



# JONES SODA: PRODUCT PERFORMANCE ANALYSIS

*Reducing Downtime & Improving Production Efficiency*

by Silvia Wutche

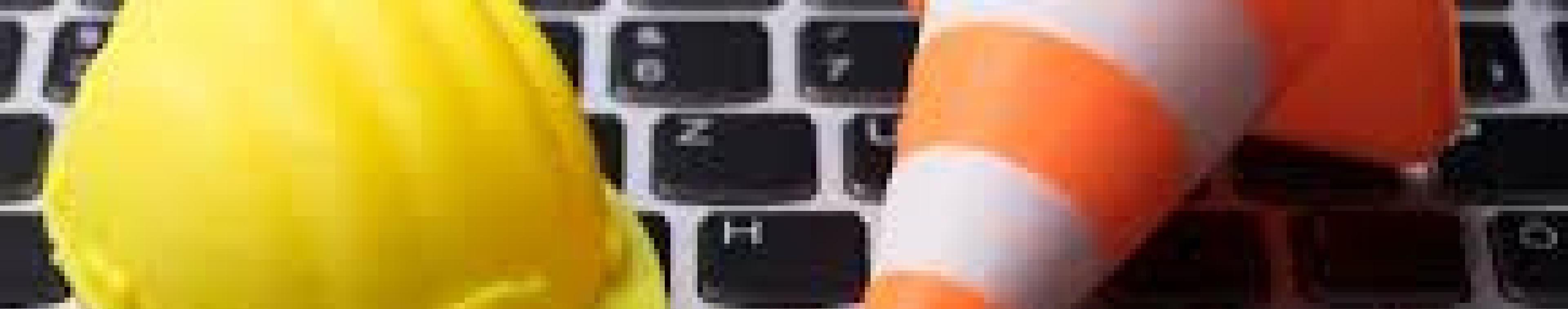
# Problem: Production Downtime

## Recurring Issues

Some products experience frequent downtime, leading to production delays.

## Efficiency Impact

Identifying these products and addressing downtime causes will improve overall efficiency.



