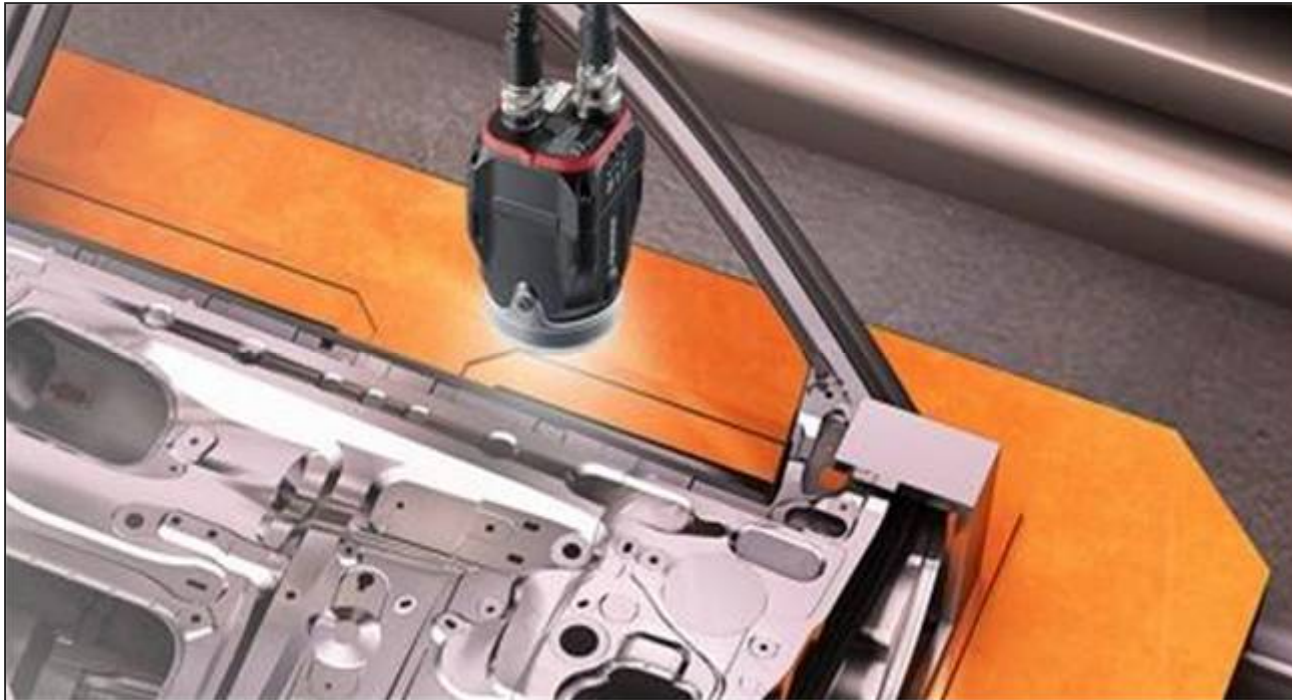


# Automated Line-side Solutions **For Honda MPR Compliance** for Packing, Labeling, Shipping and More



A Vision Sensor Confirms a Part is Correct and In-spec

## SPEDE Solutions Enable Compliance with Honda's Minimum Process Requirements (MPRs) for:

1. Pre-production
2. Process Set-up
3. Production / WIP
4. Re-pack / Re-label
5. Small Lot
6. Pass thru
7. Shipping
8. Accountability & Traceability



## We Help Suppliers Meet Honda MPRs in 12 Ways:

### 1. Error Prevention

- Prevents mix-ups of right- and left-hand parts
- Prevents a wrong or scrap part from being packed
- Prevents missing components in a kit
- Prevents under- or over-filling dunnage



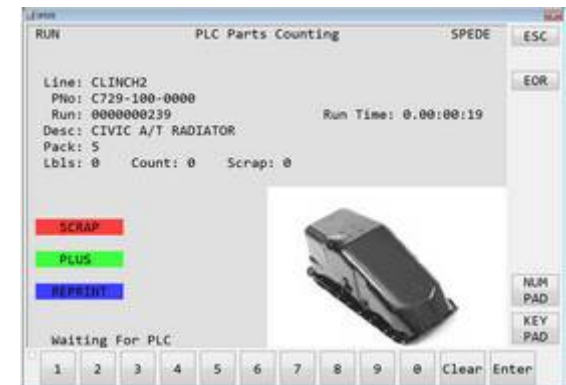
Prevents mis-labeling of similar parts

### 2. Tool Validation

- Validates a Tool / Die is correct at Start-up or Changeover
- Interfaces to test jigs

### 3. Accurate Production Data

- Identifies / counts “good pieces” vs. scrap
- Displays real-time piece counts, label status, run data, etc. at line-side
- Counts only good pieces toward pack count qty.



