

Internal logistics

Smart Factory Suite module
for a complete control over
material flow



A photograph of three people standing in a large warehouse. On the left is an older man with grey hair and a beard, wearing a yellow safety vest over a white shirt, holding a handheld device. In the center is a younger man with dark hair, wearing a blue blazer over a green checkered shirt. On the right is a woman with dark hair, wearing a light grey blazer, holding a tablet. They are all smiling at the camera. The background shows high industrial shelving units filled with boxes and supplies.

**Internal logistics optimization
is the key to lean production.**

How can you tell your **material flow** is not as efficient as it should be?

- you struggle with **late deliveries** (and might even be facing penalties)
- **material shortages** are not uncommon (because there is no real-time feedback about the speed of current production or because the line feeding process is not optimal)
- **logistic trains are not utilized efficiently** and are often overloaded or underloaded
- you have problems with **storage capacity** (possibly due to missing or inaccurate information about upcoming production and expedition)
- goods are often **moved unnecessarily** across your facility (e.g. because you don't know when and where exactly a delivery should be prepared for expedition)



The Internal Logistics module by Productoo gives you a complete control over your material flow – from the warehouse to expedition.

- 1 Produce **without unnecessary stoppages.**
- 2 Utilize your **storage capacity** and **material-handling equipment** efficiently.
- 3 Deliver **just in time.**