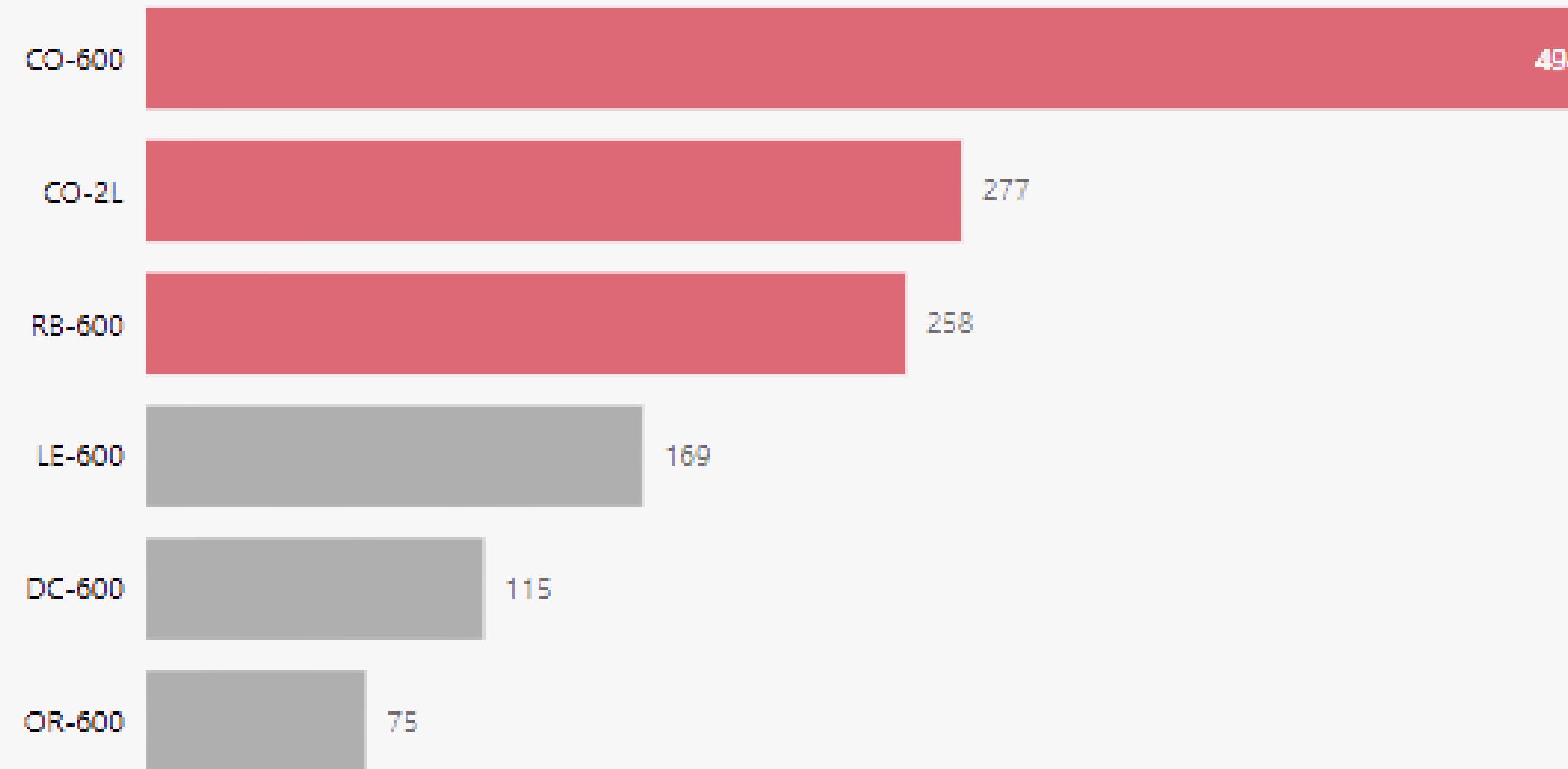
## Downtime Overview

23 hrs  
Total Downtime

40%   
Production Time Lost

We lost  $\simeq 17$  Batches

# Which Products Have the Most Downtime?



CO-600 alone accounts for over **35%** of total downtime, making it the biggest bottleneck

# Key Bottlenecks

Product	Total Downtime (mins)	% of Total Downtime	Batch Failure Rate (%)	Primary Issue
CO-600	494 mins	35.59%	93.33%	Machine failure
C0-2L	277 mins	19.96%	100%	Machine adjustment
