

TAB 7 — SMED CHANGEOVER ANALYSIS

Fictional example: names, sites and figures are invented for illustration.

CHANGEOVER DETAILS			
Line / Machine	Line 2 (depositors, tray sealer, labeller)	Observed by	Dawn Hartley with Aisha Rahman (QA)
Change (From → To)	Beef lasagne (milk, egg, gluten) to vegetable chilli (none of these)	Date	4 Mar 2026
Total current time	95	Target time (mins)	40

STAGE 1 & 2: CURRENT CHANGEOVER — Observe, Record and Classify							
Internal = Must happen while line is stopped External = Can be done while line is still running							
#	Activity Description	Duration (mins)	Internal / External	Can be converted?	Who does it?	Issues / Notes	Improvement Idea
1	Run out last product and clear finished trays from the line	5	Internal	No	Operators	Run-out waits for the last tray to clear the sealer	Start run-out earlier on the planned last batch
2	Stop line, isolate and lock off depositors	3	Internal	No	Team leader	Safety step, must stay	
3	Strip sauce depositor nozzles, hoppers and hoses and take to wash bay	11	Internal	Partly	Operators	Clamps need a spanner; parts carried by hand	Quick-release clamps; second set of parts
4	Wash and sanitise stripped parts in wash bay	12	Internal	Yes	Hygiene team	Only one wash bay, often a queue	Wash second set off-line while the line runs
5	Wet clean conveyor belts and denester guards, then rinse	9	Internal	Partly	Operators	Chemical and hoses fetched from store	Stage chemical and hose reel at the line
6	Swab / ATP test after clean and wait for the result	8	Internal	Partly	QA technician	QA technician not always on the line	Book the QA slot at the start of the change
7	Wait for QA visual check and release	7	Internal	Yes	QA technician	Waiting time while QA is found	Pre-book QA; check as the swab is read
8	Fetch tools, parts, film and trays for next product	6	Internal	Yes	Operators	Items collected after the line stops	Kit trolley staged by the previous shift
9	Fit clean depositor nozzles, hoppers and hoses	6	Internal	Partly	Operators	Hose routing differs by operator	Photo standard and quick-release clamps
10	Change tray sealer film reel and date code	5	Internal	Yes	Operators	Reel loaded only when the line stops	Pre-load reel on a stand; check date code early
11	Change labeller reel and label programme, check label text	4	Internal	Partly	Operators	Label text checked by one person only	Pre-load reel; second-person check while sealer runs
12	Load recipe on depositor controls and set weights	4	Internal	Partly	Operators	Values typed in by hand each time	Stored programmes with a recipe card
13	Set checkweigher and metal detector programme and run test pieces	4	Internal	No	Operators	Safety and quality check, must stay	
14	Start up, run first trays and complete first-off checks	6	Internal	Partly	Team leader / QA	Weights re-adjusted several times	Set weights from stored programme
15	Complete changeover record and line clearance sign-off	5	Internal	Partly	Team leader	Paperwork started after the line is ready	Pre-fill the record while the line is running
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TOTAL		95	Current total time (mins):				

STAGE 3 & 4: IMPROVED CHANGEOVER — New sequence after conversion and streamlining							
#	Activity Description (new/retained)	Type	Target Duration (mins)	Who?	Pre-staged?	SOP Required?	Notes
1	Run out last product and clear line	Internal	5	Operators	No	Yes	Unchanged
2	Stop, isolate and lock off	Internal	3	Team leader	No	Yes	Unchanged, safety step
3	Swap to pre-cleaned depositor set with quick-release clamps	Internal	6	Operators	Yes	Yes	Replaces stripping, carrying and washing on the stopped line
4	Wet clean belts and denester guards with staged chemical and hose reel	Internal	7	Operators	Yes	Yes	Was 9 min including fetching
5	Swab / ATP test with QA already at the line	Internal	5	QA technician	Yes	Yes	QA slot booked at the start of the change
6	QA visual check and release, done as the swab is read	Internal	2	QA technician	Yes	Yes	Was 7 min of waiting
7	Load stored recipe programme from the recipe card	Internal	2	Operators	Yes	Yes	New: stored programmes
8	Set checkweigher and metal detector programme, run test pieces	Internal	3	Operators	No	Yes	Unchanged check
9	Start up and complete first-off checks	Internal	5	Team leader / QA	No	Yes	Weights set from stored programme
10	Pre-filled changeover record, sign line clearance	Internal	2	Team leader	Yes	Yes	Record filled in while the line runs
11	Stage kit trolley: tools, parts, film, trays	External		Previous shift	n/a	Yes	Done while the last product runs (about 6 min)
12	Wash second depositor set off-line	External		Hygiene team	n/a	Yes	Done while the last product runs (about 12 min)
13	Pre-load sealer film and labeller reels; check date code	External		Operators	n/a	Yes	Done while the last product runs (about 9 min)
14	Book QA technician for the swab slot	External		Team leader	n/a	Yes	Done at the start of the shift
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NEW TOTAL			40	58%	Saving vs current:		

Target plan: 40 minutes stopped time; external steps run while the last product runs and are not counted. Achieved at wave closure: 52 minutes (average of weeks 9 and 10, tab 8).