

**MICROSCAN®**

**Barcode Quality 101**  
Read, Monitor, Verify



**In-Position**  
Technologies

# Barcode Quality 101

## WHAT IS A BARCODE?

Barcodes can be 1D (linear) with bars and spaces, such as EAN and UPC codes, or 2D (two-dimensional), such as Data Matrix or QR Codes

A barcode is an optical, machine-readable, representation of data; the data usually describes something about the object that carries the barcode.....



## WHY USE BARCODES?

Ensuring traceability in the supply chain

- Increase efficiency
- Improve quality & throughput
- Reduce costs

## ARE THEY EXPENSIVE OR DIFFICULT TO IMPLEMENT?

- You can print a barcode at the cost of the label, so there no additional costs, as human readable text and/or logo is usually already printed on the product or label.
- A barcode can be read by a wide variety of barcode readers, either manually or as part of an automated process
- There are industry standards that you might need to comply to, such as GS1 or ISO



# Why do good codes go bad?

## TWO PRINCIPAL CAUSES



Barcode illegibility, which may be a result of poor printing quality, failure to observe height and margin requirements, contrast problems, damaged labels etc.

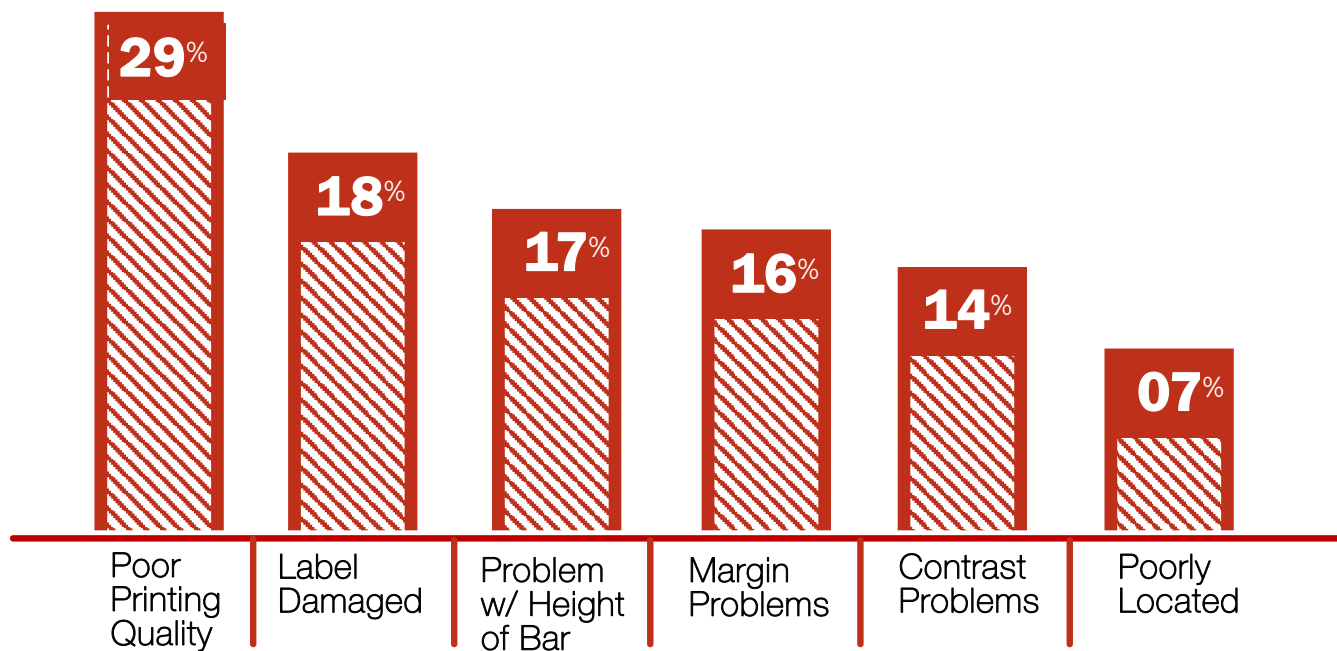


Incorrect data, due to an incorrect - or non-existent - entry indicating for example the characteristics of the article in a store's information system.

