	TRENDS SENSORS	
80M 1H 4H 8H 12H	24H 48H 72H 1W 🛱 🖛				<u>c</u> .
Selected: 9/11/2023, 10:51 PM to now					
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	V V				
V					
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V INSIDE INSIDE INSIDE INSIDE + ANAPOLINICAE duced @ 487894 Bottes	Namber of Stops 4 stops	Average Stop Length @ 24.0 min	Draw Story Shar Star Star Star De eff & Des tays of the & Des weathing Downtime 95.0 min.	Value Adding Timee	Value Adding Time While Menned 80.0 %
teced et allocations to allocation and the second s	Namber of Stops Average Produced Per Minute	Average Stop Length @ 24.0 min Average Stop Length @ 24.0 min Average Produced Per Hour @	Density approx believe believe between believe been been been been been been been b	Value Adding Time e B0.0 % Average Produced Per Week e	Value Adding Time While Manned 80.0 %
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V Leaders many many Leaders many Leaders Leade	Number of Stops Average Produced Per Minute 0106.4 Bottestreinin Sorap	Average Stop Length 0 Average Stop Length 0 24.0 min Average Stop Length 0 09966.5 Bottseyhour Stops Rate	brown assess brief brank brown and Der Der Store trays on that Brownsteines Downtime 96.0 min Average Produced Per Day 1463675.8 buttes(day Yrold Rate	Value Adding Time e 80.0 % Average Produced Per Wesk e 10245730.3 Bottles/wesk Export Chart Data	Value Adding Time While Manned 80.0 % Cycle Time 0.1 sectionstee Export RPI Data

• Real time production output: X axis - time, Y axis - volume

Creating stop causes

1

Create stop categories

- 1. Select the line you want to configure.
- 2. Go to "**REGISTER STOPS**" page.
- 3. Click the purple pen icon.
- 4. Click "NEW CATEGORY" and create a category. e.g. Machine issues
- 5. Check \checkmark icon to save

- FACIDIKD	2		TIGAQULAC	KBIRD ONLINE	ENGLISH (US) 🌐	0
Kuschine Liptome LIVE	REGISTER STOPS	BATCHES	ANALYTICS	OEE	>	1
30M 1H 4H 8H 12H 24H 48H	72H 1W 🛱 🖛			ļ.	C • *	-
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= FACTBIRD			TIGAQUELAC	ticiana Xeirdonline	ENGLISH (US) 🌐	0
FACTBIRD K New Demo Line Machine Uptime	RECISTER STOPS	BATCHES	TRABULAC	TICIANA XEBHOLONUNE	ENGLISH (US) 🌐	• •
FACTBIRD New Demo Line Archino Listerio 30M 1H 4H Selected: 10/2/2023, 9:35 4	REGISTER STOPS	BATCHES	TION RELAC	TICIANA XERILONINE OEE X	ENGLISH (US) ⊕	
FACTBIRD Machine Uptere Manage stop causes Machine issues	REGISTER STOPS	BATCHES	TRANSPER OF		ENGLISH (US) ()	
ERACTBIRD New Demo Line Machine Uptime Machine issues	REGISTER STOPS	BATCHES			ENGLISH (US)	E E SDFM
ERACTBIRD New Demo Line Auchino Liptonic Au	REGISTER STOPS	BATCHES	TRANSLYTICS		ENGLISH (US)	Solution

2

Create downtime reasons

1. Click the "+" icon in the category to create a downtime reason.

=	FACTBI	RD				TIGAQBL	TICIANA ACKEIRDONLINE	ENGLISH (US) 🌐	0
÷	K New Demo Lin Machine Uptime	• • <	LIVE	REGISTER STOPS	BATCHES	ANALYTICS	OEE	>	
30M	1н 4н	Manage stop o	auses				×	<u>c</u> -	-
Select anout 10	ted: 10/2/2023, 9:38 /	- Machine	issues			. ھ	1+		N
No.	0 OB-45AM TO DO	O XLSX	XLSX		late:	CATEO	N CLOSE	at 15PM dita	анм
MACI	HINEISSUES								
			No s	top causes has been crea	ted for Machine issu	es.			

- 2. Type in the stop cause name.
- 3. Select the correct type from **"Stop cause type**" e.g. Loss during operation.
- 4. Click "CREATE NEW STOP CAUSE".

	FACTBIRD			SHU-YI HUANG 🕀 🕐
mi	← C Demo Reference Line 1 つ	Create new stop cause		X OEE TRENDS
Ľ,	PLEASE DON'T CHANGE: This is a d	Stop cause information	Stop cause category	
((*))	30M 1H 4H 8H 12	Stop cause name *	Others	<u>C</u> · · ·
0	Selected: 11/13/2023, 2:10 AM to now	Name of the stop cause	The category that the stop cause is a part of	ANDON (2)
, it		Description	Require initials	
	Veekend 50k	Description of the stop cause (optional)	Require comment	
	bcs/		Enable counter-measure	
ع ہ	0	✓ Translations	+	
	3	✓ Changeover targets	+	08.30AM 09.00AM 09.30AM 10.00AM
		Stop cause type		
	RÜSTZEITEN STOPPZEIT OTHERS	No activity at line This category is for no activity at line - for instance weekends, days	holidays, non-schedules hours and extra-ordinary non-manned	
	1 MORNING ASSEMBLY 2 PRODUCT (Non-production activities This category is for non production activities - for instance me	etings, training, validation and planned maintenance	
	Start ↓ 11/13/2023, 9:11:26 AM	Batch specific non-operation This category is for batch specific non operation activities - for	r instance batch changeovers and cleaning between batches	
	11/13/2023, 8:59:21 AM	O Loss during operation This category is for unplanned stops during operations - for in	stance sudden failure of a machine.	
	11/13/2023, 8:57:13 AM			
	11/13/2023, 8:47:38 AM		X DISCARD CHANG	
E	11/13/2023, 8:45:09 AM	11/13/2023, 8:45:37 A	M 28sec	

Mass importing is available for users who already have a list of downtime categories/causes.

Registering causes on detected stops

Select unregistered downtime (indicated by a red bar with no text)

- 1. Navigate to your desired line then click the "REGISTER STOPS" tab.
- 2. Select downtime by clicking the red bar.