10-25% inventory reduction reported by Productoo users

20% average lead time reduction



Internal Logistics: Main Areas & Features

Production stock management

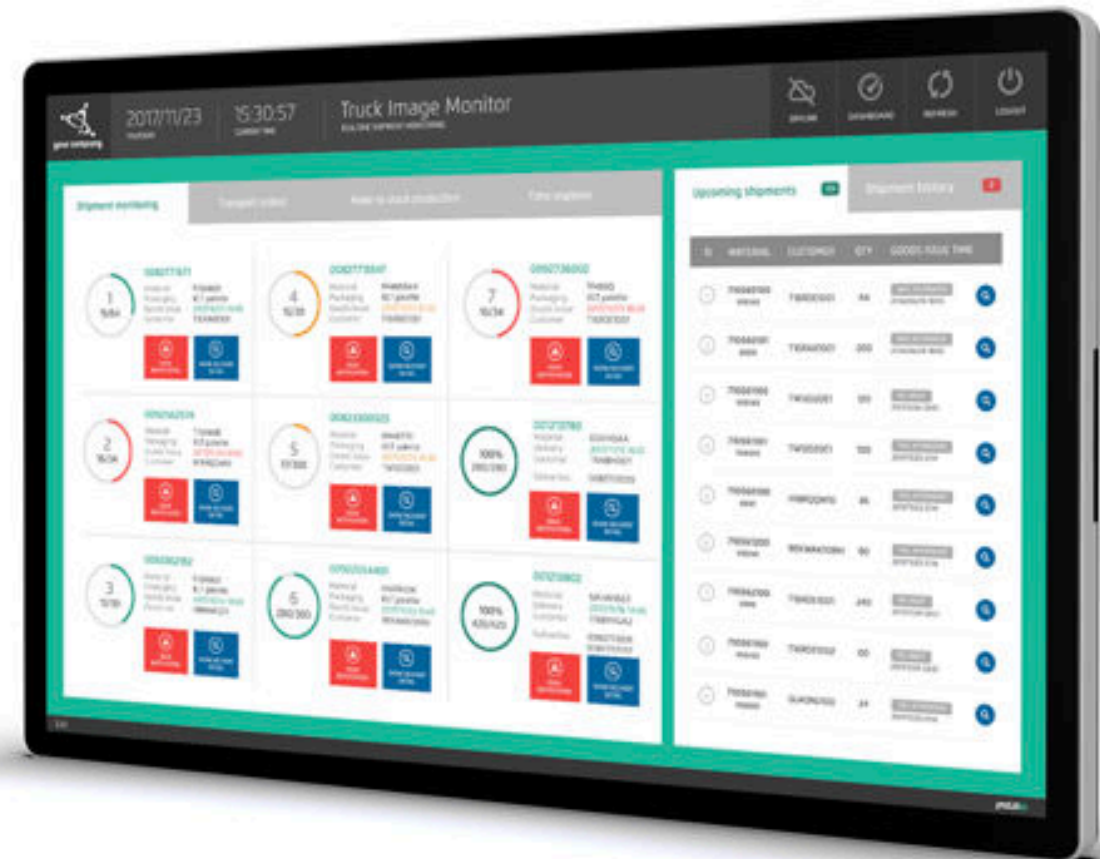
Raw materials reordering

Line feeding

Picking

Repackaging

Truck image monitor



Virtual Coverage: No more material shortage

Future consumption of material inputs is available at one click so you can prevent unnecessary production stoppages. It also helps you utilize your stock capacity more efficiently.



