# Target: modeling setup times between tasks.

Setup time is an extra time to prepare the machine for do a job. It depends of job previously executed in machine.

Setup time is modeled with a “change matrix”, a matrix that contains setup time for each pair of job type.

For example, matrix defined in Demo3 means:

Table

Description automatically generated

A resource (machine) that is ending with a job Type0, before start a new job Type0 needs 0hours for setup.

A resource (machine) that is ending with a job Type0, before start a new job Type1 needs 2 hours for setup.

A resource (machine) that is ending with a job Type1, before start a new job Type0 needs 1hours for setup.

A resource (machine) that is ending with a job Type1, before start a new job Type1 needs 1hours for setup.

Currently, setup times are not taking account, so the problem solution is do Op 4,Op 3 and Op1 in same resource.

With the new feature, changing from Op4 to Op3 and changing from Op3 to Op1 takes 3 additional hours (suppose that Op3 is Type0, all the rest are Type1).

Text

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If setup times grow up, the optimal solution will be assign op3 to Fab02, to avoid extra times.