

Client Background

Dormakaba offers a comprehensive portfolio of products, solutions, and services for everything related to doors and secure access for hotels, healthcare, education, shops, lodging, entertainment facilities, sports centers, airports, at home or in the office. They offer a wide portfolio of products including cores and keys, door hinges, padlocks, and more.



Facility located in Indianapolis, IN

Key Characteristics:

- Make-to-order
- Forward Scheduling
- Low-volume, high-mix
- Vertical Integration: Manufacturing, Assembly, Distribution

Problem Statement

A poor inventory management system and inefficiency of the existing conveyor system have caused problems with productivity, delays in fulfilling orders and excess inventory in the distribution center. With constant expansion over the years, their outdated conveyor system is causing more problems than it solves. It is one of the major causes for inefficient put-away and picking processes and is costing more labor hours than necessary.



Main Issues:

- Conveyor belt is outdated and error-prone
- Wide footprint for picking and put-away processes
- Lack of standardization and underutilization of SAP

Methodology

Time Study: We performed time studies at different locations where problems were identified and developed strategies to address those issues.

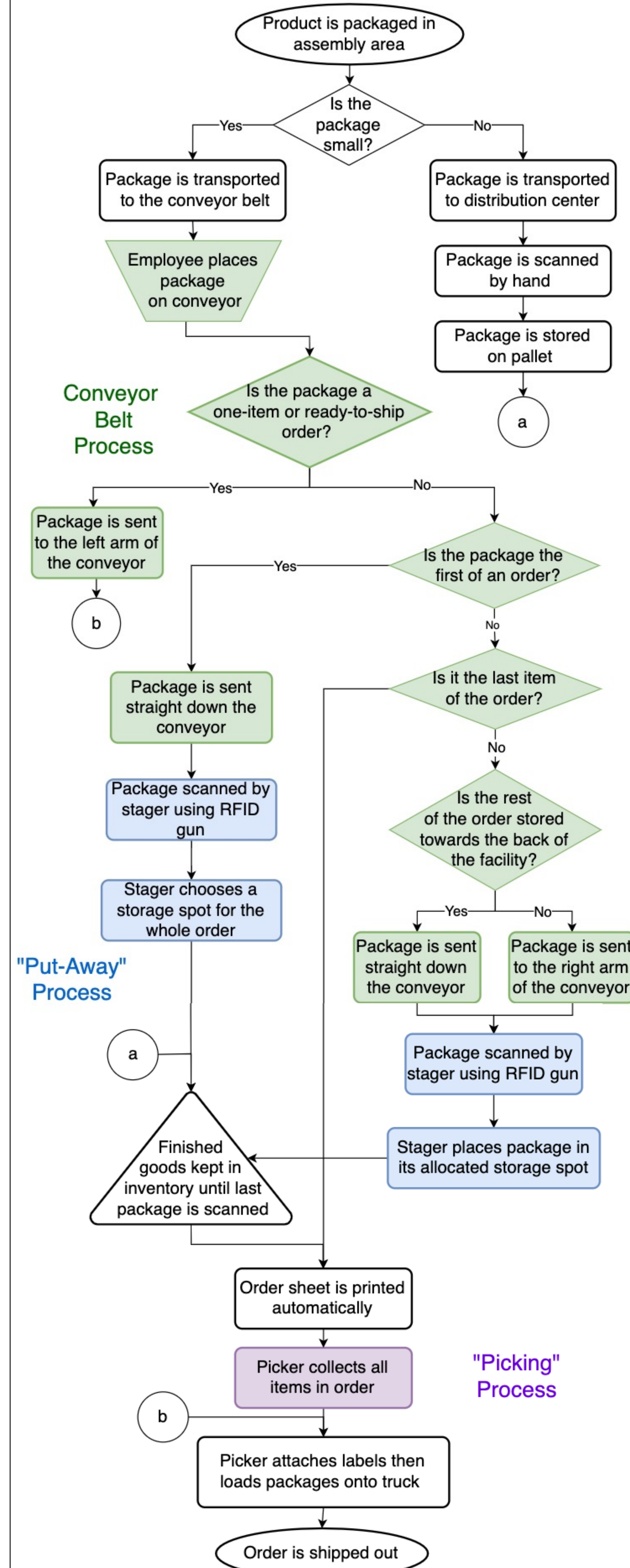
Conveyor Belt: We requested a budgetary estimate from Bastian Solutions for a new conveyor belt with its upgraded features identified through benchmarking research.