RB-600	258 mins	18.58%	100%	Machine adjustment
LE-600	169 mins	12.17%	83.33%	Batch change
DC-600	115 mins	8.29%	75%	Machine failure
OR-600	75 mins	5.40%	100%	Batch change

 Total estimated downtime from these key issues: ~1,027 mins (~ **17 hours lost**)

# Top Affected Products

**CO-2L**

277 mins (19.96%)

**CO-600**

494 mins (35.59%)

**RB-600**

258 mins (18.58%)



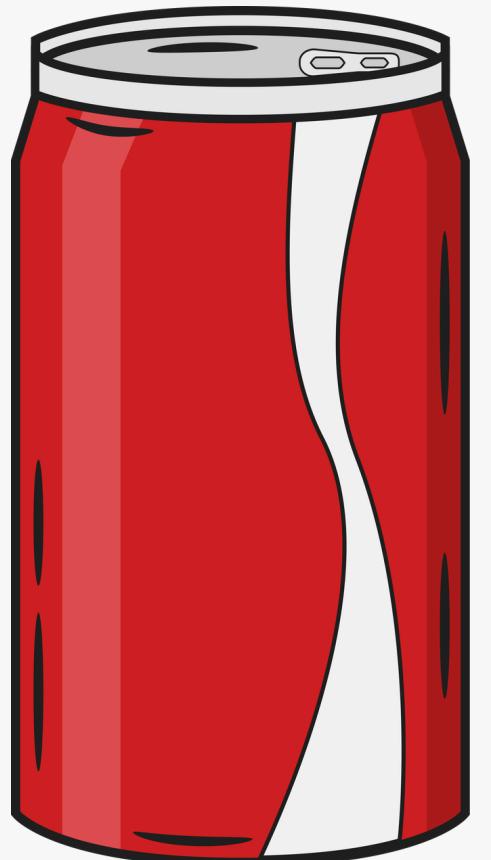
The delays from these failures is impacting the production flow of other products as well