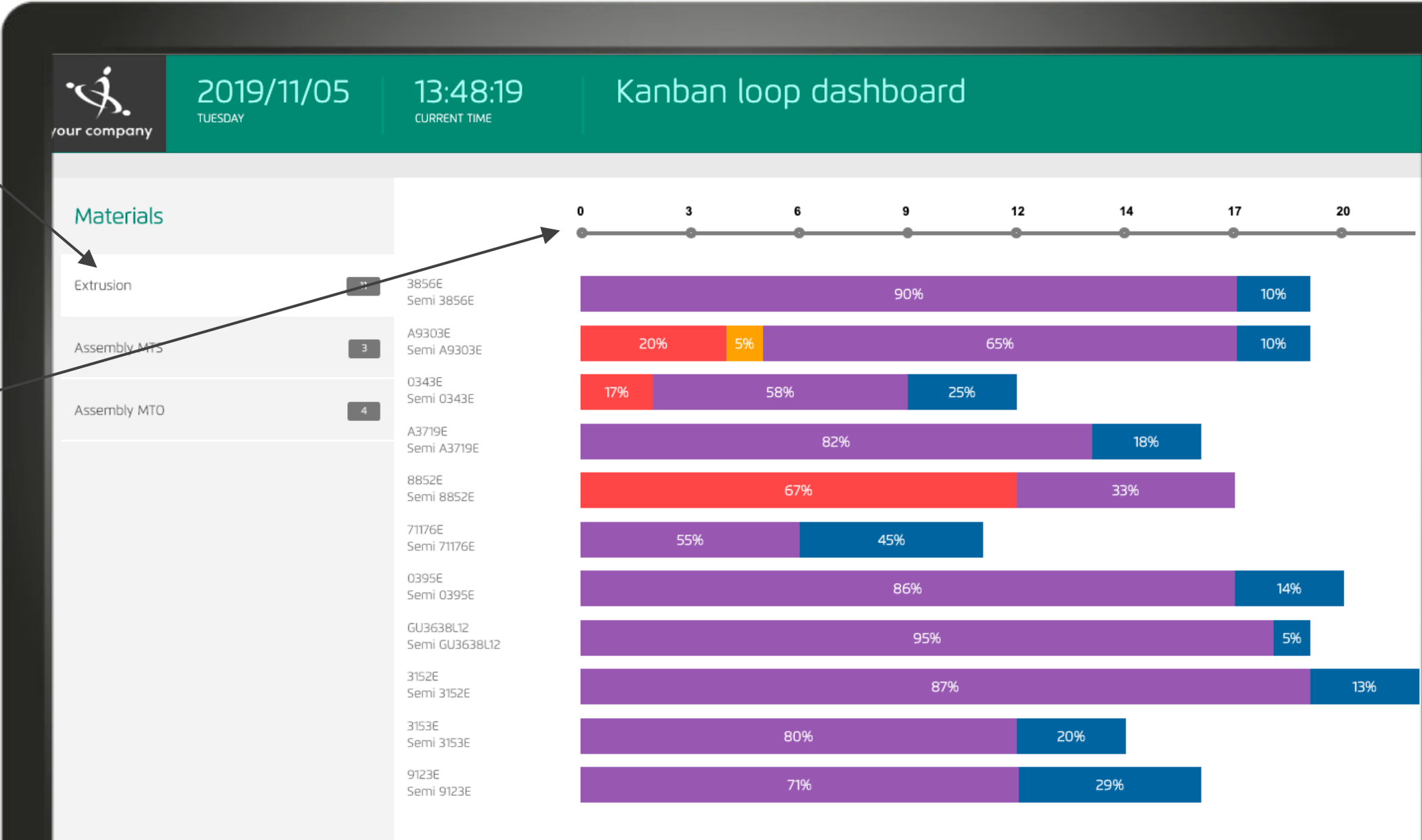
Control your WIP: kanban loop dashboard

The kanban loop dashboard gives you a **clear overview of the status of your semi-finished goods production**. This allows you to **control your work-in-progress** by keeping a limited number of items in the loop.

Material group selection

Number of kanban cards in the loop

- Produced
- In production
- In queue
- Batch building



Keep your line feeders on track

Line feeders have access to the current production plan in order to see how much material needs to be brought to production lines and when. A checklist is available for a **clear overview of what's left to prepare**. All is optimized for tablets so your team can stay **mobile and updated on the go**.

The screenshot shows a mobile application interface for production management. At the top, a header bar displays the date '05/25/2019 SATURDAY', the current time '08:55:59', and the production line 'FC13 - Final'. Below this, a status bar shows 'Current production', 'Production queue 72', 'Production line redbox 3', and 'Incomplete palette'. The main content area features a table with columns: '#', 'MATERIAL WORKCENTER', 'QUANTITY PACKAGING', 'OUTBOUND DELIVERY', 'GOODS ISSUE TIME', and 'ESTIMATED FINISH TIME'. The table lists materials like T89256A and T89256A FG with their respective quantities and delivery times. A 'Save' button is visible below the table. On the right side, there is a sidebar with a 'Kanban number' field and a 'Material' field. At the bottom, there is a 'Required materials' section with three items: F671300W (40), T19183B (200), and T67528B (100). The interface is designed for tablets, with a clean layout and clear text.

05/25/2019 SATURDAY | 08:55:59 CURRENT TIME | FC13 - Final

Current production | Production queue 72 | Production line redbox 3 | Incomplete palette

Expand all | Collapse all

#	MATERIAL WORKCENTER	QUANTITY PACKAGING	OUTBOUND DELIVERY	GOODS ISSUE TIME	ESTIMATED FINISH TIME
376	T89256A FG	20 ST plast 20 ks - 4 beden	0082404213	GIT: 2020/02/03 10:46	EST: 2019/05/25 09:19
514	T89256A FG	20 ST plast 20 ks - 4 beden	0082404214	GIT: 2020/02/03 10:46	EST: 2019/05/25 09:45

Save

Required materials

- F671300W (40)
- T19183B (200)
- T67528B (100)

Kanban number: 00000000000359
Material: T89256A
WIPER.TD389.PL7
Quantity / Packaging: 20 / plast 20 ks - 4 beden
Customer: T18ROD1001
AUTOMOTIVE KLIMASYSTEME GMBH
Outbound delivery: 0082404213
Goods issue time: 2020/02/03 10:46
Scheduled finish time: 2019/05/21 09:07
Estimated finish time: 2019/05/25 08:52

Andon signalization of material preparedness

Possibility to add comments

Line feeders confirm they've prepared all required materials

Picking process optimization

Once materials are produced, they should be picked and transported to the warehouse or to the expedition area. Productoo optimizes the number of items to be picked (= logistic leveling) so you **utilize the capacity of your logistic equipment efficiently** in each picking loop.

