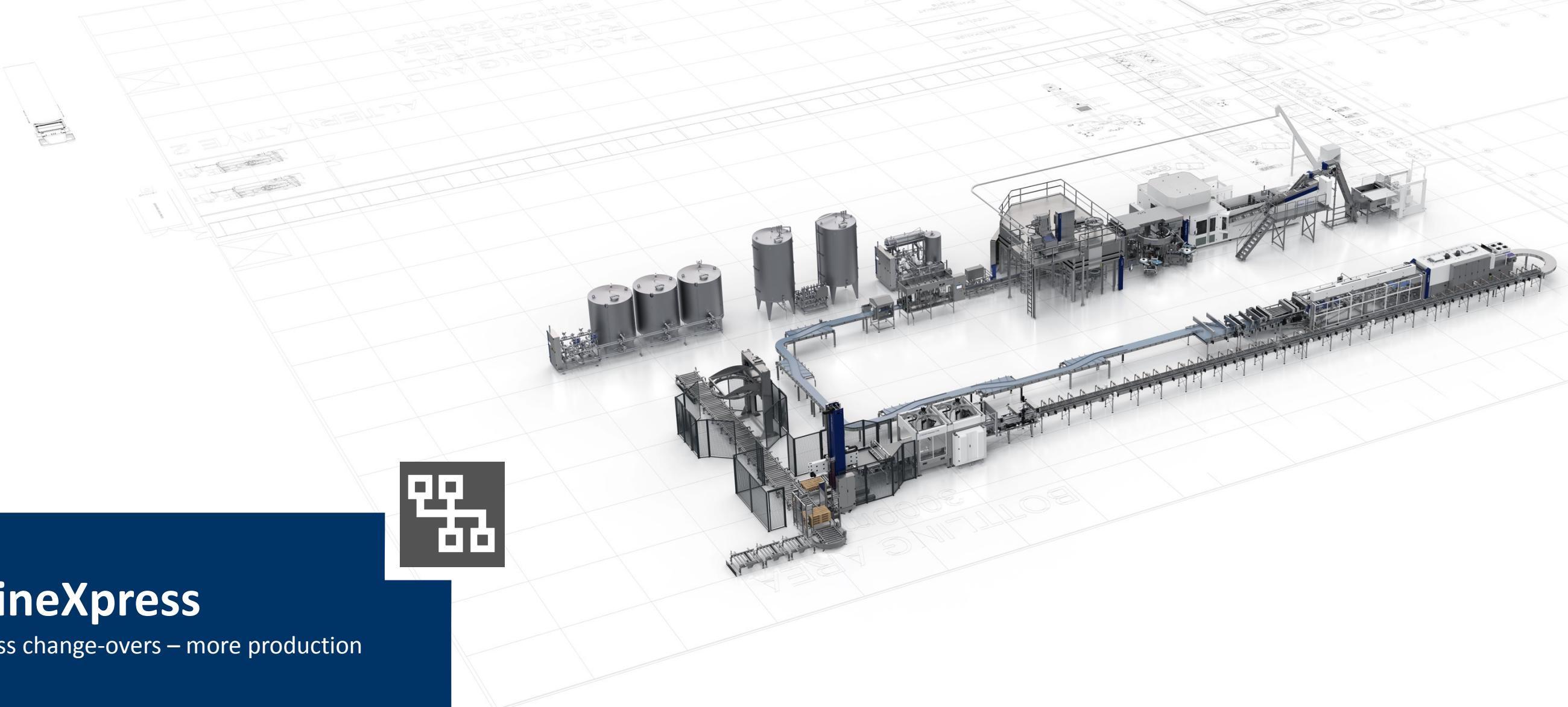




LineXpress

Less change-overs – more production





Changing over lines in record time

Broad range of products and small single batches often push many lines to their economic limit. Why? Because the complex change-over processes use up more and more valuable production time.

Would you like to get this time back and use it productively? LineXpress makes this possible. The system pushes product change-overs on a line to its maximum efficiency. How? By simply automating essential processes and directing the entire change-over process as a whole.

At a glance

- Automation and coordination of the change-over process on one line
- Reduced product change-overs to up to 10 minutes
- Reduced format change-overs to up to 30 minutes
- Increased line efficiency by up to 20 percent





LineXpress: Why and what for?

Initial situation

Complex change-over processes:

- require up to 1,000 working steps.
- drastically reduce the line availability.
- increase the personnel requirement.
- bear the risk of operator and adjustment faults.

