

# MICROSCAN.



## ID and Inspection from Can to Carton

Live Q&A following the presentation.

*Presented by:*

*Mike Dietzel*

*November 14/15, 2012*

**Track, Trace & Control Solutions**

# MICROSCAN.



## Mike Dietzel

*Microscan Solutions Engineer, Packaging*

Solutions Engineer on Microscan's Packaging team, Michael has over 15 years experience developing solutions for packaging industries ranging from single laser barcode readers to multi-camera machine vision installations requiring unique lighting solutions.

To ask a question during the following presentation, please use the Questions window on the right side of your screen. Questions will be queued and answered after the presentation.



The background of the slide is a light blue and white gradient. On the left side, there is a faint, semi-transparent image of a world map and a computer keyboard. The main text is centered in a large, bold, dark blue font.

# **Packaging Operations are Becoming More Automated...**

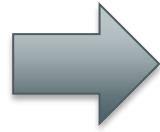


# Barcode & Machine Vision in Food & Beverage Packaging

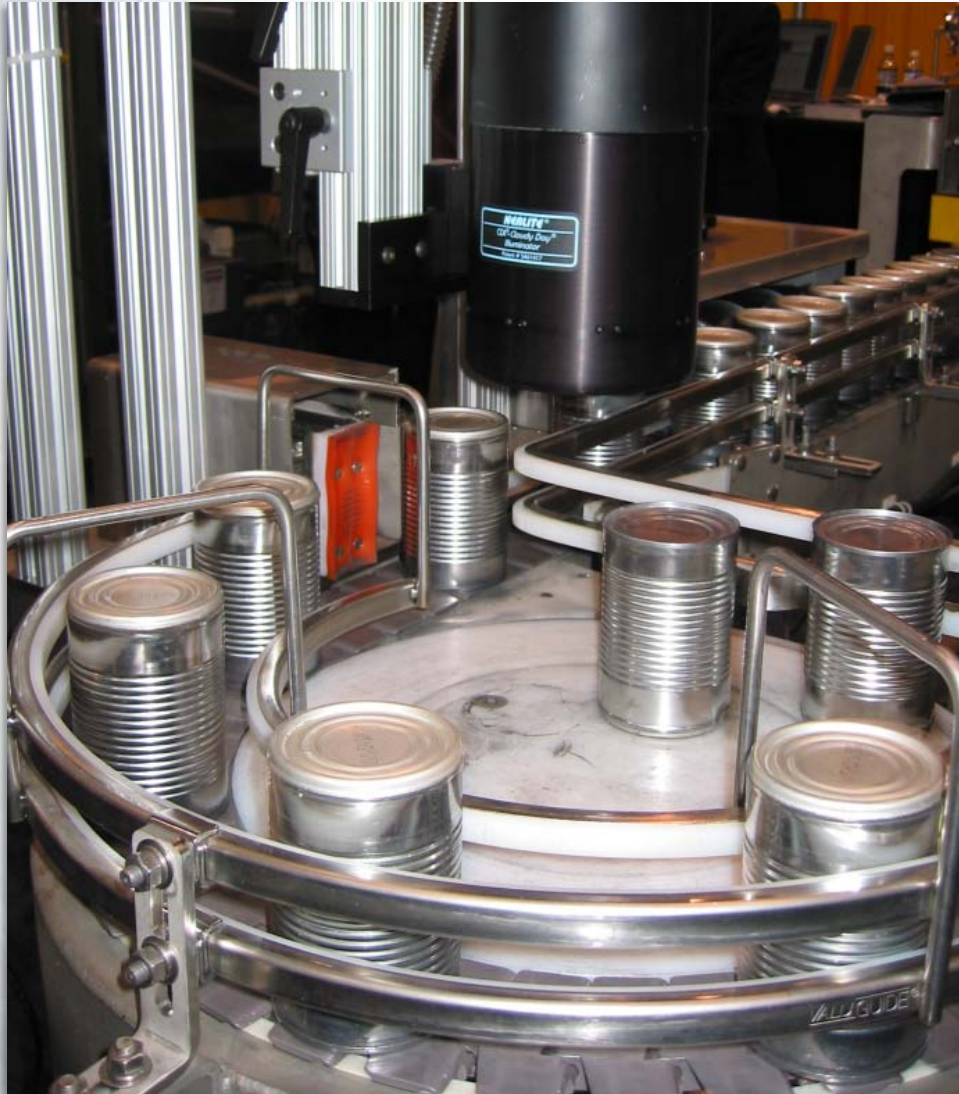


# Common Uses:

- Identify Products
  - Barcodes & Human Readable Text
- Verify Label and Print Accuracy
  - Label Presence and Skew, Print Legibility
- Inspect Package Integrity
  - Cosmetic & Safety Concerns
- Track & Trace
  - Achieve Visibility, Limit Liability, Regulatory Compliance



## VERIFY PRINT LEGIBILITY





# Application Example: Can Print Verification

- Detection of randomly oriented alphanumeric ink jet mark
- Optical Character Verification (OCV) for ID verification
- Use machine vision system with appropriate lighting

