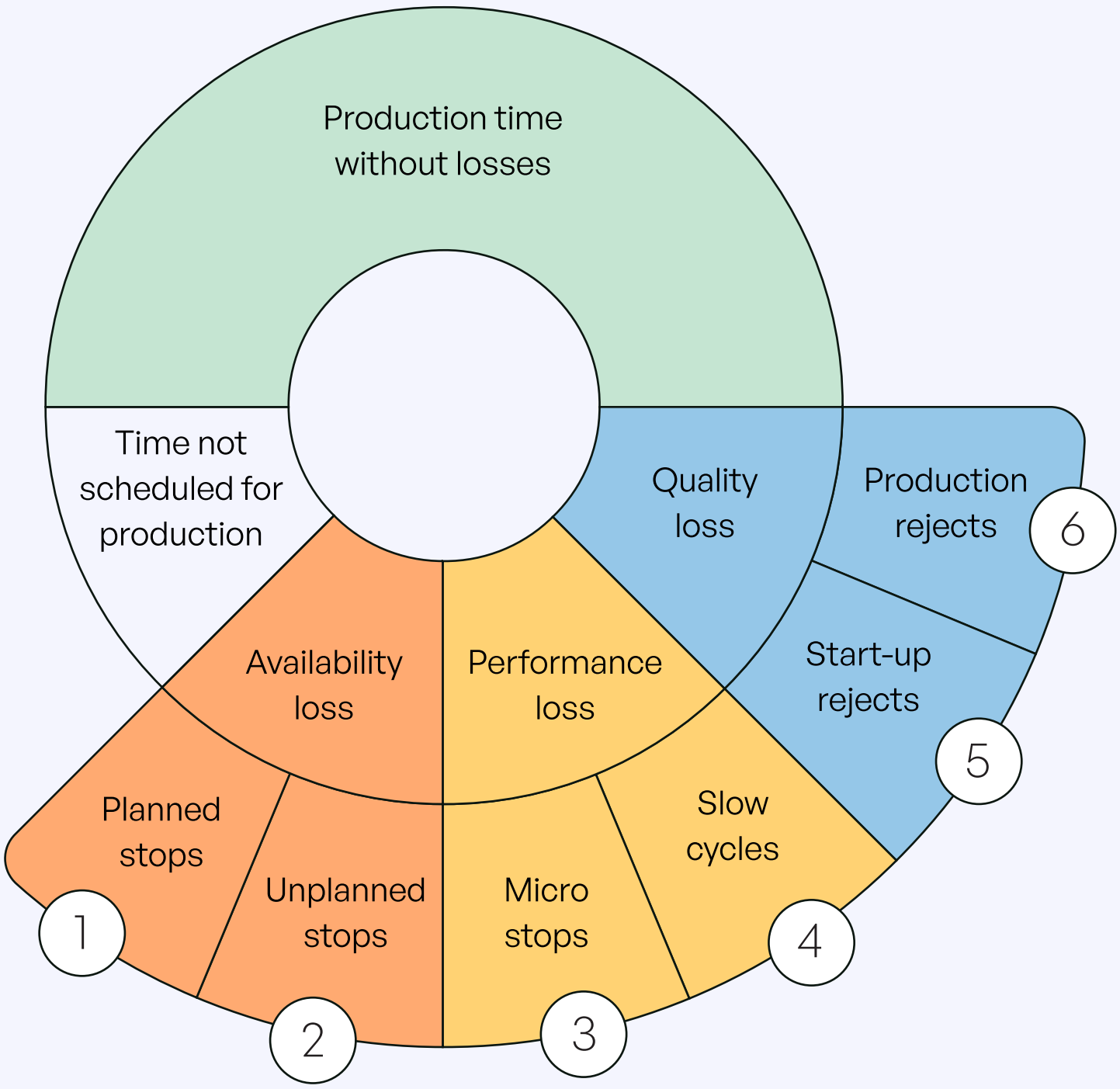
The Six Big Losses

in Manufacturing



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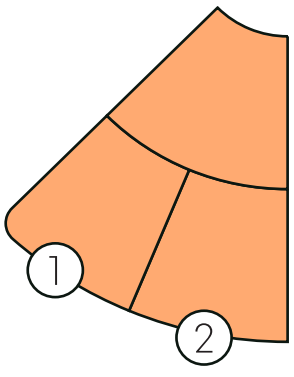


Availability loss

1. Planned stops

Equipment is scheduled for production but is **not running due to a planned event**.

Examples: changeovers, tooling adjustments, cleaning, breaks, etc.

2. Unplanned stops

Equipment is scheduled for production but is **not running due to an unplanned event**.

Examples: breakdowns, unplanned maintenance, lack of operators or materials, problems upstream or downstream.

Performance loss

3. Micro stops

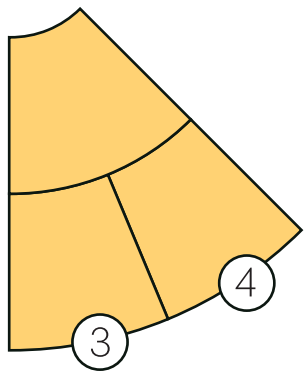
Equipment stops for a very short period of time, typically a minute or less and the stop is often resolved by the operator.

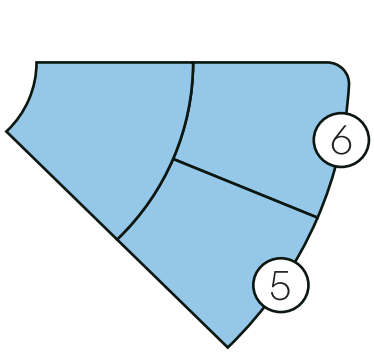
Examples: miss-feeds, jams, incorrect settings, misaligned or blocked sensors, etc.

4. Slow cycles

Equipment runs slower than the "nameplate", the theoretical fastest possible time to manufacture one piece.

Examples: equipment limitations or age, improper maintenance, scheduling, low targets, human errors, material quality, etc.





Quality loss

5. Start-up rejects

Defects produced from start-up until stable production is reached. They can occur after any equipment start-up, however, are most commonly tracked after changeovers.

Examples include suboptimal changeovers, "warm up" cycles, or equipment that inherently creates waste after start-up.

6. Production rejects

Defects produced during stable (steady-state) production - including those that can be reworked (OEE measures quality on the basis of "Right First Time").

Examples include under or overweight bags, label problems, chemical or physical conformity issues, broken packaging, etc.