# Batch Failure Rates

How often a batch experienced downtime

**CO-2L**

5 out of 5 batches  
affected



100%

**RB-600**

7 out of 7 batches  
affected



100%

**CO-600**

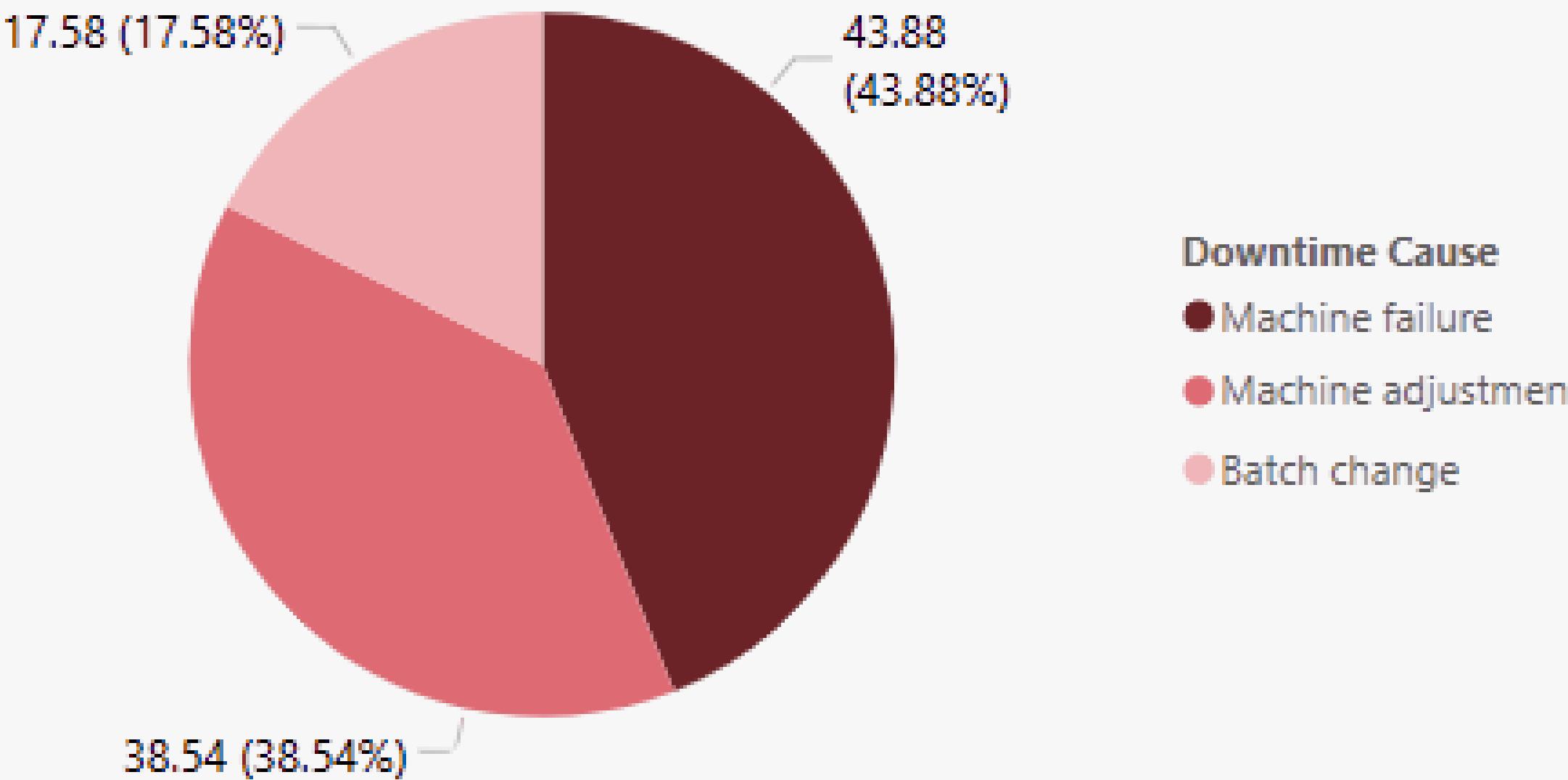
14 out of 15 batches  
affected



93.33%



# What causes most of the Downtime?



Machine failures and frequent adjustments make up over **70%** of total downtime  
Addressing these will bring the biggest impact