## We can help you meet Honda MPRs in 12 Ways:

### 4. Real-time Container Labeling

- SPEDE interfaces to PLC, Vision, Weigh Scales, Host apps
  - PLC supplies the part number / run data / count
  - Vision sensors count and verify the manufactured part is “good”
  - Vision or Scale verifies dunnage is correct
- Host ERP / EDI supplies label data
- Prints serialized label when pack count is correct



Interface to Weigh Scale ensures  
Packed Quantity is correct

### 5. Production / WIP

- Prints serialized Internal (WIP) or Customer label
- Scan serial number on WIP label to create new Honda label



### 6. Re-pack / Re-label

- Scan serial number on container to be re-packed /re-labeled; verifies part is correct before it is re-packed / re-labeled

## We can help you meet Honda MPRs in 12 Ways:

### 7. Small Lots

- Controls non-standard pack counts at End of Run / End of Shift
- Controls partial containers of Parts available for Re-pack or Re-work

### 8. Pass Thru

- Vision Technology confirms Supplier's Part is correct as shown on the Supplier's label



### 9. Shipping

- SPEDE label data is sent real-time to your EDI/Shipping application
- Partial containers / Split containers do not update EDI

### 10. Process Control

- Automates and standardizes processes to ensure consistent quality
- Confirms correct process is being followed in real-time

## We can help you meet Honda MPRs in 12 Ways:

### 11. Accountability

- All SPEDE operations require the Associate to sign-in
- All transactions are retained and accessible in SQL Txn database

### 12. Traceability

- Serial number is linked to each part's production data
- Traceability by part, lot, container, line number, run date, associate, etc.
- Forward traceability from production -> Customer
- Backward traceability from production -> raw components -> suppliers

Printed By: Dan Worthington  
Report Date: 01/08/2013  
Report Time: 08:35:00  
Page: 1 of 1

**Container Trace: 0319804-05088465**

Part Nbr	Description	Run Nbr	Line Nbr	Create Date	Create By	Qty	Item S/N
C729-101-0000	CIVIC M/T RADIATOR	000012001	CLINCH2	11/05/2012	JS MITH	5	AB879762351 AB879762352 AB879762353 AB879762354 AB879762355





## SPEDE Line-side Labeling can interface to Weigh Scales:

- SPEDE integrates to existing weigh scale to receive piece weight
- Weight can be used for piece counting / full pallet validation
- Adjustable tolerances to accommodate piece weight variances
- Actual weights collected and stored with label data

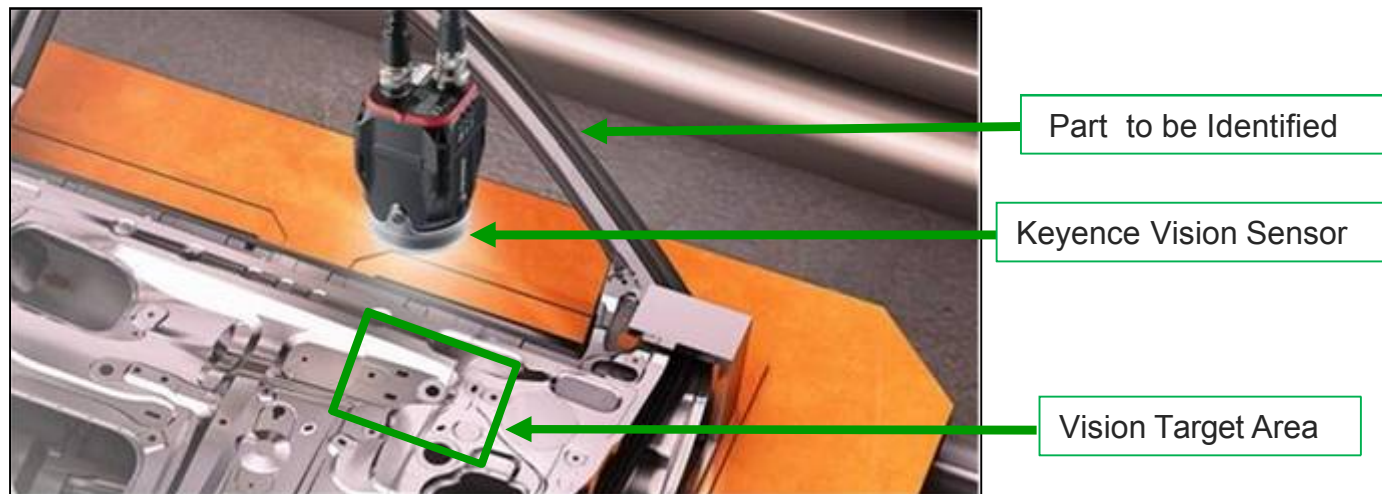


Optional integration with Vision Sensors  
can also provide:

- A “vision check” to ensure part is correct
- Weight verification to ensure part is placed in dunnage

## SPEDE Vision Solutions prevent errors in Packing:

- Vision Sensor is “trained” to recognize a part number by its unique attribute
- At Packing, the part is moved under the sensor
- Sensor uses image capture & pixel analysis to identify the part
- If part is correct, the running part count is incremented
- If part is wrong, an audio/visual signal prevents a packing error
- When pack count is reached, SPEDE prints a container label

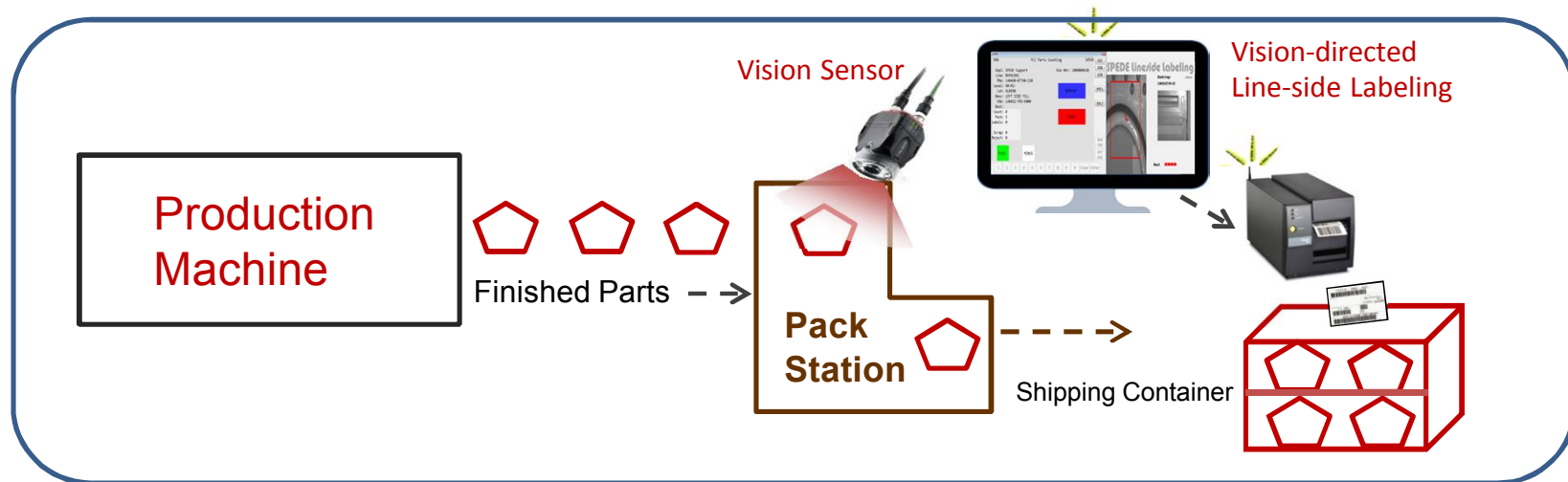




## 3 Packing & Labeling Scenarios using Vision Sensors:

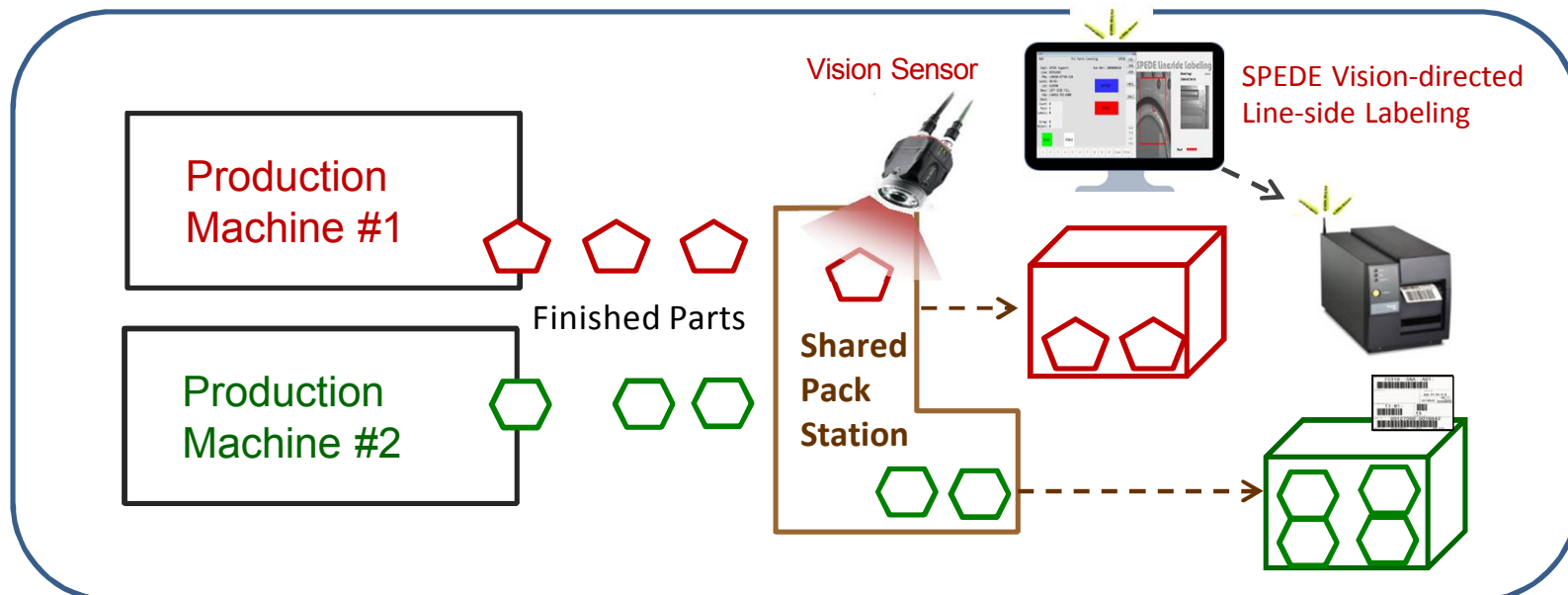
### Scenario 1: At the Production Machine

- Parts are packed at the production machine
- No PLC is needed to count parts
- Vision sensor identifies and counts “good” parts
- Operator can press a TouchScreen to record scrap
- SPEDE prints the container label at pack count of good parts



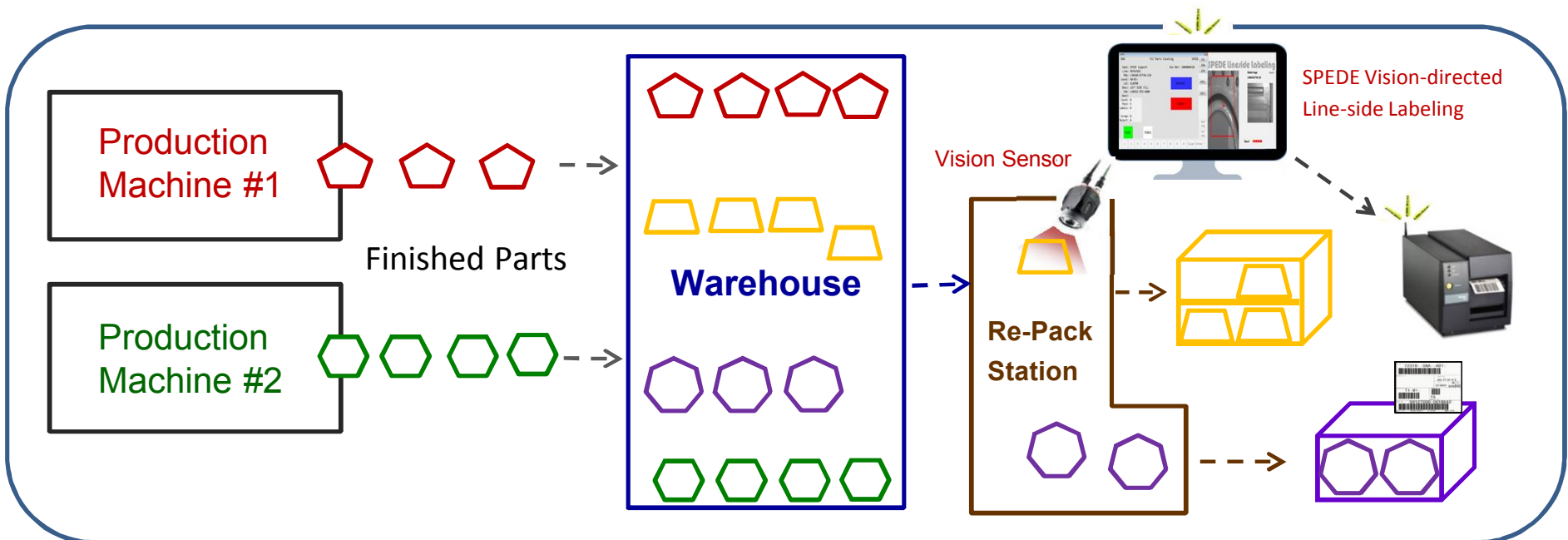
## Scenario 2: Using a Shared Pack Station