Select a downtime reason and complete registration

1. Navigate the categories just below the graph, then choose the correct downtime reason

2. Click "REGISTER STOP"



USER GUIDE Analytics

Downtime analytics

Downtime analytics

- 1. Navigate to your desired line then click the "ANALYTICS" tab.
- 2. Select a time range e.g. last 24 hours, morning shift etc..
- 3. Select a chart type.
- 4. Click on a bar to see the breakdown.
- 5. Click a column to sort the list of stops. e.g. Duration to see the longest stops.
- 6. Filter stops as required.



Hourly count chart: Shows analytics and issues for each hour Scatter plot: Shows how frequently issues are progressing Scrap reasons: Shows a distribution chart of scrap reasons

OEE analytics

Overall Equipment Efficiency (OEE) analytics

- 1. Navigate to your desired line then click the "OEE" tab
- 2. Select a time range e.g. last 24 hours, morning shift etc..
- 3. Filtering by product in the search field provides SKU specific OEE.



- The gear icon 🔹 allows to type in OEE targets on OEE meters.
- The "?" 📀 shows how various OEE metrics are calculated in the Factbird system.
- Scrap is calculated automatically as quality loss. Scrap sensor can be set up on "Line Settings".

For more information on calculating OEE, please visit our website.

OEE complete guide is available here.

USER GUIDE Analytics

KPI trend analytics

3

Trend of Key Performance Indicators (KPIs)

- 1. Navigate to your desired line then click the "TRENDS" tab or any KPI on "LIVE" page.
- 2. Choose a KPI you want to see over time by clicking on "**selected statistic**" e.g. OEE, produced, downtime.



Choosing "All" allows analysing correlation between KPIs.



USER GUIDE Analytics

Scheduled reports

4

Scheduled reports

Built-in scheduled report capability schedules PDF performance report to selected emails at desired times.

- 1. Select "Scheduled reports" from the menu
- 2. Click "+" to add report
- 3. Select "Line" in the "Create report for" dropdown
- 4. Select desired line & report type.

e.g. Selecting "Stops by last shift" generates a shift report sent out every time a shift ends.

- 5. Input report name and description
- 6. Click "CREATE"

= FACTBIRD	Create new report	×	• 0
Reports © 3			
(m) Line	Factbird Live Demo	•	
0	The type of entity to create the report for		
Sto	ps by week Vame *		
-	The type of report This field is required		
Stops by last shift			
Stops by day	scription		
Stops by weak	This field is required		
Stops by week	l		
Stops by month	Timezone Europo/Copenhagen	*	
Stops by last shift			
	Select stop filters		
	Batch-specific Non-operation Loss During Operation Non-production Activities No Activity at Line		
	monuteu sudi types		
	Repeats		
	Monthly 12:00 PM	6	<u></u>
	1	CREATE	
p		× CLOSE	
E			

7. After creating the report click the arrow corresponding to the report to add subscribers (email that will receive the report)

Reports ©		LINES	LINE GROUPS CUSTOM	тофистикалом 🥹 О
Search				
Report Name	Туре	Scheduled Time	Number of subscribers	
 Line Name: Factbird Live Demo 				
> Test 6	Stops by day	Daily, At 12:00 PM	0	/ 🗠 PDF
Test 3	Stops by week	At 12-00 PM, only on Monday	0	X 0 PDF
Email		Language		+
		No subscribers		
				0-040-0
> Name: Test für DBMO (Wochenbericht)	Stops by week	At 12:00 PM, only on Manday	ō	
				+

USER GUIDE Batch Set up and Management

Creating products

What is a batch?

PO or a work order of a product with planned production amount.



Create products

- 1. Navigate to your desired line then click the "BATCHES" tab
- 2. Click "+" to:
- "Manage packagings": Unit of products such as pcs, bottles, can, boxes. Pcs is default.
- 3. Click "Manage products"

💪 Q branch 👻			LIVE	REGISTER STO	BATCHES	OEE TREND	5 SENSORS					1
Filter batches												×
State Batch/PO number	Product name	Planned start	Planned stop	Actual start	Actual stop	Estimated time of completion	Planned amount	Actual produced	Avg. speed pcs/min	Expected speed pcs/min	Links	Actions
					No batches						Manage control	
CSV 🛆 XLSX										Rows per	Manage p	roducts

4. Click "ADD PRODUCT" and fill in the required fields

5. Click "CREATE PRODUCT"

and the second s	FACTBIRD					TSAQUAC:	entrante 🕀 🔘
el Organization	e Chanch -						1
Sensors Consolidated lines	C Prescaline.						*
Andon							Actions
Cockot		Create product		×	l.		
Manage products		Name *	Validation upond * 0 The maximum line upond when making this	pcs/min			×
Search products		Rem number *	product Aspected apoes positiver * 0	pos/min *			
Name 🛧	Itom number Validated speed (posine Expected speed positie Pa	Packaging *	The expected average live specer including stages when making this product Data multiplier *		Edit		
		The packaging of the product	Future incoming data from the sensor will be multip (statistic-sensor)	lied by			
		Product parameters + ADD PARAMETER	G			Rows per page 10 * 0 c r	
-		All fictors marined with an automotic (*) are required.		CREATE	PRODUCT	X	ADDPRODUCT
			× close				
Administration							

USER GUIDE Batch Set up and Management

Creating batches

2

Create batches

- 1. Click the "+" icon and click on "Add batch"
- 2. Select the product from the dropdown menu and fill in the required fields
- 3. Once done, click on "CREATE BATCH"

			>
Product name or item num	ber		•
Batch/PO number *		Amount *	
PO I Identification number for the batch		The planned amount of items to be produced during the batch	- I. speed /min Acti
Manual scrap	¢	Comment	
Scrap during batch that is not recor	ded by scrap sensors on the line		
Schedule			
Planned start * 14/11 - 2023, 11:28 Planned start time for the batch			1-0 ot 0 C
Actual start	RESET	Actual stop	
		Actual stop time for the batch	
Actual start time for the batch			
Actual start time for the batch Speeds			
Actual start time for the batch Speeds Validated speed *		Expected speed pcs/min *	
Actual start time for the batch Speeds Validated speed * The equipment has a maximum of () sec/pcs	Expected speed pcs/min * The equipment is expected to run at 0 sec/pcs	
Actual start time for the batch Speeds Validated speed * The equipment has a maximum of 0 Data multiplier *) sec/pcs	Expected speed pcs/min * The equipment is expected to run at 0 sec/pcs	

Created batches can be viewed on the list of batches.

