Inventory -Technology 2 – Vision System

Vision systems used in manufacturing offers several advantages, contributing to improved efficiency, quality control, and overall productivity. In the DMC use case, the vision system is being used to confirm the correct packing material is loaded on to the yogurt filling machine based on the product specification. The vision system is also checking that the label is correct and not damaged.

Pros	Cons
• Remove effort required to count and manually remove stock from the inventory. • Prevent incorrect packaging being used and costly rework. • Prevent damaged packaging being used and the resulting customer complaints.	• High initial cost of implementation. • Accuracy dependent on effort placed in developing solution. • ERP to Shop Floor integration required (See technology stack).

Technology Cost range: $50,000 - $100,000, depending on the complexity of the use case, integration into the control system, MES and ERP systems. Available network connectivity.

DMC Technology Cost: $50,000

DMC Cost Assumptions:
- Limited to single packing line and 6 packing material types.
- Existing ERP, MES and Control System integration.
- Network connectivity and power exists in packing plant area.
- Internal costs for end user staff involvement have not been included.
- Single design and build iteration.

What situation would this technology usually be adopted in? Reduce costs of incorrect packing material and labels being used in production.   Where validation is required to confirm final goods meet the expected standard. Reduce costs and labour required to carry out visual quality checks throughout the manufacturing process. Where barcodes aren't available on incoming goods.

RoI Considerations: The cost of poor quality if the wrong materials are used during a production run. The cost of customer complaints and resolution.   Business process changes, hardware, development and training costs.

What skills are required to implement & run this tech? Design, installation, integration and development skills (likely external). Ongoing Use skills are basic (using camera / hardware).

Pre-requisites for successful adoption: Ability to visually distinguish between good and bad.

Typical Tech Stack

Network Switch

Camera

Controller

Camera management

Database
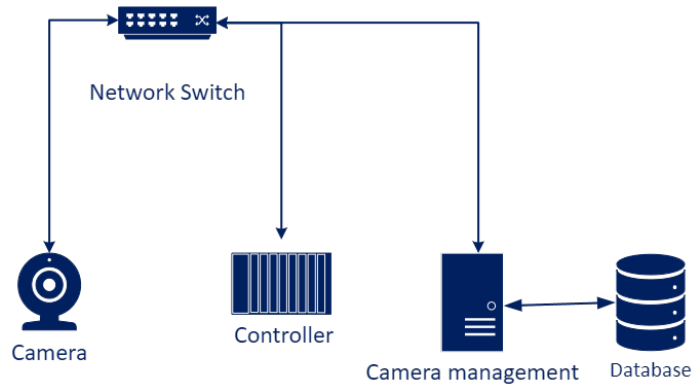
Who can help with this technology?

- System integrators.
- Vision solution providers.

What to google when researching this technology?

'vision system training'

'manufacturing quality vision systems nz'