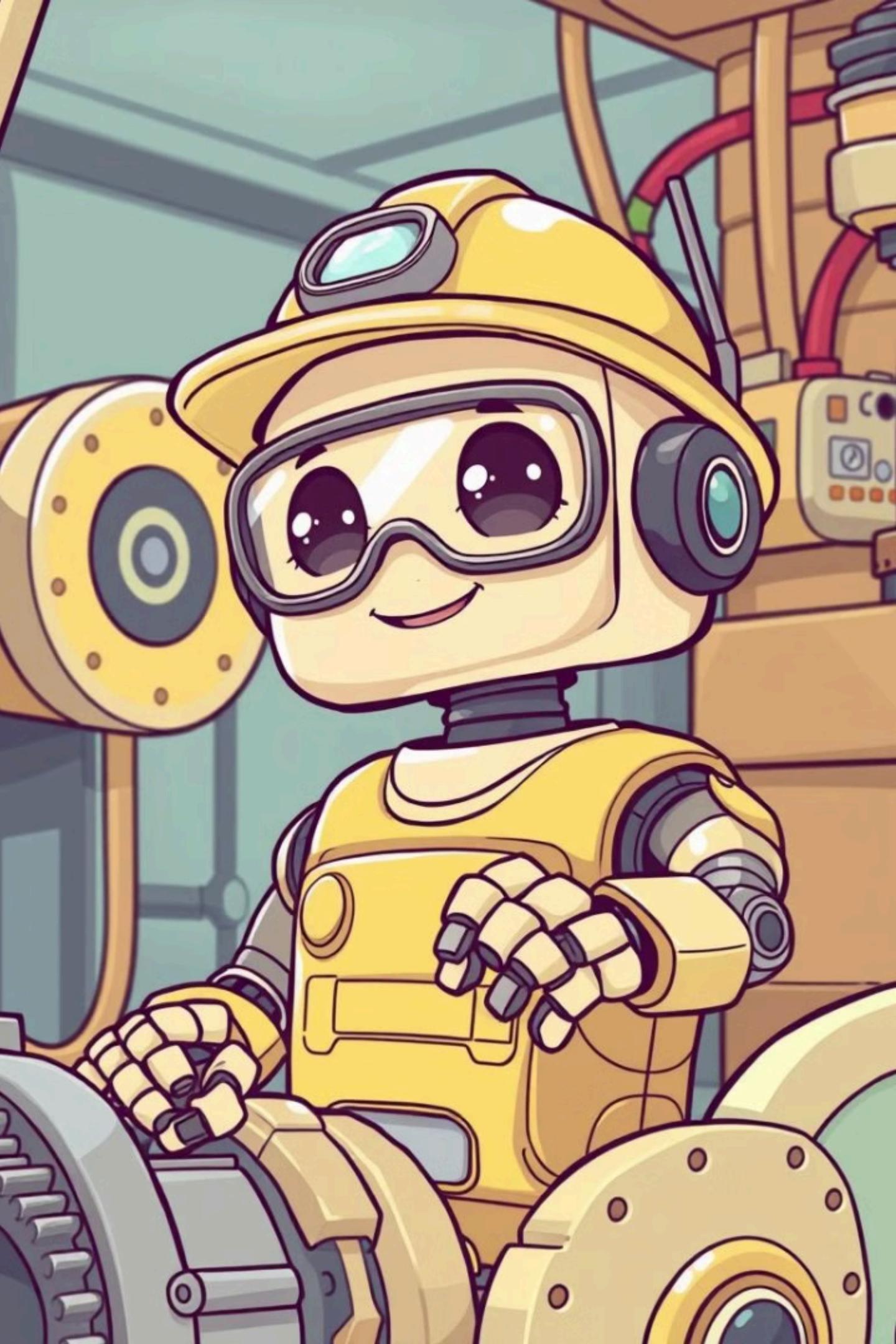
# Production Loss



Product	Batches Lost
CO-2L	2
CO-600	8
RB-600	4

A total of **14** batches were lost to downtime

# Root Cause Analysis



## 1. C0-600 **8hrs downtime (35.59%)**

Frequent adjustments, setup errors, product spills, and inventory shortages stressed the machine which led to failures

## 2. CO-2L **5hrs downtime (19.96%)**

Every batch experienced downtime at least twice due to the larger size requiring frequent machine adjustments

## 3. RB-600 **4hrs downtime (18.58%)**

Calibration and coding errors at the start likely caused instability, which leads to frequent machine adjustments to correct settings



# Recommendations

- 1 Preventive Maintenance (High Impact)**  
Reduce machine failures
- 2 CO-2L Optimization (High Impact)**  
Optimize machine settings for adjustments
- 3 Analyze Trends (Medium Impact)**  
Monitor downtime data to catch issues early
- 4 Train Operators (Medium Impact)**  
Reduce unnecessary machine adjustments
- 5 Batch Change Process Improvement (Low Impact)**  
Reduce batch changeover time by optimizing setup processes

# WHAT HAPPENS WHEN WE FIX THIS:

Assumed reduction = 50%

Expected downtime reduction: ~ 8hrs saved

**CO-2L: 1 batch**

(277 mins \* 50% = 139 mins saved / 98 mins per batch ≈ 1 batch)

