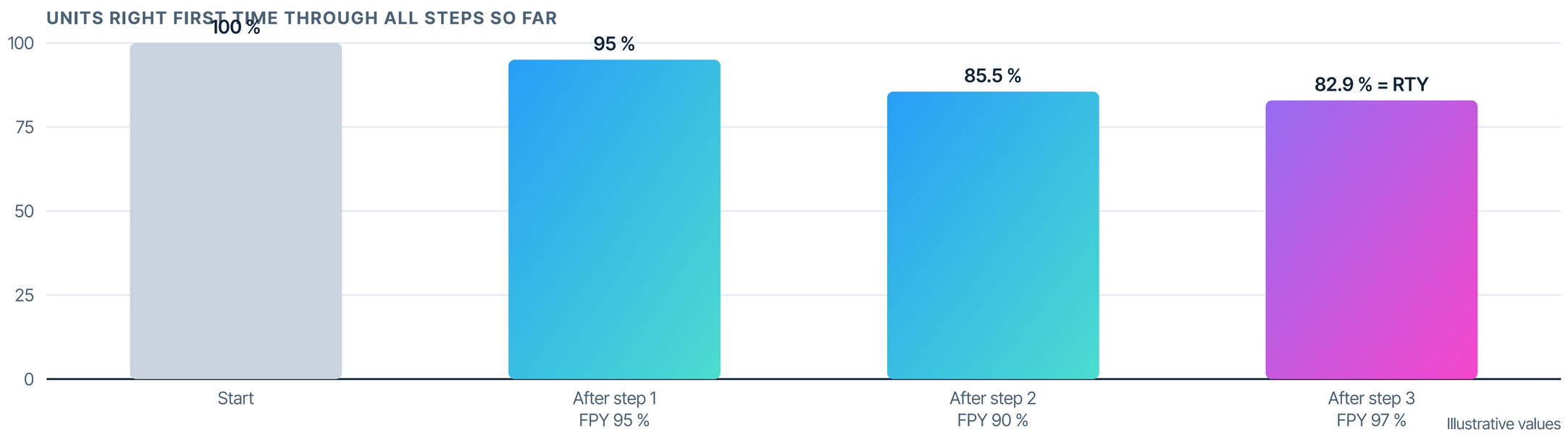
QUALITY MANAGEMENT

First Pass Yield vs Rolled Throughput Yield

First pass yield measures how many units pass one step right the first time. Rolled throughput yield multiplies these yields to show how many pass every step first time.

01 THE CORE MODEL

YIELD FUNNEL · FIRST-PASS YIELDS MULTIPLY



First pass yield

Units right first time at one step ÷ units entering that step.

Rolled throughput yield

The product of all step FPYs: the chance a unit passes every step first time.

Hidden factory

The rework loops that a final yield report never shows.

02 WHY IT MATTERS

Final yield can look fine while rework hides in every step.

FINAL YIELD — RTY

FINAL YIELD ONLY

- Counts reworked units as good
- Hides capacity lost to rework
- Points to no step in particular

ROLLED THROUGHPUT YIELD

- Shows true first-time capability
- Makes each step's loss visible
- Prioritizes the weakest step

03 WORKED EXAMPLE

THREE-STEP PCB ASSEMBLY · ILLUSTRATIVE FIGURES

STEP 1 FPY **95 %** × STEP 2 FPY **90 %** × STEP 3 FPY **97 %** = RTY **82.9 %**

0.95 × 0.90 × 0.97

04 MANAGEMENT TAKEAWAYS

01 — Measure FPY at every step

Count rework as a failure, even when the unit is saved later.

02 — Attack the lowest FPY first

In this example step 2, at 90 %, offers the largest gain.

03 — Report RTY next to final yield

The gap between them is the size of your hidden factory.

05 COMMON MISTAKE

LIMITATION

Counting repaired units as first pass

Including reworked units inflates FPY and makes the rework loop invisible.