Shingo’s Single-Minute Exchange of Die (SMED) method can be used to ensure quick changeovers and eliminate waiting time.

According to the book, “OEE for Operators” (Koch & Productivity Development Team, 1999), SMED is a 3-step process which allows for improvement in OEE through quick changeovers:

These are:

1: Separate Internal & External Setup
2: Convert Internal to External Setup
3: Streamline All Aspects of Setup

Look at all of the activities that took place during the changeover process. Identify activities which are:
- Internal: which can only be completed when the machine is stopped
- External: which can be actioned when the machine is still running and producing products

Reduce internal setup time, and change much of what is being done internally to be done externally:
- Organise operating conditions in advance
- Introduce standardized functions and work instructions
- Measure the effects of changes using a reliable system, such as an automated OEE system.

Look at all other aspects and optimize all areas to improve flow:
- Use PDCA model to visualize each step and apply critical thinking.
- Continuously improve your improvements
- Train staff to improve sustainability
- Use parallel operations, where two operators share the workload.