SAP Capabilities: We interviewed SAP experts to gather information about the diverse capabilities of SAP, particularly those that are not currently being utilized.

Constraints:

1. Increased learning curve and training operators
2. Risk of not being able to obtain an accurate quote in time
3. Lack of quantitative data and well documented KPIs

System Model



Client Contact

Mark Harris
Email: Mark.harris@Dormakaba.com



Results

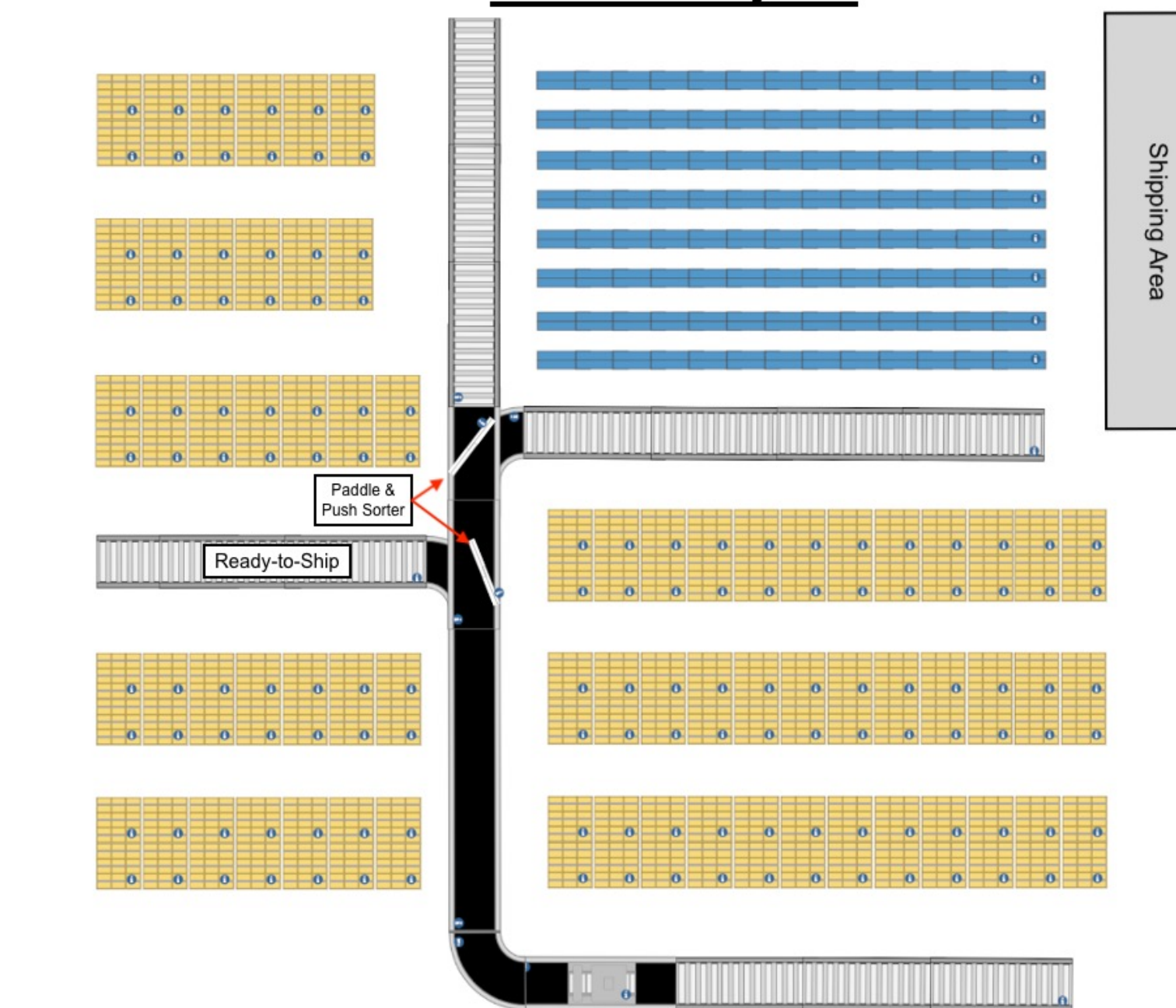
Conveyor System New Features:

- Transport Conveyor
- Gapping Belt Induction
- Activated Roller Belt (ARP) Sortation System
- Automated Weighing Scale
- Improved Layout
- Wider Belt

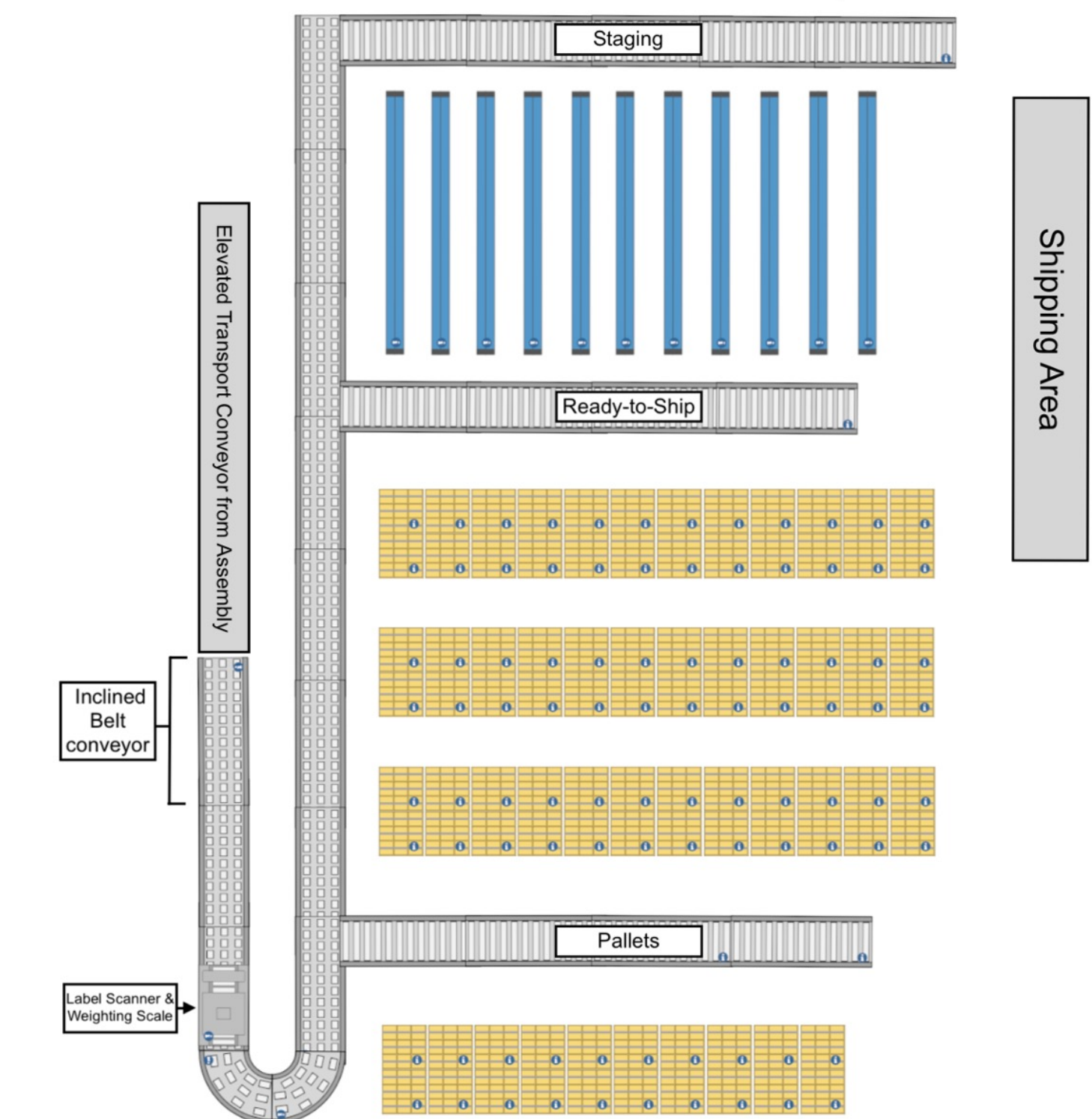
SAP Capabilities:

- Box dimensions
- Packaging Instructions
- Empty Bin Report
- Returned Product Inventory

Current Layout



Proposed Layout



Quantitative Evaluation

Time Reduction :

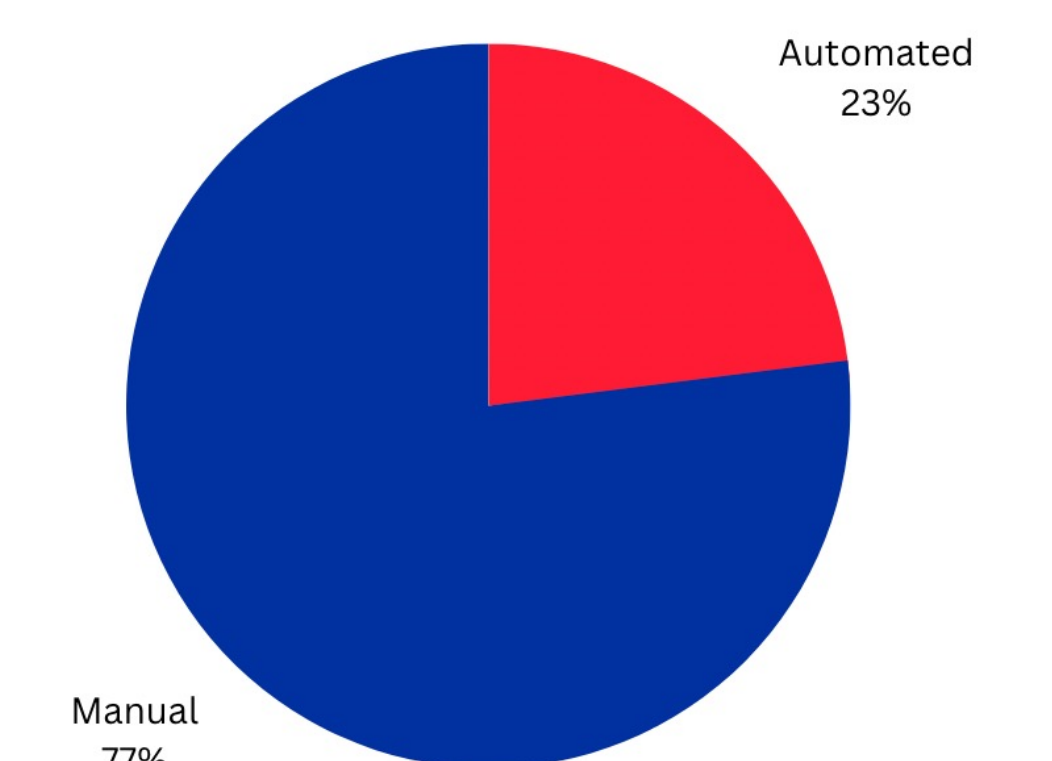
- 48.62 hours/month saved with Gapping Belt Induction
- 85.5 hours/month saved with the removal of tugger
- 114.4 hours/month saved with built-in automated weighing scale

Quality:

- 18.03% of boxes currently getting stuck or not scanned due to pile-up

Total time saved in 1 month	248.52 Hours
Cost Savings in 1 month	6013.4 dollars

Tugger Spacing Cycle Time

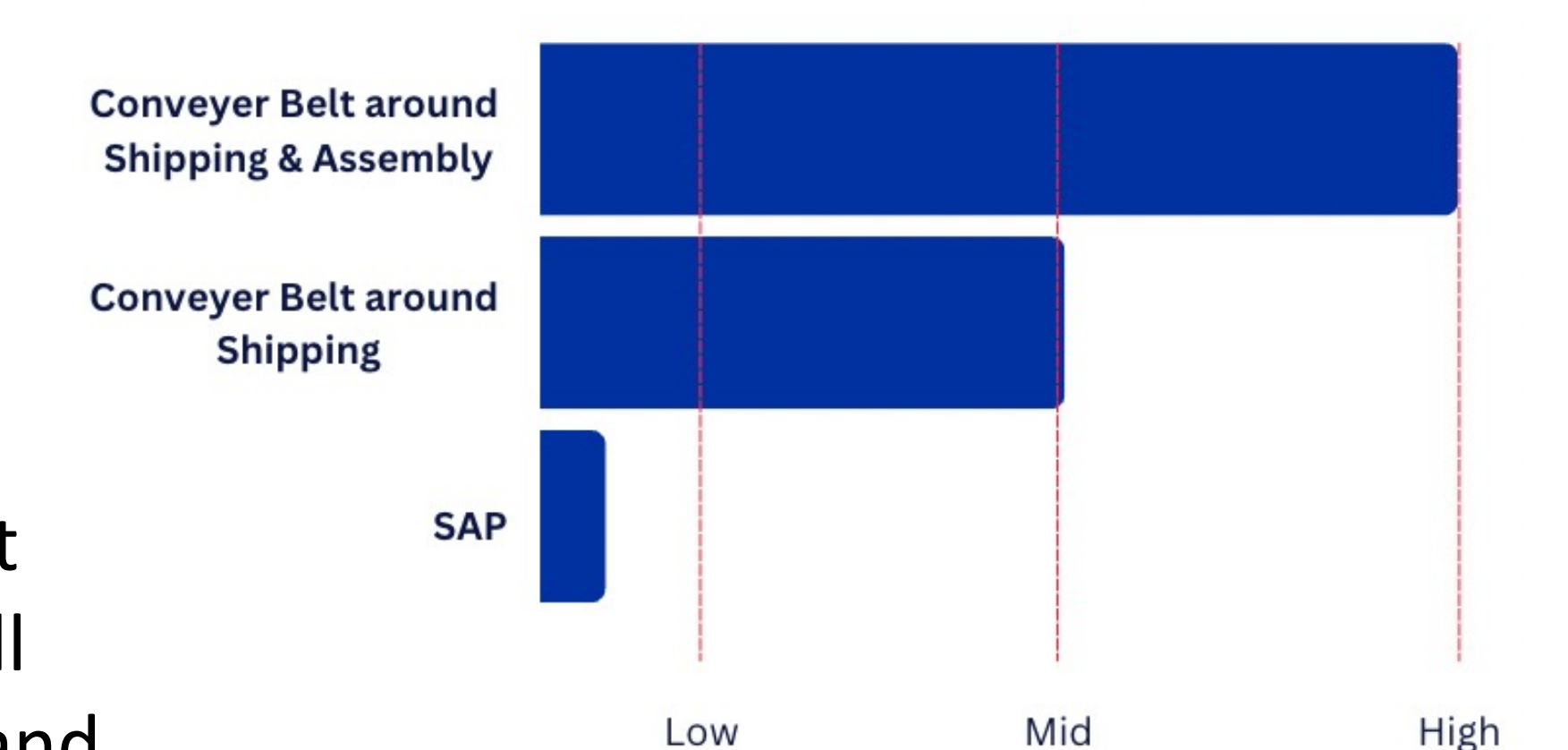


Discussion

We aim for improvements in **productivity, safety, footprint, and quality** which are persuasive justifications for capital investment from our client's perspective.

Our final recommendations will be presented through a multi-level cost benefit analysis, emphasizing overall productivity gains, time reduction, and cost savings.

Final Cost Comparison



Scan the QR code for a list of our references