Starting and stopping batches

3

Run a batch

- 1. Click the play icon to start a batch
- 2. Click **"CONFIRM"** on the pop-up window. The batch turns green = currently running batch

FAC	TBIRD											TICIANA TIGMØRACTURILOOM	•
< <u>⊀</u>	Factbird Live Demo			LIVE	REDISTER STOPS BAT	CHES ANALYTICS	OEE TREF	NDS SENSI	DAS				÷
Pitte													
State	Batch/PO number	Product name	Planned start	Planned stop	1 Tual start	Actual stop	Estimated time of completion	Planned amount	Actual produced	Avg. speed pcs/min	Expected speed pos/min	Links	Actions
Y Pend	ng 123456	BB Beer	9/11/2023, 2:05:30 PM	9/11/2023, 3:45:30 PM									1.6
✓ Done	123625123y	Factbirds	9/11/2023; 6:00:00 AM	9/11/2023, 4/25:00 PM	9/10/2023, 7 00:00 PM	9/11/2023, 3:00-29 PM		500000	838250	698.25	800	~ ili O 🗎	16
~ Done	6464	B8 Cider	9/4/2023, 1:45:30 PM	9(4/2023, 9-20-02 PM	9/7/2023, 8-08-00 AM	9/8/2023, 9:45-59 AM				814,24		~ ili O 🗉	/ 6
v Done	1681610	BB Soda	9/4/2023, 8:05:00 AM	9/9/2023, 7:09:51 PM	9/4/2023, 5:45:30 AM	9/7/2023, 9:07:59 AM		7864860	2439993			~ ili O 🖩	1.6
v Done	1524	BB Beer	8/31/2023, 2:15:00 PM	8/31/2022 10:00 00 00				500000	2978662	580.41	1000	~ ili O 🗐	/ 6
~ Done	234567768	88 Wine	8/25/2023, 1:32:00 PM	Are you su 8/27/202	re you want to start this i	batch? ×			3864438			≁ ılı O 🗎	/ 6
v Done	3445555 1	BB Wine	8/15/2023, 12:53:00 PM	8/19/202 Actual start: 9	nber: 123456 N12/2023, 8:35:34 AM	2	line and		2609	1304.51	1000	~ ılı O 🖽	/ 6
~ Done		BB Wine	8/15/2023, 12:53:00 PM	8/16/201		COI	NFIRM		992876	764.93	1000	∼ ılı O 🗎	/ 6
- Done		BB Soda	8/17/2023, 7:15:30 PM	8/17/2023, 8:65-30 PM	8/21/2023, 12:30:30 9%	0120/2023, IUN-SU AM						~ ih O 🗎	/ 6
v Done		BB Brend Roll	8/1/2023, 3:11:30 PM	8/1/2023, 4:48:54 PM	8/17/2023, 2:15:30 PM	8/21/2023, 12:30:29 PM		95416	3659706	647.16		~ ili O 🗎	/ 6
v Done	Live-Demo	Factoirds	8/17/2023, 8:43:30 AM	8/17/2023, 9:13:30 PM	8/17/2023, 3:45:30 AM	8/17/2023, 2:15:29 PM		450000	276534	438.94	600	≁ ılı O 🔲	/ 6
v Done		BB Bread Roll	8/1/2023, 3:11:30 PM	8/2/2023, 6:43:14 AM	8/15/2023, 4:45:00 PM	6/17/2023, 3:35-29 AM		931740	1543620	738.4		~ ili O 🗐	/ 6
v Done		BB Wine	8/15/2023, 12:53:00 PM	8/19/2023, 7/26/13 AM	8/15/2023, 12:53:30 PM	8/15/2023, 4:44:59 PM			2781			~ IL O E	18

Use the search bar to find batches by keywords

Stop a batch

- 1. A currently running batch is shown in green. Click on the stop icon to stop the batch.
- 2. Click "**CONFIRM**" on the pop-up window. The batch turns grey = completed batch

		LIVE	REGISTER STOPS BATCHE	S ANALYTICS	OEE TRE	NDS SENSOR			
Product name	Planned start	Planned stop	Actual start	Tual stop	Estimated time of completion	Planned amount	Actual produced	Avg. speed pcs/min	Expected speed pcs/min
BB Beer	9/11/2023, 2:05:30 PM	9/11/2023, 3:45:30 PM	9/12/2023, 8:35:30 AM	-	9/12/2023, 10:15:23 AM	100000	4180	1024.63	1000
Factbirds	9/11/2023, 6:00:00 AM	9/11/2023, 4:25:00 PM	9/10/2023, 7:00:00 PM	9/11/2023, 3:00:29 PM		500000	838250	698.25	800
BB Cider	9/4/2023, 1:45:30 PM	9/4/2023, 9:20:02 PM	9/7/2023, 9:08:00 AM	9/8/2023, 9:45:59 AM		500000		814.24	1100
BB Soda	9/4/2023, 8:05:00 AM	9/9/2023, 7:09:51 PM	9/4/2023, 5:45:30 AM	9/7/2023, 9:07:59 AM		7864860	2439993	539.52	
88 Seer	Confirm					× 000	2978662	580,41	
BB Wine	Batch/PO number: 123456			Comment		9677	3864438		
BB Wine	Actual start: 9/12/2023, 8:3 Actual stop: 9/12/2023, 8:38	5:30 AM 3:30 AM		Manual scr	ran	0441	2609		
88 Wine				Scrap during t	batch that is not record	-	992876	764.93	
88 Soda	× CANCEL					ONFIRM	357507		
BB Bread Roll	8/1/2023, 3-11:30 PM	8/1/2023, 4:48:54 PM	8/17/2023, 2:15:30 PM	8/21/2023, 12:30:29 PM		95416	3659706	647.16	
Factbirds	8/17/2023, 8:43:30 AM	8/17/2023, 9:13:30 PM	8/17/2023, 3:45:30 AM	8/17/2023, 2:15:29 PM		450000	276534	438.94	600
BB Bread Roll	8/1/2023, 3:11:30 PM	8/2/2023, 6:43:14 AM	8/15/2023, 4:45:00 PM	8/17/2023, 3:35:29 AM		931740		738.4	
BB Wine	8/15/2023, 12:53:00 PM	8/19/2023, 7:26:13 AM	8/15/2023, 12:53:30 PM	8/15/2023, 4:44:59 PM		5433222	2781		