# How common are barcode and label problems?

## Some Statistics: GS1 publications, retail survey

### Breakdown of label-related problems by type



There are many reasons for unreadable barcodes.

**37%** Failure to respect GS1 standards.



**29%** Poor print quality



**18%** Label damaged [wet, torn, etc.]



*Universe 224 articles*

# Some statistics, GS1 publications, logistics survey

The 14 MOs\* participating in the process together visited 18 Distribution Center & reviewed a total of 2101 pallets. Of these, 617 were described with problems or issues (29%).

**1 in 3 pallets had issues!**

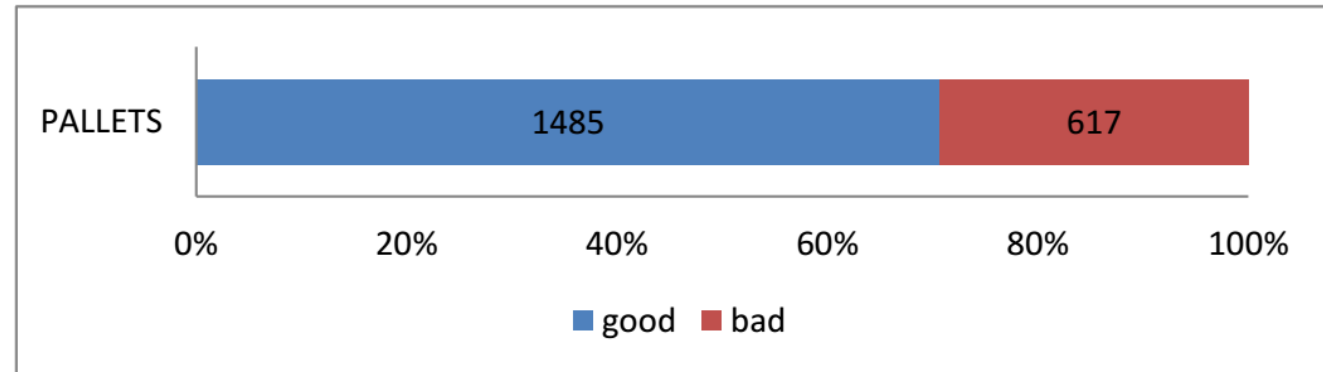


Figure 1 – Number and % of pallets with issues



PALLETS

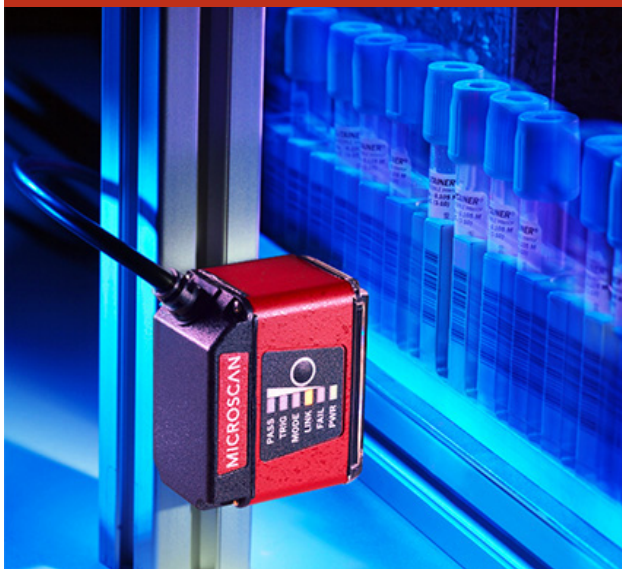
■ good ■ bad

\*MO=GS1 Member Organization

# How can you conquer these issues?

- Do a read test – by scanning the code with a barcode scanner
- Monitor the mark quality with a machine vision solution using smart cameras and software
- Verify the code, by making an absolute measurement to industry standards – using a specialized barcode verification solution

## MicroHAWK ID-30



## AutoVISION w/MicroHAWK ID-40



## LVS Verification

