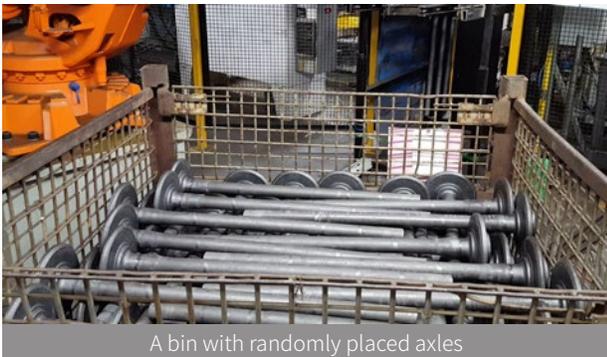


# Bluewrist Case Study

Random Bin Picking to Improve Productivity & Throughput

## The Application

A global Tier-1 automotive parts manufacturer requires a solution to automate the placement of randomly placed car axles from a storage bin into a flange that leads into a conveyor belt.



A bin with randomly placed axles

## The Challenge

The customer originally had a 2D vision system for the bin picking application from a different integrator.

Due to poor reliability, accuracy and inadequate performance, this bin picking system was never implemented into a production environment. Moreover, manual loading of the axle is also impractical due to the heavy weight and large dimension, which poses a serious health and safety risk for the operator.

To help overcome this challenge, Bluewrist proposed our FlexiPick random bin picking solution that uses a 3D scanner for greatly improved parts recognition, collision prevention and fast processing.

## The Solution

The manufacturer required a 100% inline picking solution to eliminate the manual handling and loading of the car axles onto the conveyor for further processing.

In order to meet the customer's requirement and address the challenge they face, Bluewrist proposed our advanced bin-picking solution, Bluewrist FlexiPick system, which uses a 3D snapshot sensor positioned top of the axle storage bin. The 3D sensor generates point cloud of the parts in the bin which is then streamed to comXtream, a Bluewrist industrial communication software for additional processing.



3D scanner taking a snapshot of the bin

Bluewrist ScanXtream 3D point cloud processing software receives the point cloud data from comXtream, which would identify the best part for picking. The robot will be commanded to pick up the part using a gripper specifically designed for this project.

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## Bluewrist Advantage

A high performance and reliable random bin picking solution requires seamless integration of software, 3D vision sensors and robotic guidance. Powered



Reliable detection of misplaced parts in bin and collision check

by custom software that is precisely calibrated to the physical characteristics of the part and tailored to meet a manufacturers' cycle time requirements, FlexiPick seamlessly integrates into the customer's existing production process.

## The Result

- Our solution is able to identify parts in the bin every 3 to 8 seconds depending factors such as bin fullness or part orientation with 95% plus success rate.
- Our 3D vision based bin picking solution is highly robust and reliable in a production environment and is not affected by changes in ambient lighting conditions or temperature
- Bluewrist software solution is hardware agnostic. Customer is able to reuse existing robot, PLCs and conveyor hardware that greatly reduced deployment time.

## Next Steps

After the successful deployment of the first bin-picking solution, the customer will adopt similar systems in several other production lines. This will lead to significant increase in productivity and bottleneck

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