USER GUIDE Batch Set up and Management

Visualizing real time batch progress

Visualize real time batch progress against batch target

- 1. Click on the three dots on the main navigation menu.
- 2. Click on "Batch Dashboard"

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÷	A F	actbird Live Demo			LIVE	REGISTER STOPS BATC	HES ANALYTICS	OEE TREM	NDS SENSO	85				Y	\vdots
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	State	Batch/PO number	Product name	Planned start	Planned stop	Actual start	Actual stop	Estimated time of completion	Planned amount	Actual produced	Avg. speed pcs/min	Expected speed pcs/min	Lirke [f]	Schedule Batch Dashbo)ard
	Runnin	g 123456	BB Beer	9/11/2023, 2:05:30 PM	9/11/2023, 3:45:30 PM	9/12/2023, 8:35:30 AM		9/12/2023, 10:15:23 AM	100000	4180	1024.63	1000	~ 11 C	Display Op	dions
	Done	123625123y	Factbirds	9/11/2023, 6:00:00 AM	9/11/2023, 4:25:00 PM	9/10/2023, 7/00/00 PM	9/11/2023, 3:00:29 PM		500000	838250	698.25	800	~ 11. 0	8 ×	•
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	Done	1681616	BB Soda	9/4/2023, 8-05-00 AM	9/9/2023, 7:09:51 PM	9/4/2023, 5:45:30 AM	9/7/2023, 9:07:59 AM		7864860	2439993	539.52	1000	~ 1h O	• /	
	Done	1524	BB Beer	8/31/2023, 2:15:00 PM	8/31/2023, 10:35:00 PM	8/31/2023, 2:13:30 PM	9/4/2023, 3:45:29 AM		500000	2978662	580.41	1000	~ 1h O	• >	

When you have a running batch (in green), the **"Batch Dashboard"** updates to reflect the current status and progress according to the batch specifications.



Display Dashboard on a flat screen



Setting up productivity alarms

What is Factbird productivity alarms

Setting up speed alarms in Factbid automatically sends alarm notifications via email and SMS.

- Stop alarm: Stop alarms can be set up based on the type of downtime and its duration.
- Speed alarm: Speed alarms can be set up based on the actual line speed compared to the target speed.

Create an alarm

- 1. Click on "Sensors" from the menu on the left side of the view
- 2. Click on the sensor you want to set up alarms for.
- 3. Click on the "**ALARMS**" tab and then the "+" button to create an alarm.
- 4. Fill out the form, "ADD NEW SUBSCRIBER TO ALARM" and click "CREATE ALARM".
- 5. Created alarms are shown on the "**ALARMS**" tab, where you can edit them and see the list of triggered alarms.

Image: Constraint of the constr		▼ 1·2 o(2 < 1
 2 2 2 2 3 4 4		
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This is a duplicated device, use this to test on production	S i New Demo 71	8
0	demo-U	
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		Mr III MA
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Date	Date	
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USER GUIDE

Setting up Andon

What is a Andon?

In manufacturing terms, Andon is a system which alerts support teams (maintenance, management) of a problem. Our Andon feature is standard for every user.

Create workers

- 1. On the menu click on "Andon"
- *Schedule:* Shift schedules for contacts who receive and resolves Andon calls. e.g. John is on mechanics shift every day.
- Workers: List of contacts who receive and resolve Andon calls.
- 2. Click on the "WORKERS" tab
- 3. Click on the "+" icon to add workers

FACTBIRD		CALLS SCHEDULES	WORKERS	#
(↔) 8 Name ↑	Email	Phone number	Role	Edit
4		No data		
			Rows per page	10 - 0.0000 (1

- 4. Type in name, email and phone number of a contact
- 5. Type in name for a "Roles" and click "SAVE". Click on the role.

¥2	Roles
Name *	Select a role that applies for this worker. A role specifies how and when to notify the worker based on its following escalation configuration.
Email	The delay is the time from when a maintenance call is made, until a notification is sent to the worker on the shift. Secondly, the taken delay , indicates the time delay before a notification is sent from when the maintenance call gets taken. The parameters only apply if a call ins't already resolved before the time is us. Clearing the field disables the parameter b
Phone Number	at least one parameter must be set per escalation.
	Role name Role sav

6. Click "ESCALATION +", enter "Delay" and "Taken Delay" as required and "Save".
7. Click "CREATE WORKER".

Create Worker	×
Name *	Roles Select a role that applies for this worker. A role specifies how and when to notify the worker based on its following escalation configuration.
Email	The delay is the time from when a maintenance call is made, until a notification is sent to the worker on the shift. Secondly, the taken delay , indicates the time delay before a notification is sent from when the
Phone Number	maintenance call gets taken. The parameters only apply if a call isn't already resolved before the time is up. Clearing the field, disables the parameter, but at least one parameter must be set per escalation.
All fields marked with an asteriak (*) are required.	Mechanics
	Delay 0 ⊕ minutes Taken Delay 0 ⊕ minutes Type Save
	7 CREATE ROLE +



- 1. On the menu click on "Andon".
- 2. Click on the "SCHEDULES" tab.
- 3. Click on the "+" icon to create a schedule.
- 4. Type in name and choose lines for the schedule.
- 5. Click "CREATE SCHEDULE".
- 6. Click on the view icon to go to "CALENDAR" and "WEEK TABLE".

1		FACTBIRD		SHU-YI HUANG SYH@FACTBIRD.COM	⊕	?
	1	Andon ③	CALLS SCHEDULES WORKERS			
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	ع0	testy	Bemo Refe Schedule Name *	G	•	1
			Lines for schedule Rever parage CREATE SCHEDULE	 ▼ 1:3 of 3 	3	÷

- 1. Click on the "CALENDAR" tab
- 2. Click on "+" to create shifts. Type in "Title" and choose times and click "SAVE".
- 3. Click on the desired shift to assign workers. E.g. John is on day shift everyday. Andon call notifications will be sent to John during his day shift.