Capacity of logistic trains

Optimization with "logistic leveling" functionality

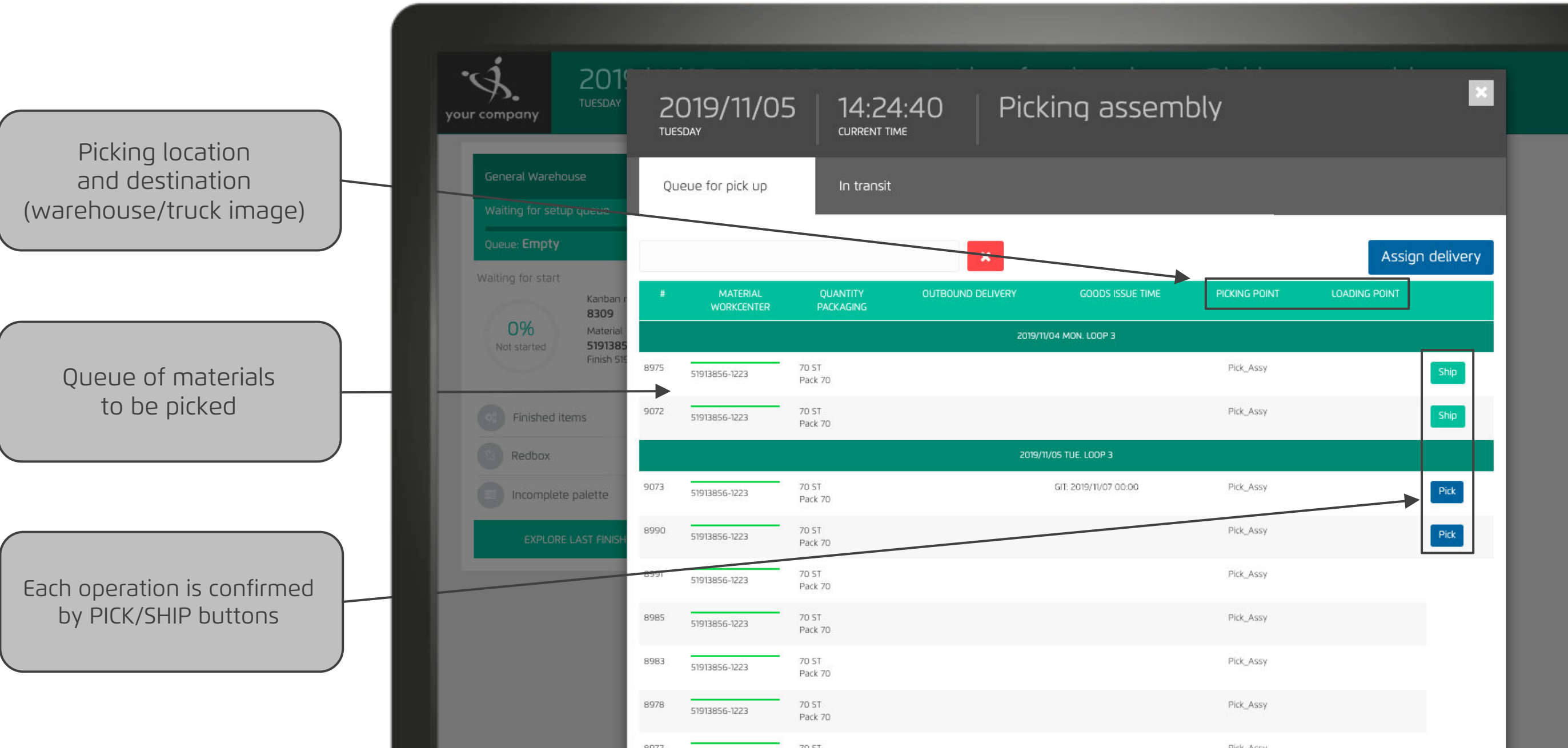
Kanbans to be picked

The screenshot displays the Productoo EBT 3.4.2 interface in the Quality Environment. The top navigation bar includes 'CUSTOMIZATION', 'LOG OUT MATEJ UCHYTL', and the version 'PRODUCTOO EBT 3.4.2 | DEVELOPMENT (HU11) | QUALITY ENVIRONMENT'. The main header shows the date '2019/11/04 MONDAY' and time '14:30:11 CURRENT TIME'. The title 'Picking assembly' is accompanied by a status 'LINE PRODUCTION IS DELAYED'. A sidebar on the left contains icons for 'Dashboard', 'Batch building', 'Distribution', 'Production lines', 'Outbound deliveries', and 'Redbox'. The main content area is divided into two sections. The left section, titled 'TUESDAY 05', lists picking loops with their respective capacity bars: 'tue. loop 1' (00:00 - 04:00), 'tue. loop 2' (04:00 - 08:00), 'tue. loop 3' (08:00 - 12:00), 'tue. loop 4' (12:00 - 16:00), 'tue. loop 5' (16:00 - 20:00), and 'tue. loop 6' (20:00 - 00:00). The right section, titled 'WEDNESDAY 06', lists 'wed. loop 1' through 'wed. loop 6'. The right sidebar contains buttons for 'VIEW LINE REDBOX', 'RESET TIME DIFFERENCE', 'RECALCULATE', 