

# ***“How Can We Add Production Lines That Make The Most Of Robotics?”***

## **What Our Client Said**

Due to an increase in demand, we need to significantly ramp-up our production of hardwood flooring. We need new production lines, and we need robots, but our experience with robot cells has not been positive.

## **What We Heard**

Build us robot cells we can count on and put them to work on additional production lines that can help us grow.

## **What We Did**

As always, LSI started by listening. The client told us that they valued our 25-year relationship and that our ability to develop Siemens automation and Integrated Drive Systems gave them confidence. Then they described their goals, their challenges and their desire to utilize a unique combination of technology from a variety of manufacturers – something LSI specializes in. Together, we decided on new robotic cells and Siemens PLC-based coordinated supervisory controls for each additional production line. Supervised processes included dust collection, OEM equipment and all the robot cells.

## **LSI provided:**

- The complete electrical design and schematics
- Custom design and fabrication of electrical and controls enclosures including an Ehouse
- PLC hardware and software
- Eight robot cells (base, tooling, setup, programming and HMI)
- Safety system design and implementation, including master E-stop control over all systems (regardless of manufacturer)
- Production Line Supervisory control, communications and monitoring master control and status to all OEM equipment per line

## **The control system consisted of:**

- Siemens PLCs/HMI
- Siemens VFD Drives
- Robots
- Safety control

## ***The Results Speak For Themselves***

### **Product flexibility means new lines can evolve**

- Quick-change palletizing or de-palletizing of multi-size products
- Recipe-driven configuration and on-the-fly pattern changes

### **Efficiency built into the process**

- Optimized robot movements for a changing stack height
- Pick and place on pallets while in motion with accurate precision
- No downtime during pallet changes
- Stack lights for quick identification of equipment status

### **Safety for workers and equipment**

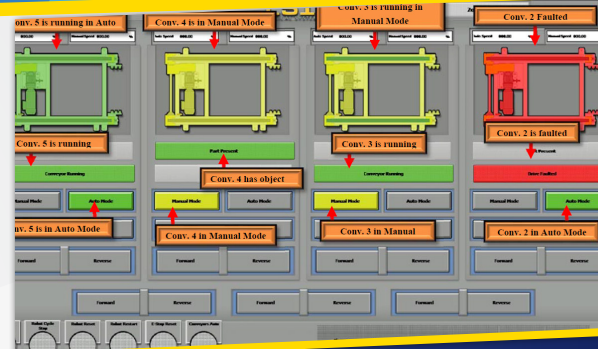
- E-stop control centrally located and integrated with control system and HMI
- Automatic contextualized HMI popups on each OEM screen when an E-stop occurs

### **Simplicity makes robot cells easy to manage**

- Simplistic control, no complex buttons or procedures ... just Start, Stop, Pause or Reset
- Easy maintenance with intuitive HMI screens and password protected robot adjustments
- Straightforward troubleshooting for plant personnel; no remote support required
- Consistent, easy-to-follow code structure

***Let LSI listen to your challenges today, and we'll work together to write a success story for you.***

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**LSI listened,** then developed a custom solution by utilizing products and knowledge from global vendors best suited to the project. Because LSI is independent and not owned by a manufacturer, we were able to put the customer's needs first – selecting the best technology for the job. The simplicity and uptime on these systems have given the customer confidence in the operation and maintenance of their new equipment.

***The resulting  
50% throughput  
increase exceeded  
the customer's  
expectations and  
production shifts  
had to be reduced  
because there was  
no more space to  
store product in  
the warehouse!***