

## **ABSTRACT**

PT. XYZ is a manufacturing company operating in the F&B Food & Beverages sector. The main product from PT. XYZ is in the form of plastic cups for soft drinks and also plastic straws in various sizes. With the COVID-19 pandemic waning, demand for food and beverage products is increasing again. Following this increase, companies must increase their production to be able to meet customer demand. The increase in production volumes raises the problem of high defect rates due to reduced production quality control capabilities in reducing defective products. One of the problems that causes reduced control capabilities is the imbalance between production speed and control speed which is still carried out by human workers. This research focuses on designing a tool using the Quality Function Deployment (QFD) method that can solve production quality control problems. The proposed product is a visual sensor that can detect defects in plastic cup products and provide a warning to the operator. The expected result after implementing this proposed tool is increased efficiency of the production quality control process.

**Keywords—Automation, QFD, Industry 4.0, Quality Control, Visual Sensors**