'ADD BREAK', and 'QUEUE EXPLORER'. Below these is the 'Artificial planner' section, which includes a 'Planning scenario' dropdown set to 'Logistic leveling', a 'Run sequencing now' button, and a table showing 'Last run' (2019/11/05 08:53), 'Triggered by' (Matej Uchytel), 'Scheduled kanbans' (213), and 'Delayed kanbans' (0). A tooltip indicates 'Number of kanbans: 6 / 10' and lists materials: '51913856-5810 - (140.00x)' and '51820343-1620 - (120.00x)' with a total 'Material quantity: 260'. The bottom section displays a table of picking tasks with columns: '#', 'MATERIAL WORKCENTER', 'QUANTITY PACKAGING', 'OUTBOUND DELIVERY', 'GOODS ISSUE TIME', 'CREATED REQUIRED FINISH TIME', 'SCHEDULED FINISH TIME', and 'ESTIMATED FINISH TIME'. The table shows three rows of data for 'Assembly picking' tasks.

#	MATERIAL WORKCENTER	QUANTITY PACKAGING	OUTBOUND DELIVERY	GOODS ISSUE TIME	CREATED REQUIRED FINISH TIME	SCHEDULED FINISH TIME	ESTIMATED FINISH TIME
9073	51913856-1223	70 ST Pack 70	RAN: MPS	2019/11/07 00:00	2019/11/04 08:35	2019/11/05 08:53	2019/11/05 08:53
8990	51913856-1223	70 ST Pack 70	RAN: MPS	2019/11/07 00:00	2019/11/04 08:35	-	-
8991	51913856-1223	70 ST Pack 70	RAN: MPS	2019/11/07 00:00	2019/11/04 08:35	-	-

