Operational excellence

SMED: Changeover Time Reduction

Two days to cut a changeover time on your own line, with a target of halving it. The changeover is filmed, analysed operation by operation, then reorganised: separating internal and external operations, conversion, simpler adjustments, a changeover standard. The course ends with a SMED workshop and a timed audit that checks the gain holds.

Duration : 2 days

Objectives

1. Explain the SMED method and the effect of a short changeover on batch sizes and inventory
2. Analyse the video of a real changeover and time each operation
3. Distinguish internal and external operations, then convert internal operations into external ones
4. Simplify the fastenings, adjustments and trials that lengthen the changeover
5. Write the changeover standard and verify the gain through a timed audit

Programme

Day 1 — morning

• Why reduce changeover times: flexibility, small batches, line availability

• The steps of the SMED method and what can be expected from it

• Filming a changeover: camera angles, stopwatch, tracking operators and movements

• Choosing the changeover to study and forming the team: production, maintenance, methods

Day 1 — afternoon

• Video analysis of a real changeover on your line, operation by operation

• Recording times, movements, tool searches and waiting

• Sorting the operations: internal, external, unnecessary

• Diagram of the current changeover and reference time

Day 2 — morning

• Externalise: preparation before stopping, changeover trolley, ready-to-use tooling

• Convert: presets, jigs, standardised interface parts

• Simplify fastenings and remove adjustment by trial and error

• Work in parallel: sharing tasks between operators and setters

Day 2 — afternoon (workshop)

• Workshop: SMED workshop on the line and application of the first improvements

• Changeover standard: sequence, roles, tooling, restart criteria

• Timed audit of the new changeover and comparison with the reference time

• Action plan for improvements that require technical intervention

• Knowledge test on the SMED method

Teaching methods

• Film of a real changeover on your line, analysed sequence by sequence in sub-groups
• Timings carried out by the participants
• Multidisciplinary team: setters, operators, maintenance, methods
• Measured before / after comparison on the same changeover
• Examples from packaging, plastic injection and machining lines

Assessment and documents

Knowledge test, end-of-course evaluation at D+1, numbered training certificate verifiable online and training report. The report sets out the changeover times before and after, the standard written and the remaining action plan.

Bilingual materials for every participant; each classroom course comes with its digital twin on OmniLearn.

Good to know

Third step of the « Operational Excellence Cycle », followed by the sustainability audit. The workshop is more effective on a workstation that is already organised: see « 5S and Visual Management: Pilot Workshop ».

Practical information

Duration	2 days
Group size	Groups of 6 to 12 participants, in-company
Format	In-company, face to face on your site
Language	French, Darija or English; bilingual materials
Funding	OFPPT special training contracts (TFP), GIAC, Maroc PME: we prepare the applications with you, at no extra cost.
Programme customisation	Programme adapted to your procedures, your equipment and your audience

Frequently asked questions

Do we have to stop the line during the training?
At least one real changeover is needed during the session: once to film it, a second time to try the new operating method. We schedule the two days around your production plan.

Is halving the changeover time guaranteed?
It is the goal of the course, not a promise. The gain depends on the starting point: a changeover never analysed usually contains many operations that are easy to externalise; one that has already been worked on needs more technical changes.

Does SMED apply outside mechanical engineering?
Yes. Format changes in packaging, mould changes in plastic injection, recipe changes in agri-food with cleaning between two productions: the logic of internal and external operations stays the same.

How do operators feel about being filmed?
We inform them beforehand and explain the purpose: to analyse the changeover, not to assess people. They are often the ones who suggest the best improvements when watching the video.