ROBOTIQ

HOW AUTOMATED PALLETIZING HELPED KOREA PELAGIC
SOLVE LABOR SHORTAGES CHALLENGES AND INCREASE PRODUCTIVITY BY 200%

Industry **FOOD**	Location **KOREA**	Company Size **15 EMPLOYEES | 100 OUTSOURCED**	
Solution **PALLETIZING**	Unit **1**	Key Result **200% CAPACITY INCREASE**	

PALLETIZING *SOLUTION*

THE CONTEXT

Korea Pelagic is a South Korean Seafood packaging company. The company was looking for ways to solve labor challenges and improve its palletizing process. For Korea Pelagic, the labor shortages were particularly affecting the palletizing task, which involved stacking boxes 2 meters high in a cold environment. A difficult and unrewarding task which resulted in a high turnover.

The company was interested in automation, but feared it was not going to be straightforward. Currently operating in a rented space, the ease of deployment and redeployment was critical in their choice of equipment: they might not find a solution that would solve their labor challenges now and grow with them as they move into their own space.

This introduced the risk that automation solutions might be more complex than expected, leading to undesirable scope creep.

Here's how and why Korea Pelagic used the **Robotiq Palletizing Solution** to optimize their palletizing process, reduce the strain on their workforce, and **increase productivity by 200%.**

INTRODUCING
KOREA PELAGIC

Korea Pelagic is a seafood product company that has been in business since 2006. The company is tech-focused, using e-commerce, digital marketing, and the latest production technologies to bring innovative solutions that suit the modern world.

Operating three packaging facilities in Busan, South Korea, the company employs over 100 people across its headquarters and outsourced personnel. They also operate a factory in Indonesia.

The company specializes in packaging and palletizing frozen fish. Korea Pelagic's mission is to provide fast delivery to ensure customers receive the best quality and fresh products.
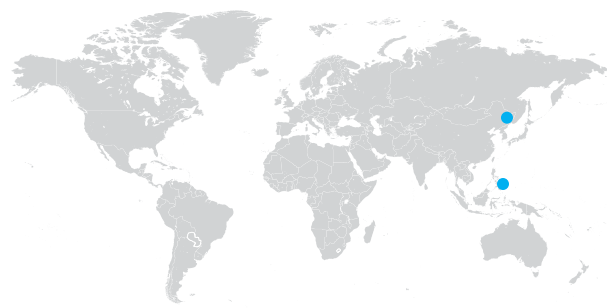
FINDING THE RIGHT
PALLETIZING AUTOMATION SOLUTION

The team wanted to automate its entire production line. However, they were concerned that the peculiarities of frozen seafood would make automation too complex or costly for some of the tasks.

Jung Hyup Song, the CEO of Korea Pelagic, was eager to find a way to convert parts of their process to automation, with the aim of fully automating the process in the future.

The team thought that it made most sense to start automating the end-of-line process as it might be more straightforward to automate than other tasks. They considered that palletizing was the best option and turned to a cobot palletizer for their first deployment.