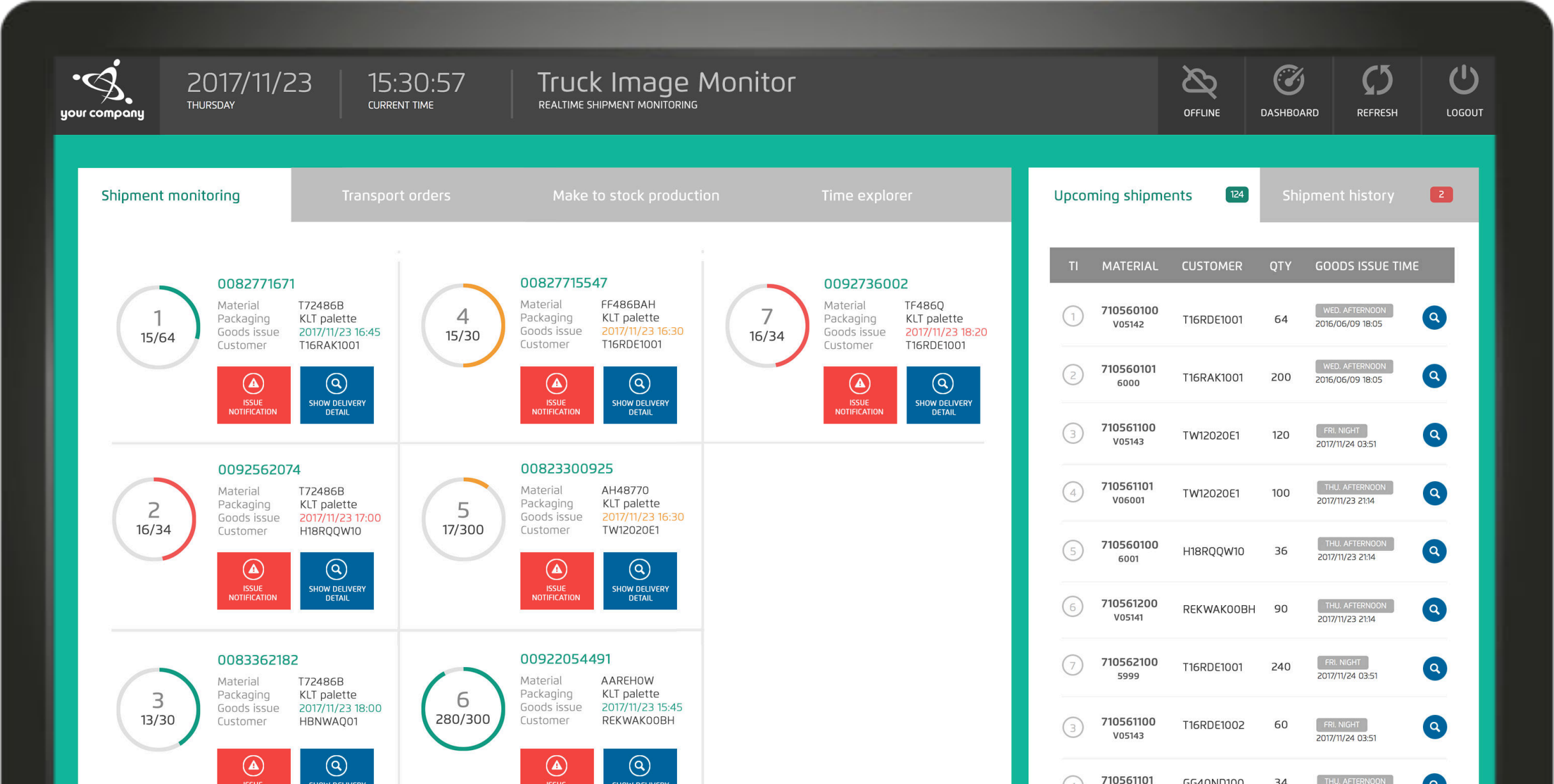
Pick & Ship

It's easy to **track the status of each item** from assembly to its transportation to the warehouse or truck image.



Real-time truck image monitor

The Truck Image Monitor informs you about all **upcoming shipments** (including production orders) as well as your expedition history. You can clearly see the progress of the preparation of each outbound delivery. This way you can make sure your goods are **ready and shipped (just) in time**.