	FACT	BIRD							NR+SALESOENIOIBBLACKERD.ONLINE 🕀 ⊘
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									- Jane Doe
4				Cre	ate new shift		×		- John Doe
				2	ate new shirt		~		– Salman
				Title *				Work	are liet
				Name of the sh	sift			Filter	with name, email or phone number
				Shift start time 2023/11/14	1 02:22 PM	Shift end time 2023/11/14 10::	22 PM		n an an an ann a' fhairt a' fha an thaisteann a' chrannann. Tha
		3		Demost					 blackbird.conveyor.ca@gmail.com
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									- John Mark
10		Afternoon shift		Afternoon shift	Afternoon shift	Afternoon shift	Afternoon shift	Afternoon shift	
E	S OC PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	

Triggering Andon calls



Call for help / Trigger Andon calls

- 1. Navigate to your desired line then click the "REGISTER STOPS" tab.
- 2. Click the "**ANDON**" button to trigger an Andon call. e.g. The machine jammed and I need help from mechanics to fix.
- 3. Select "Role": which team you need help from, type in initials and comment.
- 4. Click "**YELLOW CALL**" or "**RED CALL**". YELLOW means not urgent but as soon as possible, and RED means urgent.



USER GUIDE

Taking and resolving Andon calls

Andon dashboard showing the list of Andon calls and the status

- 1. Click "Andon" in the menu to access the Andon dashboard.
- 2. Click an "Action" button from the list to take the call. Type in "Initials" and click "TAKE"

Ar 😵	ndon 💿		CALLS	SCHEDULES	WORKERS			
30M	1H 4H 8H	12H 24H 48H 72H 1W		9	Filter Calls			
2 Action	Location	Call time	Taken time	Resolve time	Caller	Taker	Issue	Conclusio
	🖬 New Demo L	ine 02/10/2023, 11.04.52			rcs		test	
	I. New D	Andon Call		×	SLW		Test	
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~	🖬 New Demo L	Summary rcs at 02/10/2023, 11.04.52		27.	30 mwa	mwa	test	fix
	IT New 2	test		14.1	50 MWA	MWA	Test	Test
	🖬 New Den	Initials		1.0	2 MWA	mwa	test	XYX

3. Click a call from the list to mark it as resolved, once resolving the issue. Type in **"Solution"** and **"Initials"** and click **"RESOLVE"**

	Andon Call			×
	Taken by			
	ga			
	Summary			
	nf at 10/11/2023, 18.07.49			
	help on line 7			
	ga at 10/11/2023, 18.07.59 (le	ess than a minute)		
Sol	ution *			
Init	ials*			
		CLOSE	X RELEASE	✓ RESOLV

USER GUIDE Golden Batch

Golden batch

What is Golden batch?

Factbird Golden Batch automatically calculates the best-performing batch from complex performance data. It visualizes this information to support process optimization and establish a shared understanding of asset potential across the organization.



Identify the golden batch

- 1. On the menu, click on "Insights".
- 2. Click on "GOLDEN BATCH" tab.
- 3. Select the "Line" and "Product" for which you want to identify the golden batch. Click the "gear" icon to set the time period that the analysis should cover.

=	FACTBIRD			^	NAOKO RYDE NR+PLATFORM@FACTEIRD.COM	English (US) 🌐	0
mi	II Insights	GOLDEN BATCH	♦ ⁺ ASSISTANT BETA				
4 (ii)	Live Product Bottling Line #1 Factbird IPA					3	\$
*		Select a p	roduct.				
6							
4							
alle .							

- 4. The golden batch is identified based on OEE1 and visualized.
- 5. Clicking **"SAVE"** registers the batch as the golden batch. Clicking **"DISCARD**" disqualifies the batch and removes it from the calculation.

New OEE1 record! Save as current Golden Batch fo	r product US ?	× DISCARD ✓ SAVE
New Golden Batch Bottling Line #1 Factbird Pilsner		
Summary		Performance
Batch #	A3472	Bottling Line #1 300k
OEE 1	44.40 %	
Product	Factbird Pilsner	250k
Actual produced / planned produced	261391 / 260000	200k
Completion	100.53 %	2 150k
Duration	7h Omin	1004
Start	1/30/2025, 8:00 AM	
End	1/30/2025, 3:00 PM	50k
Shift	N/A	0
		10:00 12:00 14:00 16:00

2

Update the golden batch

- 1. If a batch performs better than the existing golden batch you've saved, the new golden batch and the current golden batch will be displayed side by side.
- 2. Clicking "**SAVE**" registers the new batch as the golden batch. Clicking "**DISCARD**" disqualifies the new golden batch and removes it from the calculation.



USER GUIDE Assistant (beta)

Assistant (beta)

What is Assistant?

Using the Assistant, you can simply ask questions and receive clear and easily understandable answers from Factbird to guide your actions. The Assistant uses AI technology to interpret and analyze complex data, combining various data within Factbird to provide actionable information quickly, saving you time and effort compared to doing it yourself.

Use Assistant (Bata)

- 1. On the menu, click on "Insights".
- 2. Click on "ASSISTANT" tab.
- 3. There are three preset questions you can click on, or you can write a question in the text field and click the arrow button.



2

Review the information displayed by Assistant

- 1. The Assistant analyzes the data and provides results with visualizations. It also provides recommended follow-up questions at the end to explore the analysis further.
- 2. Click on the "+NEW" button to start a new conversation.

Note: The Assistant is currently in beta and has access to the following data sources as of January 2025: Lines, Stops, OEE, Batches, and Products.



Organization and Factory overview

What is Organization and Factory overview?

The Factbird Organization helps you organize sensors and lines in a tree structure, making it easy to see where each sensor or line belongs. It includes a Factory Overview dashboard, allowing you to quickly gain a comprehensive view of your manufacturing at all levels—from total regional performance to individual sites, or from division totals to individual lines and assets.



- 1. Go to "Administration" page.
- 2. Go to the "ORGANIZATION" tab.

FACTBIRD							ENGLISH (UK) 🧲
blackbird-demo	USERS	GROUPS	ROLES	SENSORS	DEVICES	LINES 2	ORGANIZA
Organization							
Search ADD N	ew 🗸						
- 🖸 Company							
~ 🗀 Denmark							
~ 🗀 Copenhagen							
🗸 🗀 Emendo - Sundkaj	i						
🖧 Factbird Sales I	Demo						
💪 IDA Industri 4.0							
Head Quarter - Ny	ropsga						
🖧 Manual Process	ses						
🖧 New Demo Line	9			Select a unit to vie	w details		
💪 Smart Factory E	Ехро						
🗀 Køge							
-> 🖸 Germany							
~ 🗀 Berlin							
-							

USER GUIDE Organization and Factory Overview



Add a directory

Select the location you want to add a directory to and press "**ADD NEW**" and "**Directory**". The new directory will be put into the selected directory with the name "New directory".