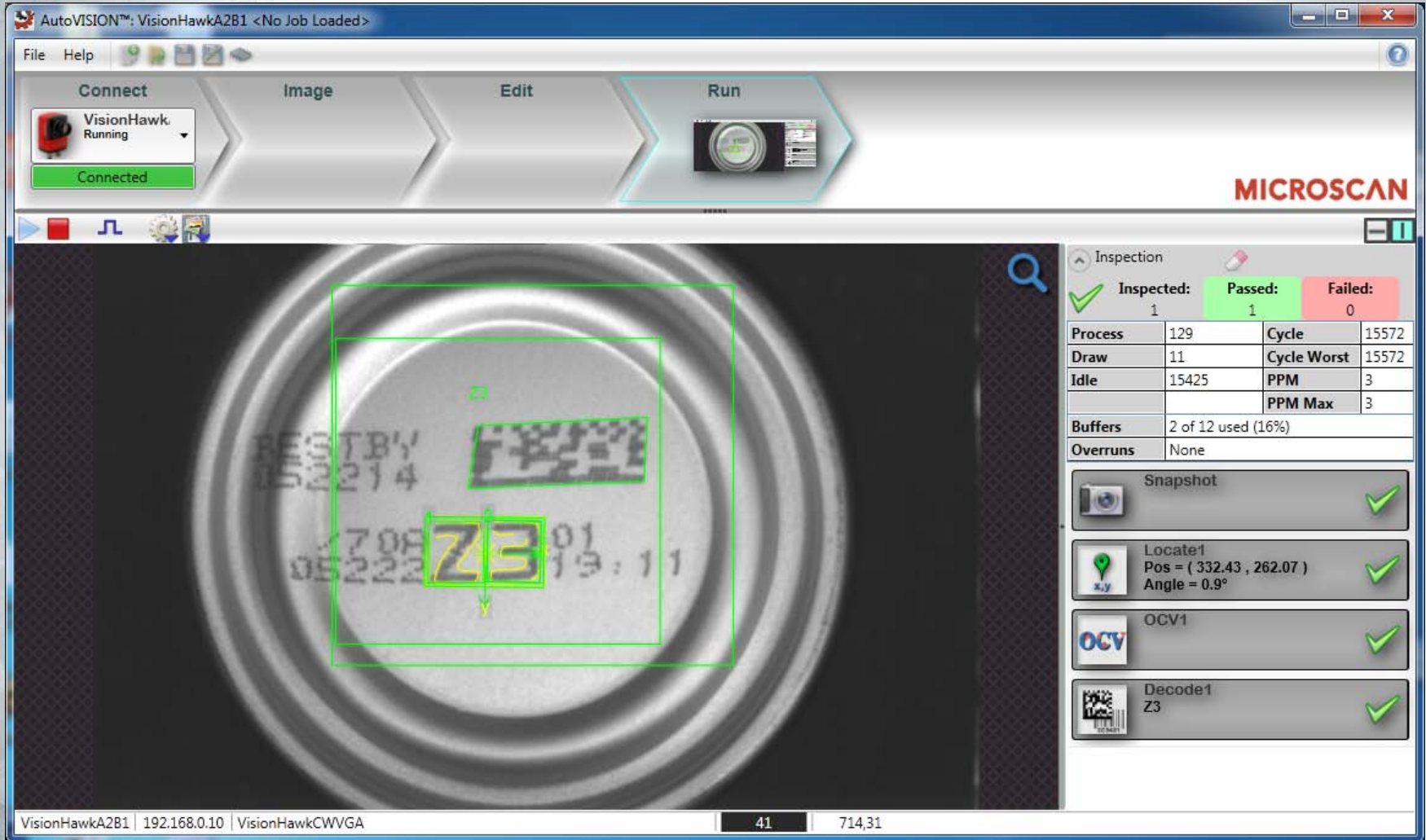


**MICROSCAN.**

# Ink Jet Data Matrix & OCR inspection at 500 ppm



# Closer look at Can Print Verification



AutoVISION™: VisionHawkA2B1 <No Job Loaded>

File Help

Connect Image Edit Run

VisionHawk Running  
Connected

MICROSCAN

Inspection

Inspected:	Passed:	Failed:
1	1	0

Process	Cycle	15572
Draw	11	Cycle Worst 15572
Idle	15425	PPM 3
		PPM Max 3

Buffers 2 of 12 used (16%)

Overruns None

Snapshot ✓

Locate1  
Pos = ( 332.43 , 262.07 ) ✓  
Angle = 0.9° ✓

OCV1 ✓

Decode1  
Z3 ✓

VisionHawkA2B1 | 192.168.0.10 | VisionHawkCWVGA | 41 | 714,31

# Closer look at Can Print Verification

AutoVISION™: VisionHawkA2B1 <No Job Loaded>

File Help

Connect Image Edit Run

VisionHawk Running  
Connected

MICROSCAN

Inspection

✓ Inspected:	3	Passed:	3	Failed:	0
Process	118	Cycle	42497		
Draw	10	Cycle Worst	42497		
Idle	42360	PPM	1		
		PPM Max	1		
Buffers	3 of 12 used (25%)				
Overruns	None				

Snapshot ✓

Locate1  
Pos = ( 334.7 , 151.89 ) ✓  
Angle = 116.9° ✓

OCV1 ✓

Decode1  
Z3 ✓

VisionHawkA2B1 | 192.168.0.10 | VisionHawkCWVGA | 216 | 363,1

# Closer look at Can Print Verification

AutoVISION™: VisionHawkA2B1 <No Job Loaded>

File Help

Connect Image Edit **Run**

VisionHawk Running  
Connected

**MICROSCAN**

Inspection

Inspected:	4	Passed:	3	Failed:	1
Process	130	Cycle	25612		
Draw	11	Cycle Worst	42497		
Idle	25465	PPM	2		
		PPM Max	1		
Buffers	3 of 12 used (25%)				
Overruns	None				

