

# Automation of Palletizing and Packaging

## USE CASE

### CLIENT PROFILE

A global **Contract Manufacturing Organization (CMO)** specializing in pharmaceutical manufacturing and packaging for international healthcare companies.

With over 50 sites across North America, Europe, and Asia, the company offers services ranging from formulation and clinical trials to copacking and commercial distribution.

The project focused on a North American site dedicated to **secondary pharmaceutical packaging**, operating 24/7 across three rotating shifts.

### PROJECT CONTEXT

Before partnering with **OPTTEL**, the **end-of-line operations** — case erecting, case packing, and palletizing — were entirely manual.

This setup led to:

- Strong dependency on manual labor, difficult to stabilize on rotating schedules;
- Increased fatigue, human errors, and high turnover;
- Constant pressure on productivity and delivery quality;
- Ergonomic risks from repetitive handling tasks.

Facing rising competition, strict GMP and traceability requirements, and cost pressures, the company sought to **modernize and automate** its packaging line.

### OBJECTIVES

The joint goals defined with OPTTEL were to:

- Reduce direct labor dependency on end-of-line operations;
- Gradually automate repetitive tasks while maintaining GMP compliance;
- Improve 24/7 performance and production consistency;
- Decrease ergonomic and safety risks;
- Lower unit costs and strengthen competitiveness;
- Achieve a **full ROI within 18-24 months**.



## CHALLENGES

Key challenges prior to automation included:

- Difficulty recruiting and retaining staff for continuous shifts;
- Variability in line performance across shifts;
- High overtime and labor costs;
- Technical constraints: limited floor space, MES/ERP integration, and safety compliance;
- Lack of consolidated performance data to measure true OEE and identify bottlenecks.

## OPTEL'S SOLUTION AND IMPLEMENTATION

OPTEL supported the client through data analysis, ROI modeling, and phased automation implementation.

**A three-phase deployment ensured a smooth and risk-controlled transition:**

### PHASE 1 Automated Palletizing

Installation of a collaborative palletizing robot

**Eliminated repetitive lifting tasks and stabilized throughput.**

### PHASE 2 Automated Case Packing

Integration of an automatic case packer.

**Reduced manual handling and micro-stoppages, improving flow continuity.**

### PHASE 3 Automated Case Erecting (ongoing)

Automation of box erection for a fully automated end-of-line.

**Expected outcome: standardized cadence, full ergonomics, and maximum safety.**

## RESULTS & MEASURABLE BENEFITS

- **Staffing reduced from three to one operator per shift** while maintaining 24/7 output.
- Savings equivalent to **two full-time positions** and significantly lower turnover.
- **OEE improved from 72% to 85%**, with a 90% target after Phase 3.
- **Zero ergonomic incidents** since automation implementation.
- **ROI achieved in under 24 months.**



## KEY SUCCESS FACTORS

- based, risk-controlled automation approach;
- Collaborative robot integration allowing safe human-machine interaction;
- Strong operator engagement and first-level maintenance training;
- OPTEL's combined expertise in **traceability, performance, and ROI validation.**

## STRATEGIC IMPACT

Following this transformation, the client:

- Strengthened competitiveness in pharmaceutical copacking;
- Stabilized continuous operations while reducing labor dependency;
- Enhanced its reputation as an **innovative, forward-thinking manufacturer.**

The ongoing automation program will lead to a fully automated packaging line, replicable across multiple sites — setting a new global benchmark in pharmaceutical packaging efficiency.



## CONTACT US

To learn more about OPTEL's traceability solutions, contact us at [optelgroup.com/contact/](https://optelgroup.com/contact/).



## HAVE QUESTIONS?

Chat with us: [optelgroup.com](https://optelgroup.com)

### NORTH AMERICA

Canada — HEADQUARTERS  
+1 418 688 0334

### EUROPE

Ireland, Germany

### ASIA

India  
+91 832 669 9600

### SOUTH AMERICA

OPTEL Brazil  
+55 19 3113 2570



[optelgroup.com](https://optelgroup.com)

©Optel Vision inc. d.b.a. "OPTEL Group", 2025.  
All rights reserved.