Organization Search... Search... Company Directory Line Sensor Asset

Rename and save Organization Select the new ADD NEW 🗸 Køge Search. directory, rename it, 👻 🗀 Company and click save. Denmark Køge Copenhagen Description 👻 🗀 Emendo - Sundkaj Factbird Sales Demo IDA Industri 4.0 👻 🗀 Head Quarter - Nyropsga DELETE Kanual Processes 🔾 New Demo Line Smart Factory Expo 🗀 Køge - 🗀 Germany - 🗀 Berlin

4

Add line(s)

Select the directory you want to put lines into and click "**ADD NEW**" and "**Line**". This opens a dialog with all your lines. Select a line(s) and press "**ADD**".

Q	Search	٩
	Lines	
	New Demo Line	
	Manual Processes	
	Smart Factory Expo	
	Factbird Sales Demo	
	IDA Industri 4.0	
	Rows per page: 100	

Protip: If you have already named your lines with a prefix (e.g. DK_FactoryA), you can search for this, select all, and add these lines in one go.

Your organizational hierarchy is shown on the left menu.

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Organization								
Search	Packaging B	GENERAL PERMISS	IONS					
 Chio site Packaging B 	Name Packaging B							
	Description							
	Note: This will not delete the line, but j organizational structure.	ust remove it from the	S	SAVE				

USER GUIDE Organization and Factory Overview

5

View Factory overview

Click on "Organization" from the menu to view Factory overview dashboard.



The organization view allows for drilling down into every level of the organization. "Breadcrumbs" in the top will show the current location and can be used to navigate back and forth.

							30M 1H	4H 8H	12H 24H	48H 72H	1W 🛱	
	AAL – Bottling Lin	ne #2	AAR – Bott	AAR – Bottling Line #1 AAR – Be			R – Bottling Line #2			AAR – Bottling Line #3		
тси 86%	+8 hours - Running # STOPS DOI 0 0.0	VNTIME TCU 10h 100%	● 10 minutes # STOPS 6	- Running DOWNTIME 6.40h	тси 20%	 36 minutes # STOPS 10 	- Unregistered DOWNTIME 3.46h	тси 57%	 3 hours - Ru # STOPS 1 	DOWNTIME 0.67h	тси 92%	
	CPH – Bottling Li	ne #2	CPH – Bott	ling Line #3		CPH – Bottl	ing Line #4		CPH – Bott	ling Line #5		
тси 61%	 31 minutes - Running # STOPS 2 0. 	9 WNTIME TCU 49h 94%	 31 minutes # STOPS 1 	- Running DOWNTIME 0.33h	тси 96%	29 minutes # STOPS 25	Unregistered DOWNTIME 6.48h	тси 19%	+8 hours - R # STOPS O	Running DOWNTIME 0.00h	тси 100%	
	ROS – Bottling Li	ne #1	ROS – Bott	ling Line #2		VEJ – Bottli	ng Line #1		VEJ – Bottl	ing Line #2		
	+8 hours - Running		16 minutes	- Running		29 minutes	- Unregistered		1 hour - Rur	nning		
TCU 91%	# STOPS DOI 0 0.0	VNTIME TCU 10h 100%	# STOPS	0.24h	97%	# STOPS 14	4.03h	тси 50%	# STOPS	3.39h	тси 68%	
	TCU 86% 61% 91%	TOU +8 hours - Running # 570% TOU -9 hours - Running # 570% TOU 0 TOU 2 TOU 91% TOU 0	AAL - Bottling Line #2 +* hours - Running # STOS 0 0.00h 0 0.00h 100% 0.00h 0 0.00h 100% 0.00h 0 0.00h 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 0.00h	AAL - Bottling Line #2 AAR - Bott 100 +8 hours - Running # stores Tou 200 0.00h 100% 6 0.00h 100% 613 CPH - Bottling Line #2 AAR - Bott 700 0.00h 100% 613 0.00h 100% 700 2 0.04h 913 0.04h 94% 700 0.00h 100% 701 0 0.00h 100%	TCU AAL - Bottling Line #2 AAR - Bottling Line #1 * # hours - Running * stors TCU 10 minutes - Running * stors * stors DOWNTIME TCU 0 0.00h 100% * Stors DOWNTIME * Stors DOWNTIME	AAL - Bottling Line #2 AAR - Bottling Line #1 * ** hours - Running # stops 0 # ** ops 0 # ** ops 0 ** ops 0	AAL - Bottling Line #2 AAR - Bottling Line #1 AAR - Bottling Line #1 TOU ## hours - Running # stores DOWNTIME TOU # STOPS DOWNTIME TOU 0 35 minutes # stores # STOPS DOWNTIME TOU 0 0 0 0 0 # STOPS DOWNTIME TOU 0	AAL - Bottling Line #2 AAR - Bottling Line #1 AAR - Bottling Line #2 • • * bours - Running • * STOPS © OWNTTAKE TOU 0 • 10 minutes - Running • STOPS • 20 minutes - Running • STOPS	AAL - Bottling Line #2 AAR - Bottling Line #1 AAR - Bottling Line #2 TOU # STOPS DOWNTIME TOU 0 0.00h 100% 6.40h 20% 1 0.33h 96% 20% 20% 0 0.49h 94% 94% 94% 20% 1 0.03h 96% 20% 20% 20% 1 0.33h 96% 20% 20% 20% 1 0.33h 96% 10% 25 6.48h 1% 1 0.33h 96% 26 6.48h 1% 26 1 0.30h <td>AAL = Bottling Line #2 AAR = Bottling Line #1 AAR = Bottling Line #2 Bit bours = Raming # STOPS DOWNTIME TOU # STOPS # STOPS DOWNTIME TOU # STOPS # STOPS DOWNTIME TOU # STOPS</td> <td>AAL - Bottling Line #2 AAR - Bottling Line #1 AAR - Bottling Line #2 AAR - Bottling Line #3 B05 • B10wirs - Running • STOPS DOWNTME TOU 0.00h 100% • 10 minutes - Running • STOPS DOWNTME TOU 0.00h 100% • CPH - Bottling Line #2 CPH - Bottling Line #1 0.00h CPH - Bottling Line #2 CPH - Bottling Line #1 0.00h CPH - Bottling Line #3 CPH - Bottling Line #3 CPH - Bottling Line #3 CPH - Bottling Line #4 CPH - Bottling Line #1 0.33h 96% S Sometrace CPH - Bottling Line #1 0.33h 96% S Sometrace Sometrace</td>	AAL = Bottling Line #2 AAR = Bottling Line #1 AAR = Bottling Line #2 Bit bours = Raming # STOPS DOWNTIME TOU # STOPS # STOPS DOWNTIME TOU # STOPS # STOPS DOWNTIME TOU # STOPS	AAL - Bottling Line #2 AAR - Bottling Line #1 AAR - Bottling Line #2 AAR - Bottling Line #3 B05 • B10wirs - Running • STOPS DOWNTME TOU 0.00h 100% • 10 minutes - Running • STOPS DOWNTME TOU 0.00h 100% • CPH - Bottling Line #2 CPH - Bottling Line #1 0.00h CPH - Bottling Line #2 CPH - Bottling Line #1 0.00h CPH - Bottling Line #3 CPH - Bottling Line #3 CPH - Bottling Line #3 CPH - Bottling Line #4 CPH - Bottling Line #1 0.33h 96% S Sometrace CPH - Bottling Line #1 0.33h 96% S Sometrace Sometrace	