Snapshot

Locate1  
Pos = ( 342.64 , 232.06 )   
Angle = 9.8°

OCV1

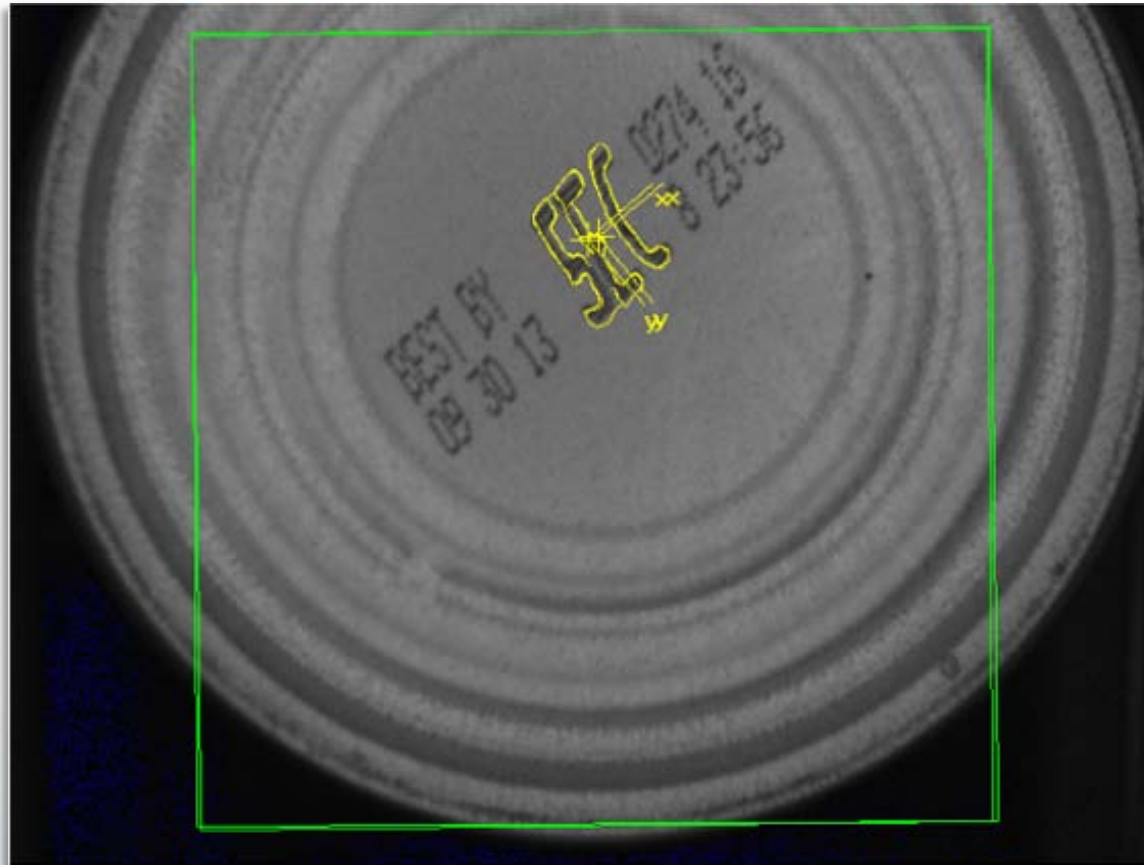
Decode1  
Z2

VisionHawkA2B1 | 192.168.0.10 | VisionHawkCWVGA

# Bright Stock goes to Warehouse



## PRODUCT IDENTIFICATION





**VERIFY PACKAGE  
INTEGRITY**



# Application Example: Can Dents

- Detection of dents on surface of can
- Use machine vision system with appropriate lighting
- Combination of vision algorithms to solve the application