The company had been relying on manual labor for their palletizing process. They knew that automated solutions could offer more efficiency and cost savings, while reducing the strain on their already stretched labor. Currently being in a rented space, the ease of deployment and redeployment was critical in their choice of equipment.
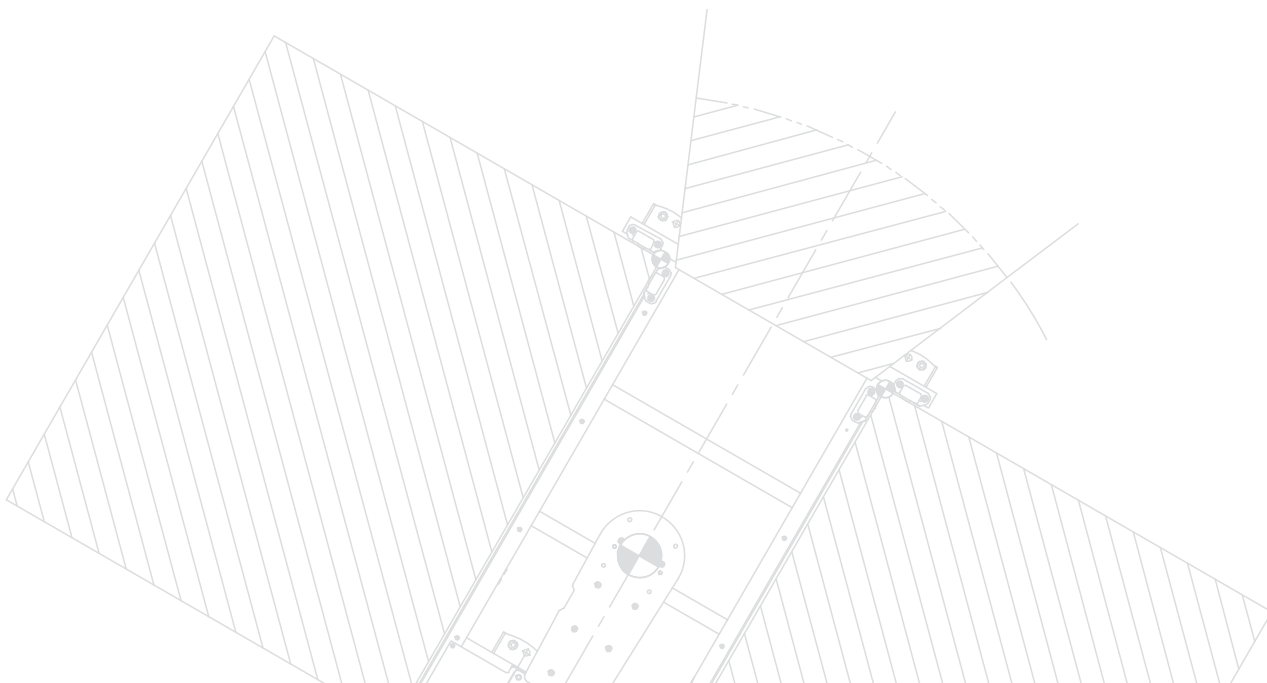
TACKLING LABOR SHORTAGES AND MEETING RISING DEMAND

For Korea Pelagic, the labor shortages were particularly affecting their palletizing task. The task involved stacking boxes 2 meters high in a cold environment, which was difficult for workers. This resulted in a high turnover, with people leaving their jobs after only 2 months, as they did not find the job rewarding.

At the same time, demand for the company's products was increasing. They were struggling to keep up with the demand.


HOW ROBOTIQ AND PARTNER ROAS APPROACHED THE PROBLEM

CEO Jung Hyup Song, previously at Samsung, had already seen a Robotiq Palletizing Solution working before. He was impressed by the solution's **small footprint, ease of use, and reliability.**

The company got in contact with Robotiq, who involved ROAS - a local Robotiq partner. ROAS is a leading provider of industrial and educational robots and robotic solutions. On the educational side, they specialize in supplying R&D ROS-based robots and accessories.

On the industrial side, they provide the full range of products and integration services to deliver turnkey solutions to manufacturers. When integrating systems like the Robotiq Palletizing Solution, they act as "lean integrators", taking charge of the installation on-site as well as providing other complementary systems like conveyors, taping machines, etc.

The team at Robotiq first assisted virtually to help them deploy the palletizing solution, and then flew to South Korea to help optimize the cell operation.
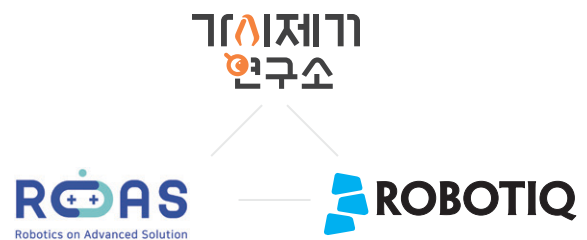
OVERCOMING
THE CHALLENGES

Every application has its particularities. For frozen seafood palletizing, here are a few challenges that were overcome with the Robotiq Palletizing Solution.

OPERATING CONDITIONS

First, to preserve the seafood at the right temperature, the boxes are made of styrofoam instead of the typical corrugated cardboard.

And since most automation solutions cannot operate below freezing temperatures, the end-of-line automation, including in this case adding the refrigerant to the packaging, the taping, the labeling, and finally the palletizing are done in an area outside the freezer. During these manipulation steps done above the freezing threshold, humidity may form on the boxes. Choosing a gripper that can perform for a styrofoam material in humid conditions was key for this type of application.