What is Factbird manual process line and manual production counter?

Manual process line

- The Factbird manual process line feature is ready-to-use web-based software where operators can easily and intuitively log downtime, part or product counts, scrap, and scrap reasons. The data is analyzed and visualized in the Factbird Cloud Application, which is accessible on any device with a browser.
- Manual process line consists of manual production counter for good count and scrap count and manual downtime logging.

Manual production counter

• The Factbird manual production counter can be integrated as a scrap counter into production lines or equipment that have sensors for automated production counting. This scrap counter can be configured to track scrap by different types, automatically generating visualized scrap analytics. The Factbird Cloud Application allows viewing both manual and automated processes within the same standard.

1

Create sensors

- 1. Go to "Administration" page.
- 2. Go to the "DEVICES" tab.
- 3. Click on the device labeled "VIRTUAL" under the "Type" category, then click on "ADD SENSOR".
- 4. Click on "Add new sensor", complete the information, and then click "CREATE SENSOR".
- 5. It will be marked as "Created".

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Blackbird ApS		USERS GROUPS ROLES		ROLES	DEVICES		ES	ORGANIZATION			
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STATUS		HARDWARE ID 0013d1506b4f2301					TYPE Factbird Duo				
BOOTLCADER VERSION 300	et up sensor							×	3		
Device Config	4								Ð	ADDS	ENSOR
SENSORS Q. Soarch	Add new senso	r						~			ctions
· · · · · · · · · · · · · · · · · · ·									pege: 5 ¥ 1 cf 1	< 1	
								DONE			
		_			_		_			_	

*If you can not find a device labeled "VIRTUAL", please contact Factbird.

USER GUIDE Manual Process Line / Manual Production Counter



3a

Create Manual process line

- 1. Toggle the "Manual production count" and "Manually enter downtime" sliders on the "BASIC INFORMATION" tab
 - a. Turning on the "**Manual production count**" slider activates the counter for good counts..
 - b. Turning on the "**Manually enter downtime**" slider enables manual logging of downtime.
- 2. Go to the **"LINE SETUP"** tab and click on "**CREATE LINE**" to create a line with the sensor by following the instruction.

	AJAS AKADIT ID ANBOLADITA ID ANDOLADITA		0
Manage sensor settings		×	
BASIC	Sensor name *		
SPEEDS	Manual process demo A		
LINE SETUP	Sensor description		
	Sensor type * Manual Process		
	Manual production count Manually enter downtime		
	All fields marked with an auteriak (*) are required.		
	X DISCARD CHANGES 🗸 UPDATE SENSOL	CONFIGURATIO	4
	Manage sensor settings BASIC INFORMATION SPEEDS LINE SETUP	Manage sensor settings BASIC INFORMATION Sector runne * Manual process demo A SPEDE LINE SETUP Sector description Sector type * Manual production count Manual production count <	Manage sensor settings × BASIC BASIC BASIC SPEDS Sensor description LIVE SETUP Sensor description Sensor type* Manual production count Manually enter downtime At fields meked with an asterial (*) are required. X

3. On the "**REGISTER STOPS**" tab, you can view the main counter and manual downtime logging function.

fain 🏚 EDIT INPUT	ADD QUANTITY	⊙ RESET 0 pcs +1	and " Manually enter downtime " slider are on.
30M TH 4H 8H 12H 24 Selected: 3/12/2024, 1:22 PM to now	H 48H 72H >	C V SS V	
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1320 1420 1420 1520 1520 16 	00 tébo třico tribo tébo tébo tribo LIVE REGISTERISTOPS BATCHES 274 TW 62 >	ANALYTICS S :	" Manually enter downtime " slide
1348 1449 1448 1558 1538 16 4 usermanualline1 * 4 44 8H 12H 24H 48H 7 Helechel 3/12/2024 123 PM to now	00 1620 1720 1730 1600 1639 1700 LIVE REGISTERSTOPS BATCHES 724 1W 12 > 	ANALYTICS > : ANALYTICS > : C + G+ + KEGHI STOP XADON	" Manually enter downtime " slide is on.
1340 1440 1440 1540 1530 14 4 usemanualline1 * (4 usemanualline1 * (5 44 BH 1234 24H 48H 7 16 eccel: 3/12/2024 122 PM to nov	0 1620 1720 1730 160 169 1700 LIVE REGISTERSTOPS BATCHES 224 170 2 > 0 1600 1700 1720 1600 1620 1700	1930 2030 2030 2130 AMALTICS > : C → : : C → : : MARTICS > :	" Manually enter downtime " slide is on.

