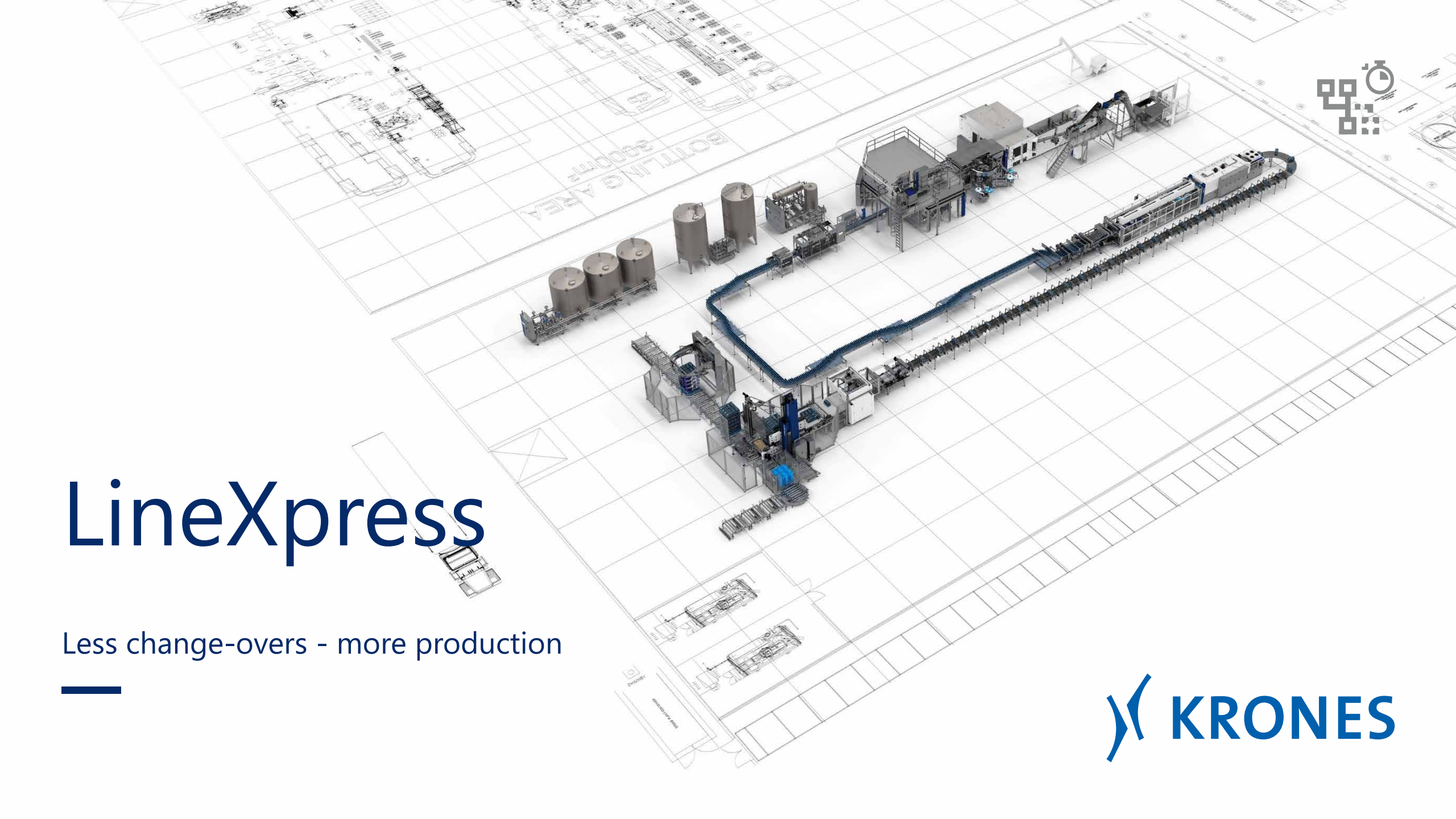


# LineXpress

Less change-overs - more production

---

 **KRONES**



# Changing over lines in record time



Broad range of products and small single batches often push many lines to their economic limit. How is that? 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 handling parts change-over to up to 30 minutes
- Increased line efficiency by up to 20 percent