The solution

The LineXpress system:

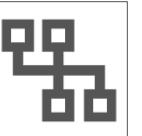
- coordinates all steps which are required for the change-over.
- allows a fully-automatic performance of essential processes
- leads the operator quickly through the process and without any faults.
- enables several process steps simultaneously instead of in succession.

The effect:

The following performances can be achieved with multi-format lines:

- Increased productivity with a line of the same size
 - Same productivity with a smaller line
- In both cases, the overall equipment effectiveness (OEE) is increased by 20 percent!





Application: from the mixer to the palletiser

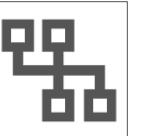
What lines is the LineXpress suitable for?

- Container: Non-returnable PET
- Products: Water and CSD
- Output: up to 60,000 containers per hour

Which machines can be included in the system?

- Contiflow mixer
- Contiform stretch blow moulder
- Contiroll labeller
- Modulfill filler
- Checkmat inspection unit
- Variopac Pro packer for non-returnable containers
- Modulpal palletiser
- SynCo container conveyor
- MultiCo pack conveyor
- PalCo pallet conveyor





UnitXpress: the modules of the system

The LineXpress consists of individual parts: the UnitXpress modules. Combined with the machines, they control the processes and support the operator.

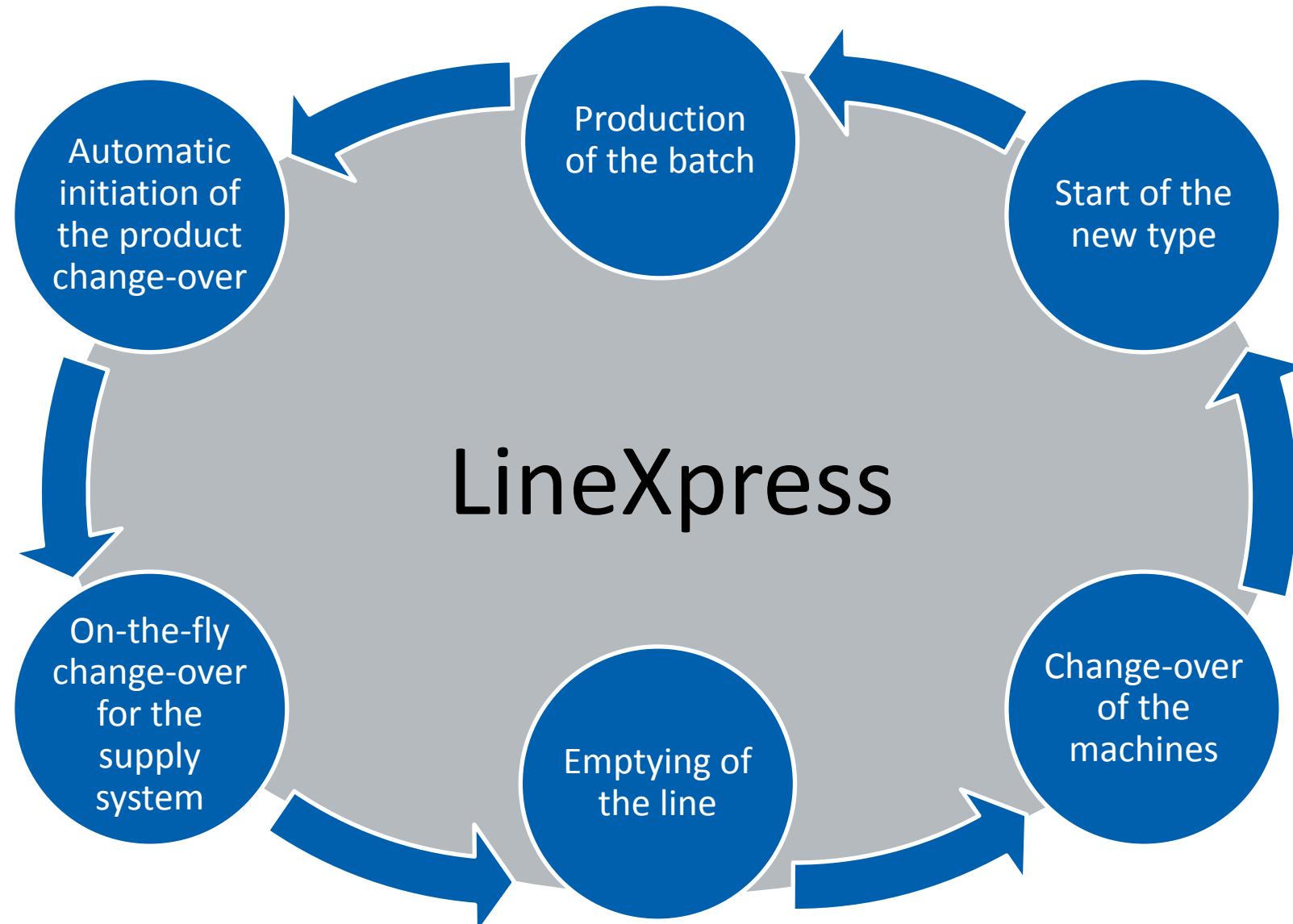
The UnitXpress modules are supplemented individually depending on the line and customer requirements. The following automation components are available for example:

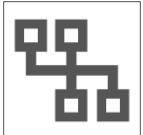
- Automatic mould change-over in the stretch blow moulder
- Quick-change system in the labeller
- Automatic handling parts change-over at the filler
- Automatic adjustment of the inspection unit
- Automatic quick-change in the packer for non-returnables





Overview of the process





Individual process steps

Initiation of the product change-over

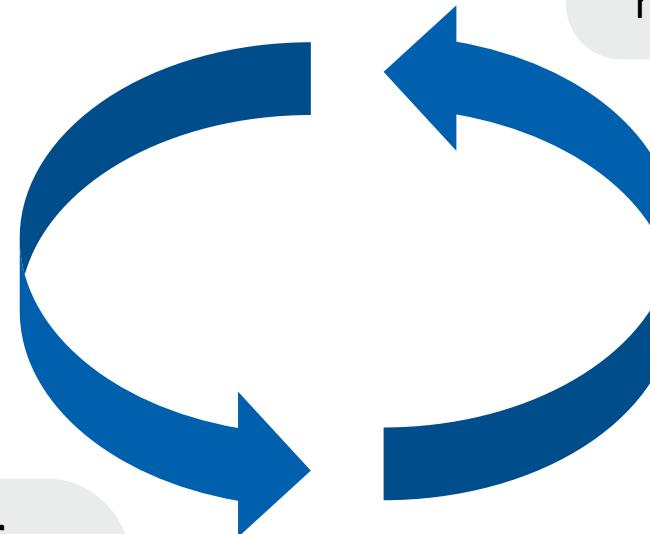
- Optionally, when the product tank empties or when a defined production quantity is achieved

Calculation of the remaining demand on materials

- Based on the remaining product volume in the mixer
- Infeed stop when the required quantity of preforms, caps etc. has been reached

On-the-fly material change-over

- Information to every machine via the residual quantity to be processed
- Signal to the operator to insert new material
- Change-over start during running production!



Emptying of the line

- Immediately after filling of the last bottle
- Reduced duration due to precise material supply

Change-over of the machines

- Semi-automatic or fully-automatic process, depending on the machine type
- Assisting systems for
 - Machines with semi-automatic processes
 - Quick and trouble-free operator guidance
 - Reproducible results

Start of the new type

- Immediately after the completion of all change-over processes



Benefits to you

Production instead of change-over

The trouble-free and automated processes increase your overall equipment effectiveness: Even with comprehensive handling parts change-overs, you can start the new batch already after a mere 30-minutes intermediate stop!

Minimum personnel requirement

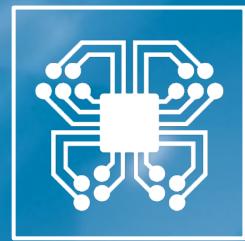
The UnitXpress modules perform many change-over processes fully automatically and all other processes are accelerated through proactive assistance systems. Even packers with numerous handling parts can be changed over within less than 30 minutes by only one operator and with reproducible results.

Less restrictions in the planning phase

The short change-over times make it possible to use the same product more often and to produce smaller batches. This comes in handy if you don't want to be bound to large storage capacities or if you would even like to realise a just-in-time production depending on the current demand.

New potentials for your brand

Have you limited your bottle sizes or designs due to long change-over times until now? With LineXpress, you can use a large range of packaging variants without running the risk of your production effectiveness suffering from this.



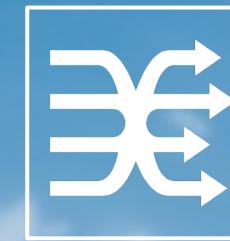
Digitalisation



Process
technology



Bottling and
packaging equipment



Intralogistics



Lifecycle
Service



We do more.

 KRONES