Create Manual process line - add scrap sensors

- 1. Repeat step 1 to create another sensor, this time for scrap. The "**Name**" you assign to the sensor will be displayed as the name of the scrap sensor. For example, if you name the sensor "shape error scrap," the button for counting will display "shape error scrap."
- 2. Go to the "Line Setting" of the line created in step 3.
- 3. Select the scrap sensor and specify its placement.
 - "Scrap sensors prior to the bottleneck" means the quantity of the scrap sensors is not subtracted from the good parts count.
 - "Scrap sensors after the bottleneck" means the quantity of the scrap sensors is subtracted from the good parts count and shown as quality loss on the OEE page.
 - The scrap sensor's value will be displayed in the KPI "Scrap" on the "LIVE" page.



4. On the "REGISTER STOPS" tab, you can view the scrap counter.

4	💪 Manual test	• <	LIVE	REGISTER STO	PS BATI	CHES	ANALYTICS	OEE	TRENDS	٤ ک	1
Scrap	٥			4) RE	ISET 22 pcs	Main 🏼	E			1 RESET	38 pcs
	EDIT INPUT	ADD QI	JANTITY	+1		E	DIT INPUT	ADD C	UANTITY	+1	
30M Selecte	1H 4H 8H	12H 24H	48H 72H	1W 🛱	'n					* ® <u>•</u> [*
								INSERT STOP	► BEGIN STOP	ANDU	JN (4)
08:30	09:00 09:30	10:00	10:30 11:0	0 11:30	12:00 12:3	30 13:0	0 13:30	14:00 14:31	15:00	530 16:00	16:30

3b

Create a scrap sensor for an existing line

- In step 1, the "Name" you assign to the sensor will be displayed as the name of the scrap sensor. For example, if you name the sensor "shape error scrap," the button for counting will display "shape error scrap."
- 2. Turn on the "Manual production count" slider and turn off the "Manually enter downtime" slider on the "BASIC INFORMATION" tab.
- 3. Click on "UPDATE SENSOR CONFIGURATION".

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Manage sensor setting	S					×
BASIC	Sensor name * Missing component - no fitting					
SPEEDS	Sensor description					
LINE SETUP	Sensor type * Manual Process				¥	
	Manual production count Manually enter downtime					
	All fields marked with an asterisk (*) are required.					
		X	DISCARD CHANGES	V UPDA	TE SENSOR CONFIGUE	ATION

4_{b}

Add a scrap sensor to an existing line

- 1. Go to the "Line Settings" of the line you want to add the scrap sensor to.
- 2. Select the scrap sensor and specify its placement.
 - a. "**Scrap sensors before the bottleneck**" means the quantity of scrap sensors is not subtracted from the good parts count.
 - b. "Scrap sensors after the bottleneck" means the quantity of scrap sensors is subtracted from the good parts count and shown as quality loss on the OEE page.
 a. The agree sensor's value will be displayed in the KDI "Scrap" on the "LIVE" page.
 - c. The scrap sensor's value will be displayed in the KPI " $\ensuremath{\textbf{Scrap}}$ " on the " $\ensuremath{\textbf{LIVE}}$ " page.





KPI "Scrap" on "LIVE" page.

3. On the "**REGISTER STOPS**" tab, you can view the scrap counter.

crap 🌣						C RESET 0 pc
	EDIT INPUT		ADD QUANTITY		+1	
30M 1H Selected: 3/13/20	4H 8H	12H 24H 48H	72H 1W 🗖 🔊		ર ી _ c	
500 250 250	Meeting	CeaningA		الاررادا		

5

Use manual production counter

- 1. With a manual production counter you can count good parts and scraps manually.
 - a. Good parts counters: The green counter represents the "bottleneck sensor" shown as "**Main**", counting the number of produced parts on the line. This is only on manual process line.
 - b. **Scrap** counters: If an additional virtual sensor is added as a "**scrap sensor**" in the "**Line settings**", it will be displayed as a scrap counter. Multiple scrap sensors can be added on a line, providing multiple options for different types of scraps. When the counting button is pressed, the operator will be prompted to choose from the available reasons.
- 2. Press the "ADD QUANTITY" or "+1" button to record counts.
 - a. When you add a count, it may take up to 30 seconds before it becomes visible in other areas of the system, such as the **"LIVE"** page or the **"BATCHES"** page. However, the local value next to **"RESET"** icon will immediately display the changing value on the screen. This feature helps operators track their production, such as the amount produced since the beginning of a shift or batch.



USER GUIDE Manual Process Line / Manual Production Counter

6

Use manual production counter - set primary quantity

The primary counting quantity "+1" button can be adjusted by clicking the gear icon.



Use manual production counter - edit inputs

Press the "**EDIT INPUT**" button to view previously submitted counts. In the dialog, you can make changes or delete counts. Please note that it may take up to 30 seconds for new data to appear.

Scrap	•	Recent counts			×	RESET 38 pcs
	EDIT INF	S There may be a delay of	up to 30 seconds before new data is shown. Currently showing data	rom the last 10 minutes.	G	+ 25
2014	114	Timestamp	Quantity			
Selected	d: 2/20/2024	2/20/2024, 5:13:36 PM	1		/ =	
		2/20/2024, 5:13:38 PM	1		/ 1	ANDON (4)
		2/20/2024, 5:13:39 PM	1		/ =	_
		2/20/2024, 5:13:45 PM	12		/ =	
	09:30				Total Rows: 4	17:00
UNPLAI	NNED		CANCEL	CONFIRM		
UNPLAI	NNED DOWNT	TIME				0

7

Use manual downtime logging - This is only for manual process line

On **Sensor setting**, turning on the "**Manually enter downtime**" slider enables manual downtime logging.

There are two ways to log downtime on a Manual process line.

- "BEGIN STOP" button: You can either use the "BEGIN STOP" button to indicate that the process has stopped. Afterwards, you will be prompted to choose a stop cause from the available options. The line will be marked as stopped, and the button will change to an "END STOP" button. When the process is running again, click the "END STOP" button to end the stop.
- 2. "INSERT STOP" button: If you want to insert a stop that happened in the past, you can use the "INSERT STOP" button. When you click it, you'll be shown a dialog where you can select a stop cause and enter the "Start" and "End' times of the stop. If the stop is still ongoing, you can toggle the checkbox "Ongoing".

4	ሬ userm	anualline	1 .			LIVE	E)	REGI	STER STOPS		BATCHES	ANALY	TICS		>	
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lected: 3	3/12/2024,	1:23 PM t	o now							⊔ INSE	RT STOP	BEGIN S	тор	÷	ANDON	8