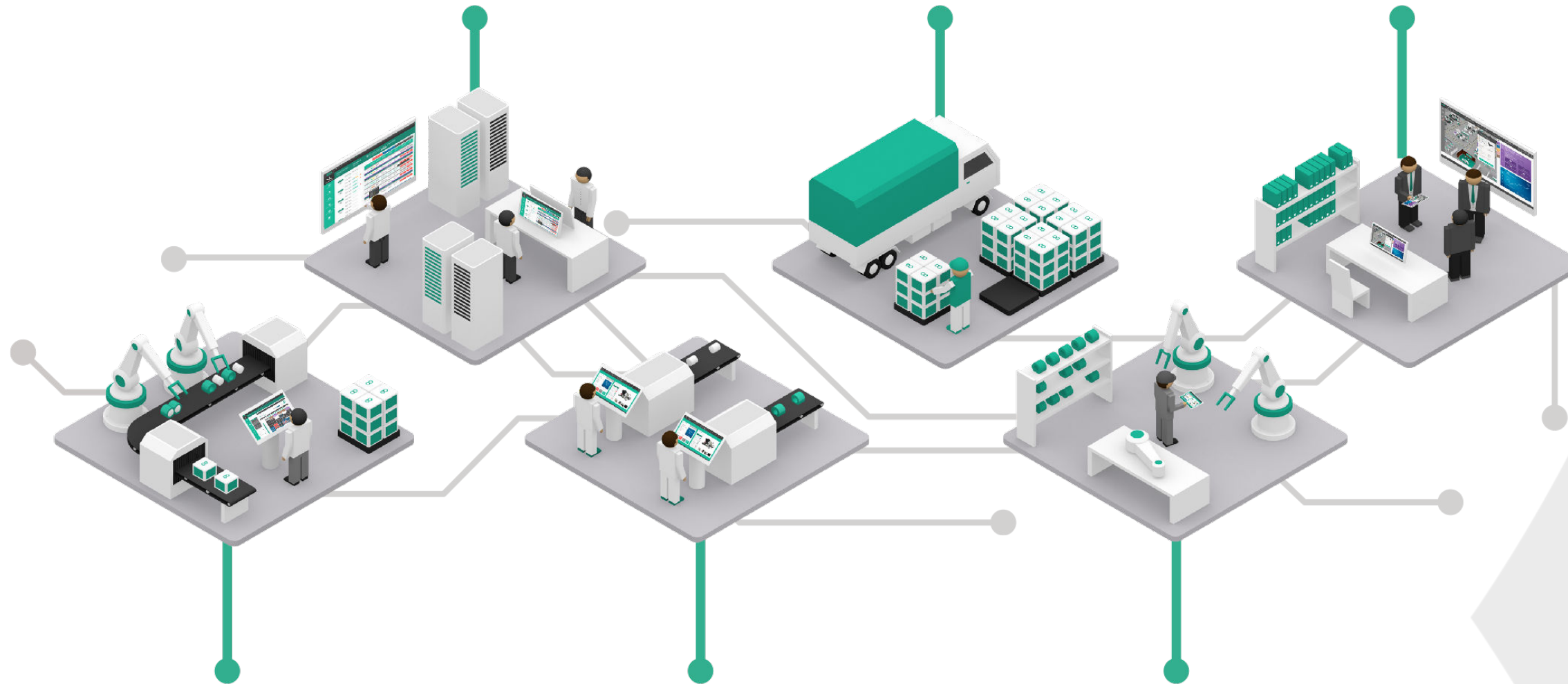


Productoo 4.0 Manufacturing Digitization Ecosystem

Production planning

Internal logistics

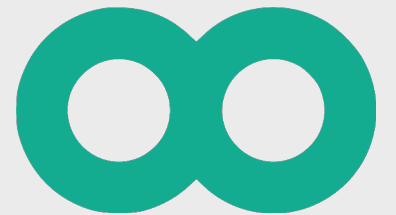
Performance
monitoring & reporting



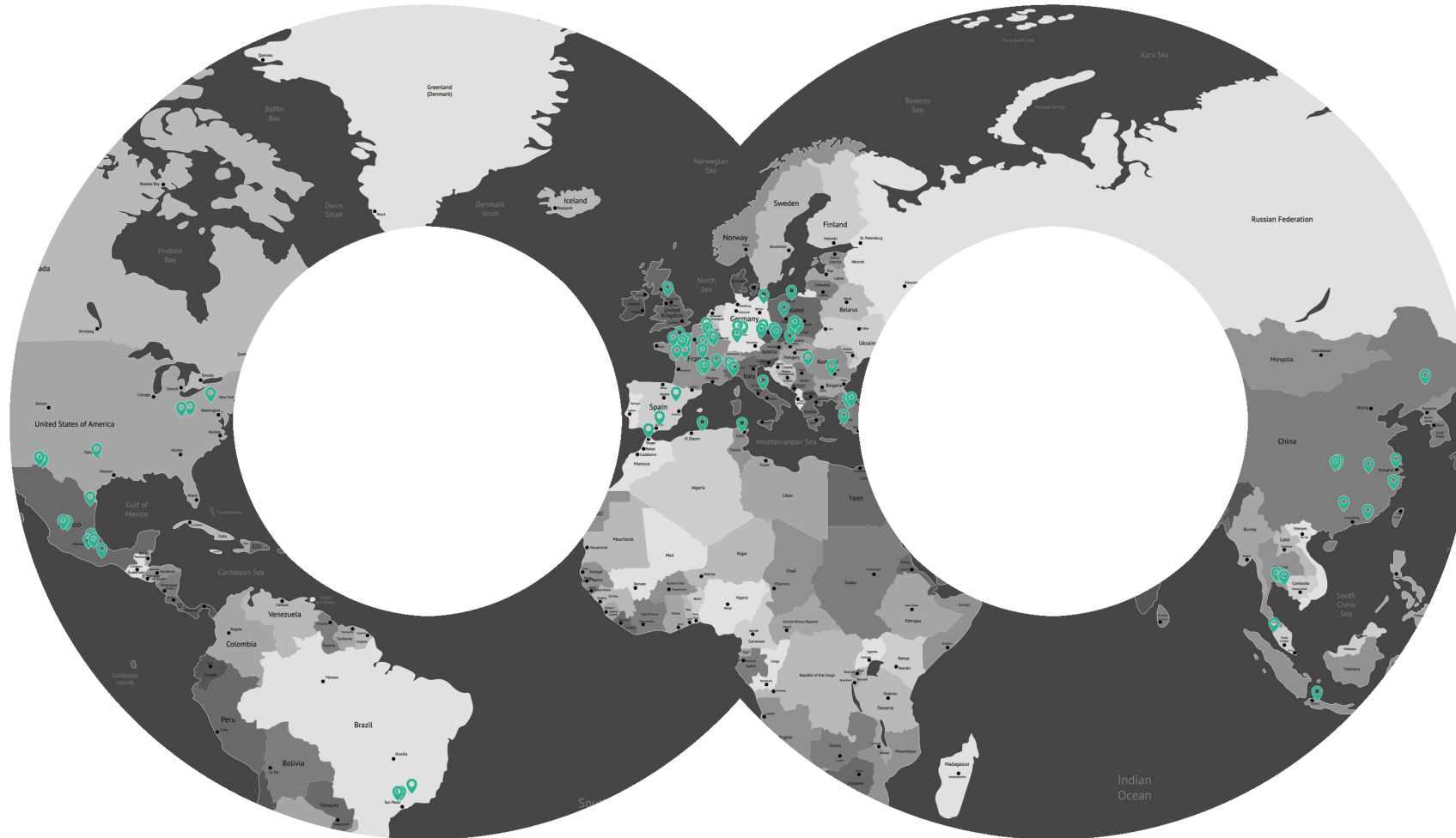
Production tracking