# Is the Can Good?

Pass

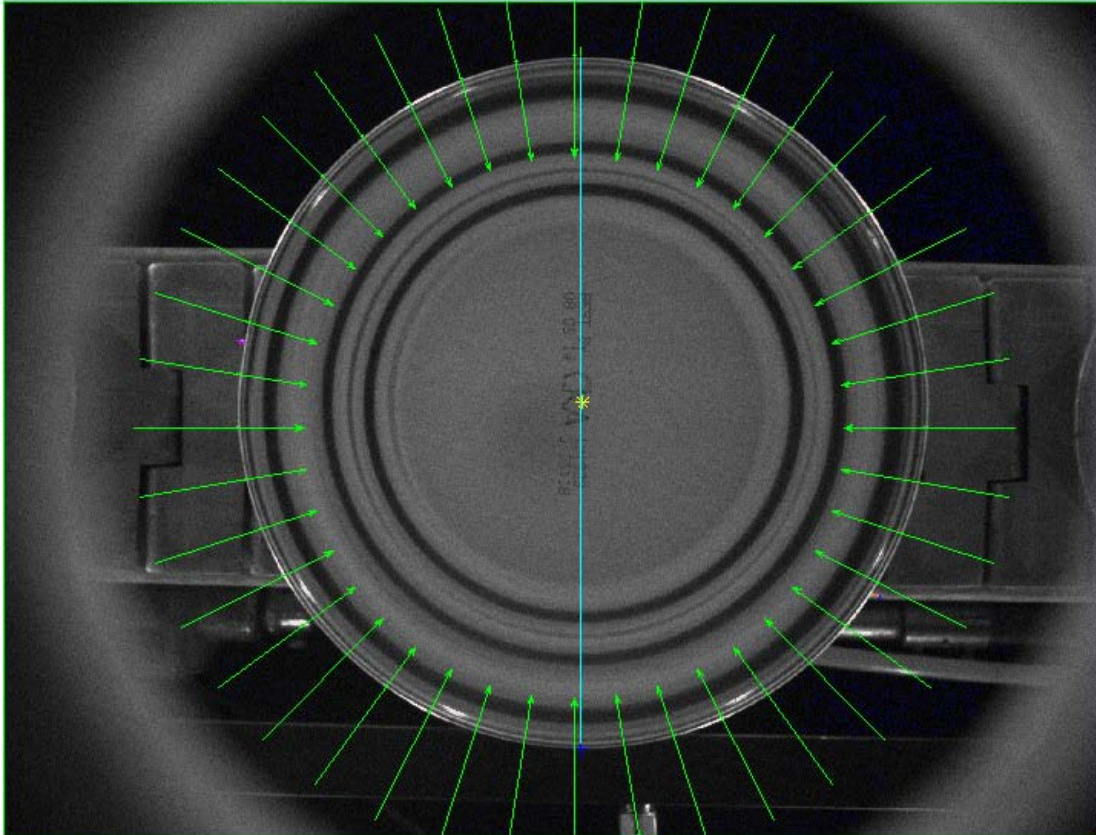


Fail



# Closer Look at Can Dent Inspection

Snapshot1 (SoftSys1:Insp1)