PACKAGING MATERIAL

Another challenge arose from an intaglio in the box — a particular ridged pattern on the material's surface. While it has a nice design touch, this posed a problem with vacuum adsorption. To solve this issue, the picking point, which is typically recommended to be centered on the box for maximal stability, needed to be changed.

EMPLOYEE ADOPTION

There were also challenges of worker adoption of the robot, which they overcame. A member of ROAS team explained:

> "At the time of initial installation, there was a negative view of the operator, but now it has been changed to a state where **it is impossible to work without the Robotiq palletizer.** In addition, increased productivity has enabled more shipments."

The workers are happy to work alongside the robot, seeing that it is trustworthy and reliable. By automating the palletizing task, they are able to put those workers to better use in more rewarding tasks.

Together, Robotiq, ROAS, and Korea Pelagic overcame these challenges thanks to the Robotiq Palletizing solution, creating a reliable automated palletizing operation that meets their growth plans.

HOW KOREA PELAGIC
INCREASED CAPACITY

Looking back, the team at Korea Pelagic was impressed by the ease with which they got a fully working robotic solution. In the beginning, they had been worried that the robot would not be able to meet the particular demands of seafood palletizing.

After the robot was up and running, they found they had increased the palletizing production by an impressive 200% compared to manual palletizing.

They are now looking forward to implementing more robotic automation to move them closer to their goal of a fully automated process.
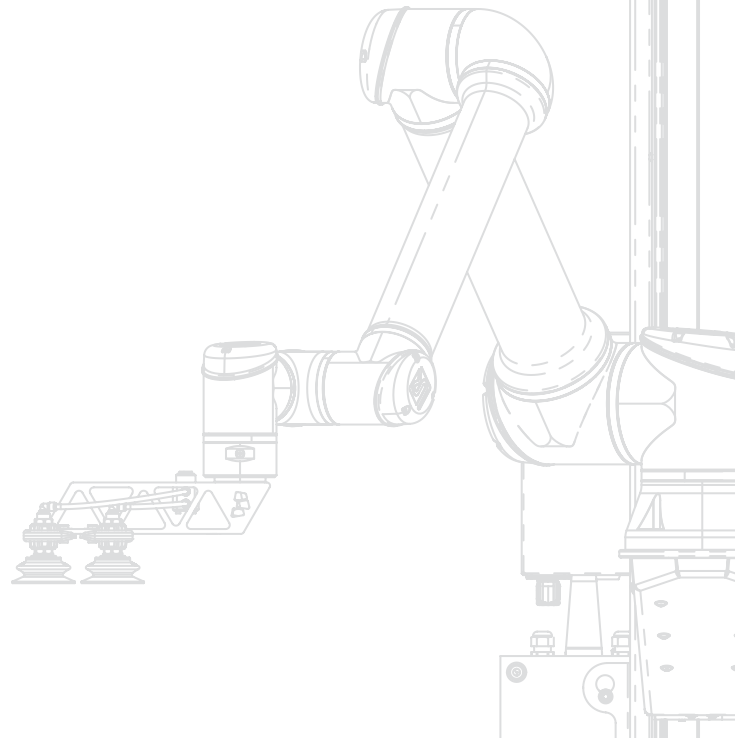
RESULTS

200%
increase in productivity compared to manual palletizing, with robots and humans working together.

Challenges solved
Labor shortage issue for palletizing tasks in a difficult environment and struggle to keep up with the increasing demand.

FROM IDEA TO WORKING ROBOT WITH EXCEPTIONAL SUPPORT

Despite the challenges, the palletizing deployment was still achieved within a few weeks.

The team at Korea Pelagic was particularly impressed with the ongoing and very responsive support provided by Robotiq.

*"Robotiq has consistently been an exemplary partner throughout the entire procuring and deployment process. **They have gone above and beyond to ensure that the Palletizer suited us perfectly, providing on-site visits and flying to Korea if needed.** Even after its successful deployment, Robotiq continues to support us by offering optimization advice and maintenance services. I wouldn't hesitate to turn to Robotiq for their customer service and quality products."*

Se-young Choi,
Korean Pelagic

Unlock greater potential with Robotiq Palletizing Solution and find out how it can transform your business operations.

CONNECT WITH AN EXPERT

ROBOTIQ

1-888-Robotiq
robotiq.com

03-2023   © Robotiq 2023