# LineXpress

## Why and what for?



### Starting point

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

### Which machines can be included in the system?

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



# UnitXpress

## The modules of the system



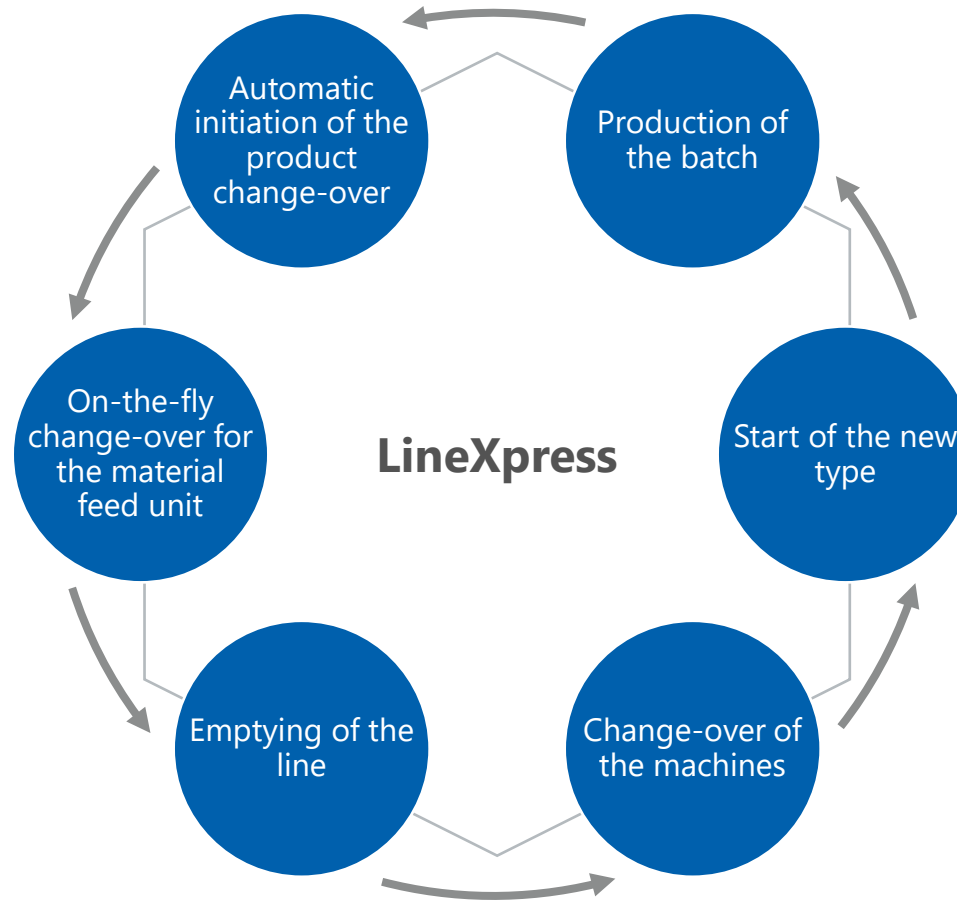
The LineXpress consists of individual parts: the UnitXpress modules. Combined with the machines, they control the processes and support the operator.

The UnitXpress modules are individually added depending on the line and the customer request. 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

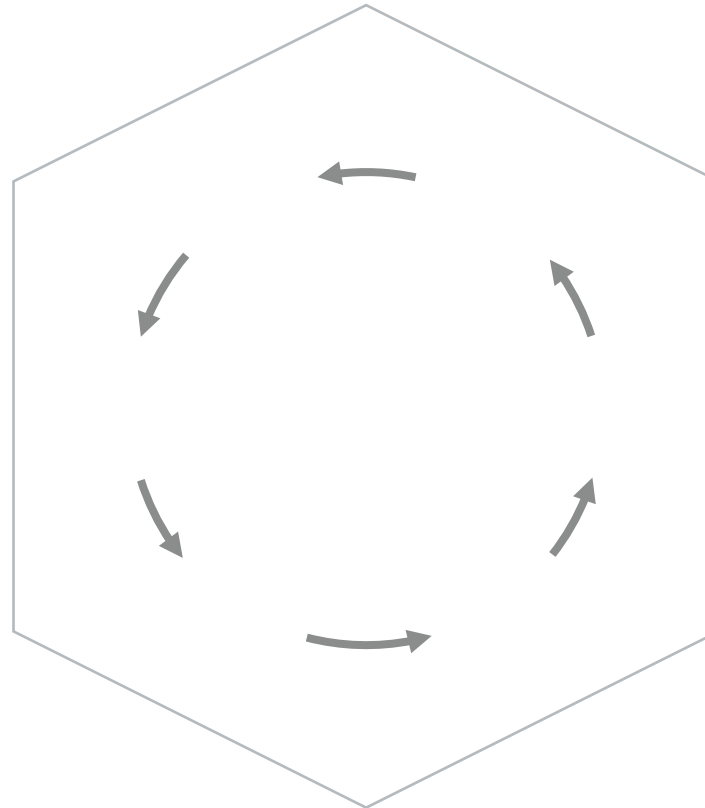
Optionally, when the product tank empties or when a defined production quantity is achieved

## 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.



**SOLUTIONS  
BEYOND  
TOMORROW**