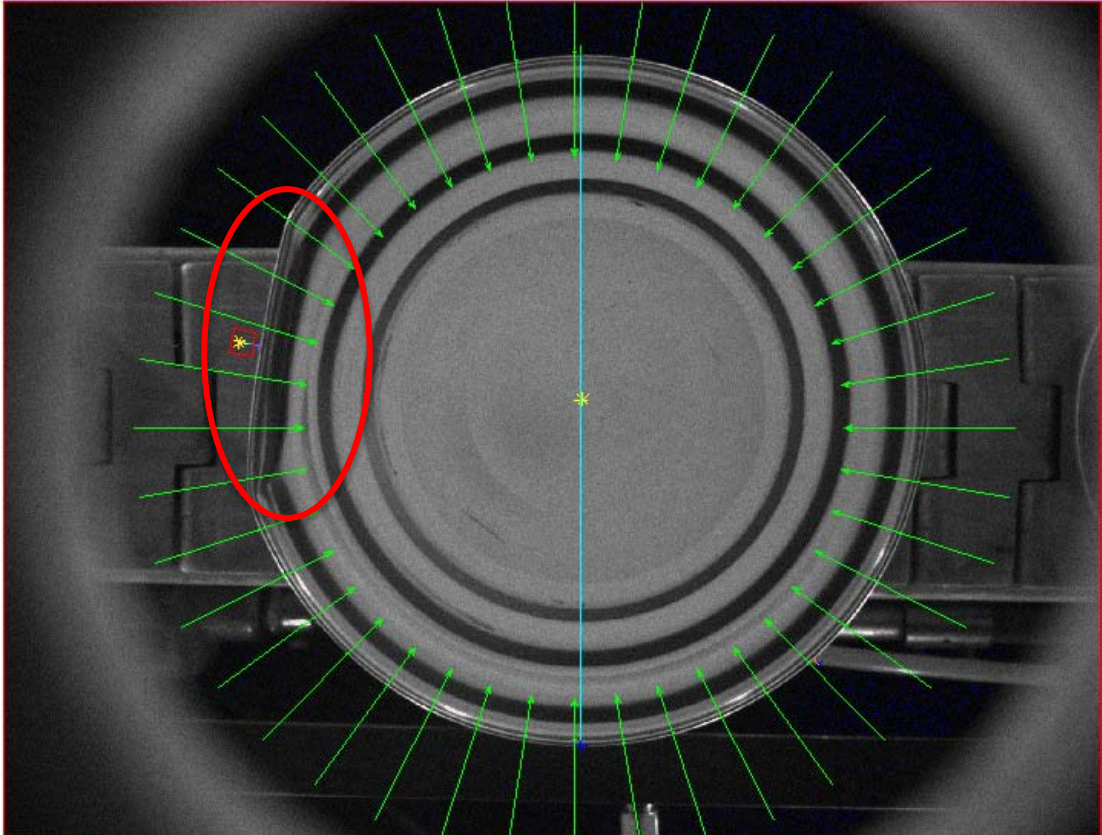
SoftSys1

Insp1    Inspect: 1    Pass: 1    Fail: 0

Can Locator.Status	True								
Dent.Pt to Line Distance	1.964								
Can Check.Status	True								

# Closer Look at Can Dent Inspection

Snapshot1 (SoftSys1:Insp1)



SoftSys1

Insp1    Inspect: 3    Pass: 2    Fail: 1

Can Locator.Status	True								
Dent.Pt to Line Distance	27.933								
Can Check.Status	False								

# Closer Look at Can Dent Inspection

Snapshot1 (SoftSys1:Insp1)

SoftSys1

Insp1    Inspect: 4    Pass: 2    Fail: 2

Can Locator.Status	True								
Dent.Pt to Line Distance	11.271								
Can Check.Status	False								