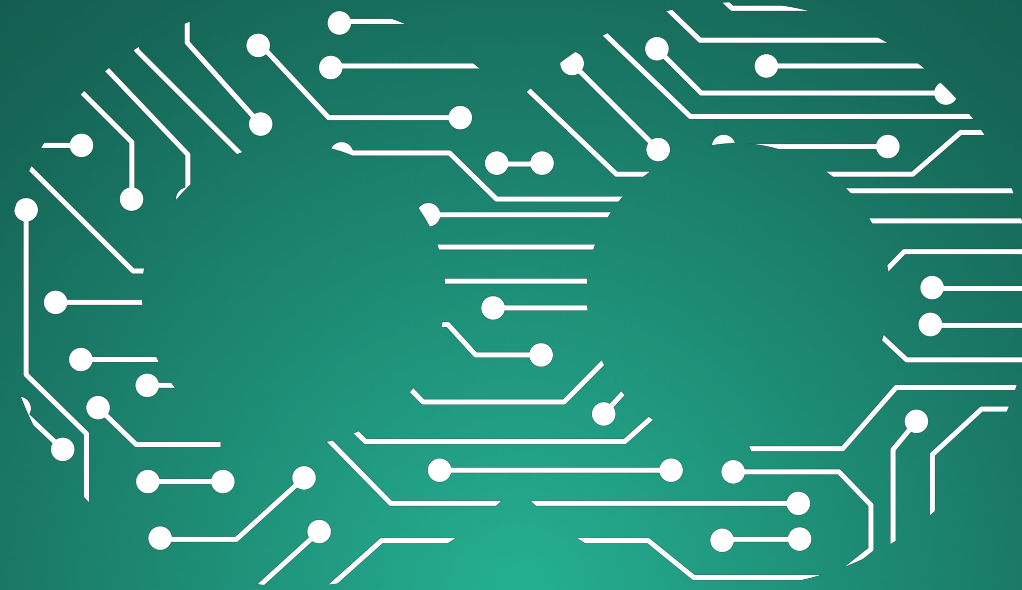
Production execution

Maintenance management



More than **150** manufacturing companies have set out on the journey towards digital transformation with Productoo





We drive the digital evolution.

office@productoo.com

www.productoo.com