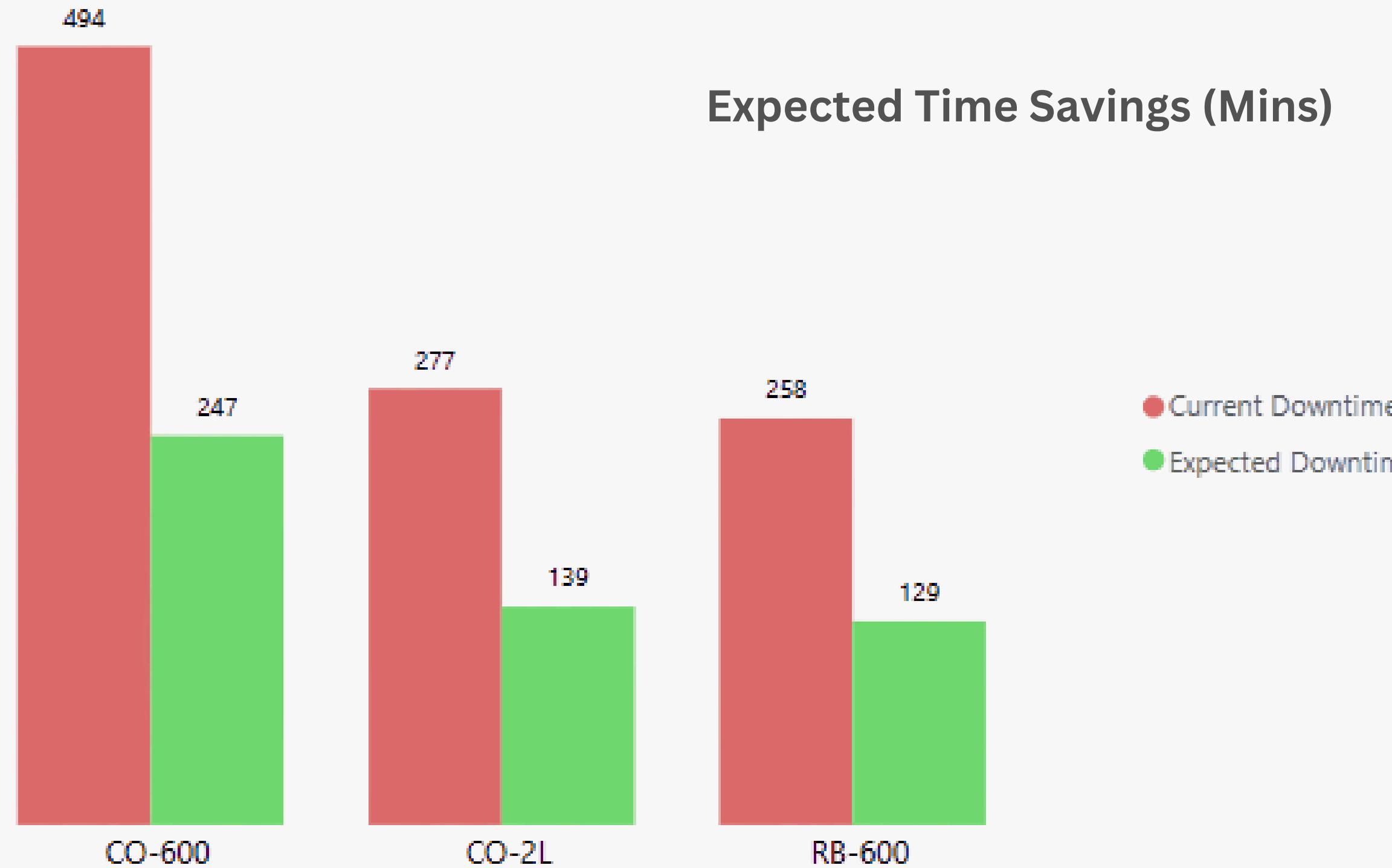
**CO-600: 4 batches**

(494 mins \* 50% = 247 mins saved / 60 mins per batch ≈ 4 batches)