## MATCH LABELS TO CONTENTS

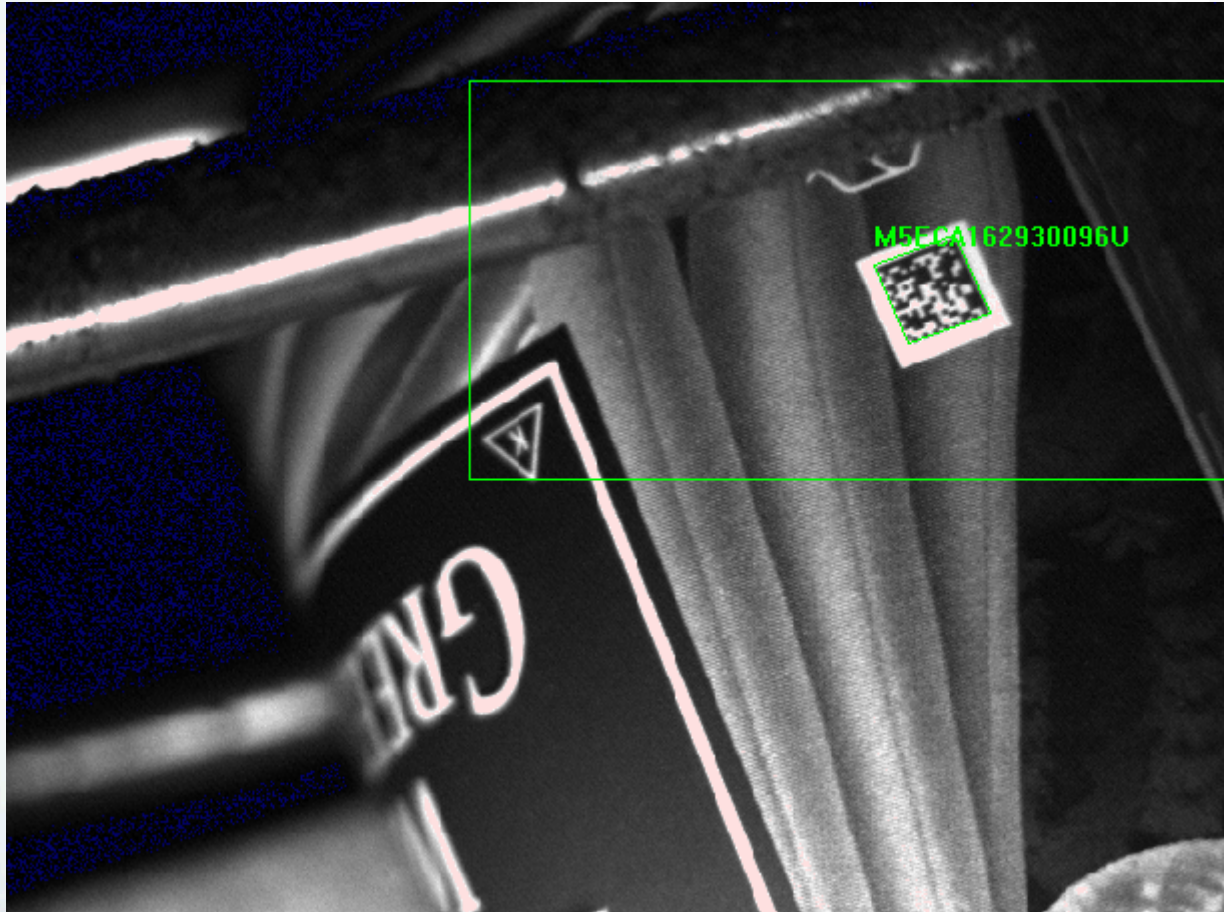


# Application Example: Match Labels to Contents

- Read Data Matrix Code on Label to Ensure Labeling Accuracy
- Data Matrix Use Growing Due to High Data Density and Small Size of Codes
- Decoded with Imaging Technology



# Confirm Label is Correct



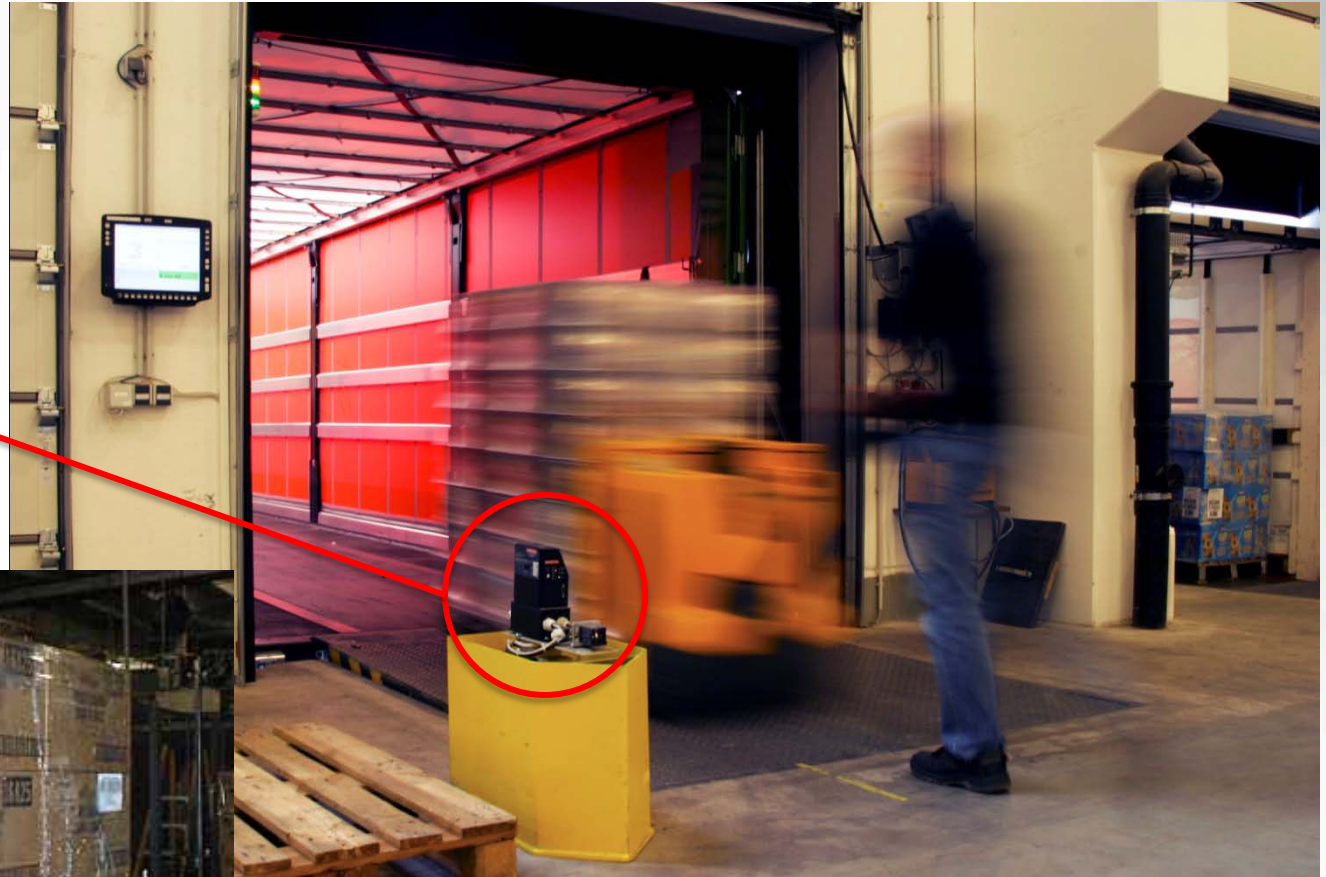
# PRODUCT TRACKING



# Barcode Reading at Caser



# Barcode Reading of Pallet



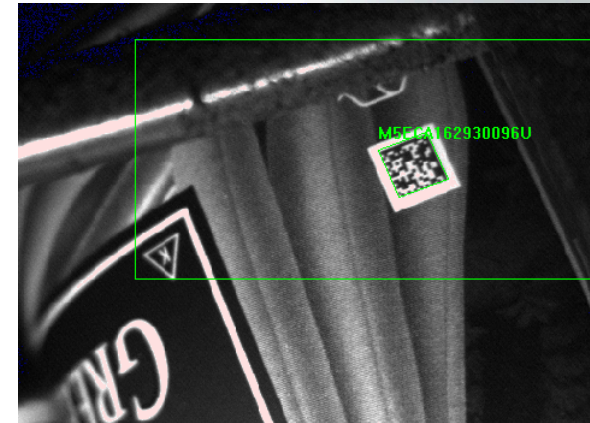
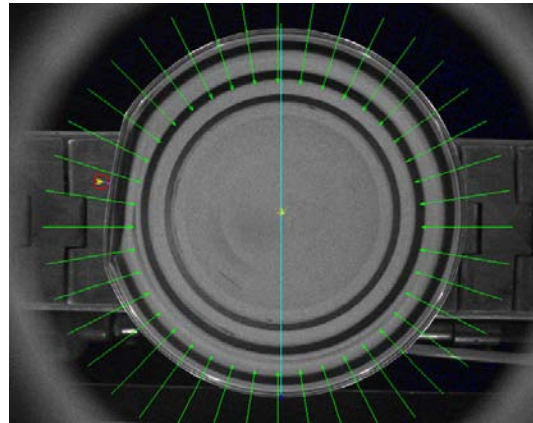
# Track & Trace Customer Value

## Enhanced Productivity through Data

We help customers reduce costs, monitor quality, and increase production flow. Our solutions enable real time data control and process automation for thousands of manufacturers around the world in a large range of applications.



# Solutions for the Green Bean Packaging Line



# Benefits to Each Can of Beans:

- Accurately Labeled
- Cosmetic and Structural Integrity of Packaging Verified
- Traceable Throughout the Supply Chain

# Benefits to the Manufacturer:

- Compliance with Industry and Government Regulations
- Improved Inventory Management
- Reduced Number of Customer Rejections
- Limited Liability in the Case of Product Recalls
- Cost Savings



# MICROSCAN.

The background features a faint world map. On the right side, there is a close-up of a Microscan industrial scanner. The scanner is black with a silver lens assembly at the top. The word "MICROSCAN" is printed on the side of the main body. Below the scanner, there are some cylindrical metal components, possibly part of a production line.

## *Thank You*

- If you have questions regarding this presentation or topic, please send an e-mail to [info@microscan.com](mailto:info@microscan.com).
- For further information about barcode, machine vision or lighting products, visit our website at [www.microscan.com](http://www.microscan.com).