**RB-600: 2 batches**

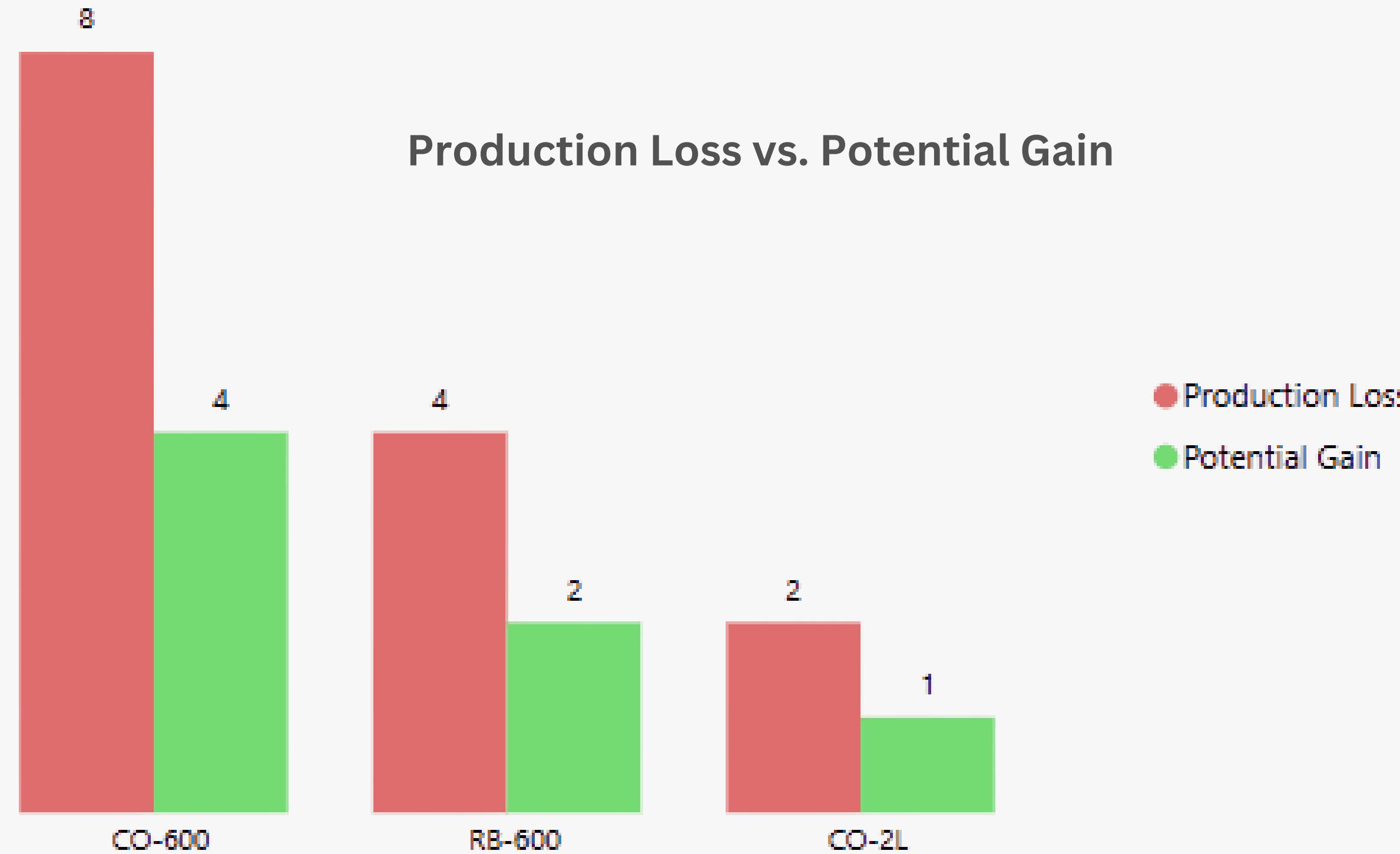
(258 mins \* 50% = 129 mins saved / 60 mins per batch ≈ 2 batches)

# How much Downtime can we reduce?



By implementing these solutions, we can cut downtime by 50%, saving 8 hours of production time

# How many batches can we recover?



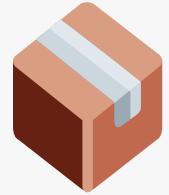
Fixing these issues will recover 7 batches, reducing downtime and boosting efficiency

WHEN WE FIX THIS

We are saving:



8 HOURS OF  
PRODUCTION TIME



7 ADDITIONAL  
BATCHES

# BUSINESS

## Business Gains

### 1 Increased Production Output

Up to **20%** more output from the same machines

### 2 Lower Batch Failure Rate

Fewer failed batches = less waste

### 3 Cost Savings

Fewer machine breakdowns = lower maintenance and repair costs

### 4 Higher Efficiency

More products made in less time

# Action Plan

## Immediate Actions

- 1** — Check and service CO-600 to avoid breakdowns
- 2** — Fine-tune CO-2L and RB-600 settings to reduce frequent stops
- 3** — Train operators on how to adjust machines properly and prevent unnecessary downtime

## Ongoing Improvements

- 1** — Track downtime issues to spot patterns and fix them early
- 2** — Simplify the process to switch between batches faster
- 3** — Check downtime data and make improvements every 3 months

# Thank You

Questions  
Answers