- Parts are conveyed to a shared pack station
- Different part numbers arrive
- Vision sensor identifies part number being packed
- Vision sensor will alert if wrong part is picked for a container
- SPEDE prints the container label at pack count of good parts



### Scenario 3: At a Re-Pack Station

- Parts are made, put away and packed later
- Re-pack station has no PLC to validate parts
- Vision sensor identifies correct part to be packed in a container
- Vision sensor will alert if wrong part is picked for a container
- SPEDE prints the container label at pack count of good parts



Many Honda Suppliers are using Vision Sensors for Packing Control

Here are 3 SPEDE Vision Customers...

**Sonoco**

Vision is set up on a mobile cart



Bumper Filler



Vision detects unfilled slots in a Jack Kit

**Nissin Brake**

Vision is set-up on a fixed table



Machined Casting

**Nisco**

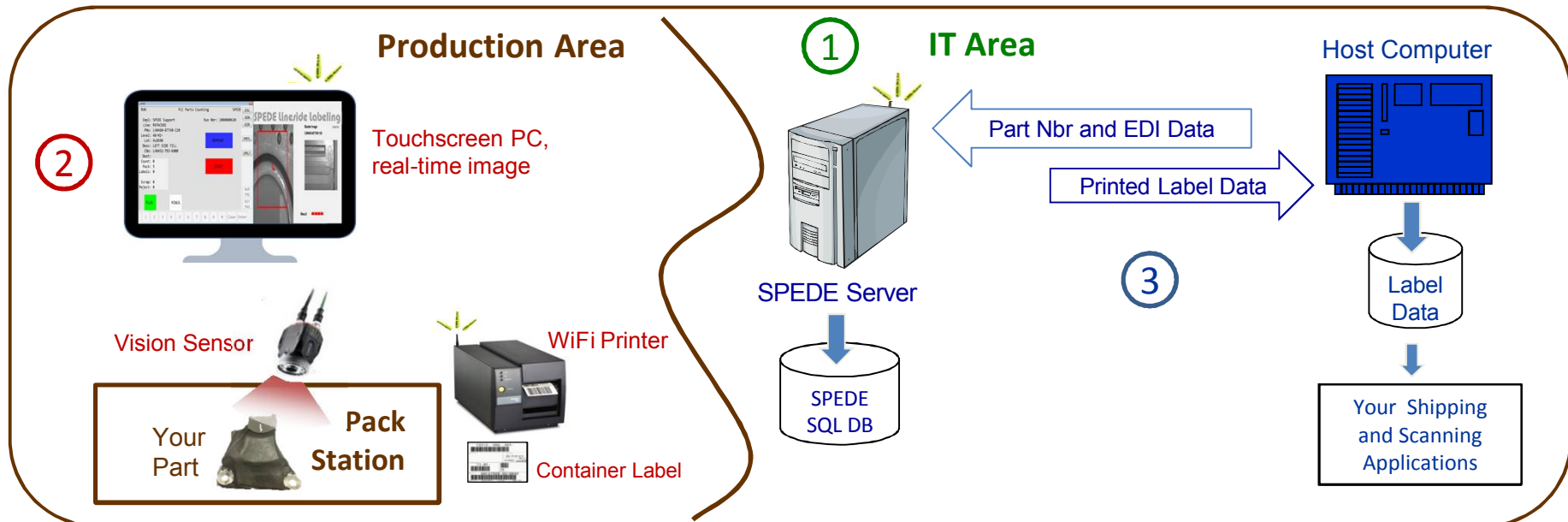
A Laser etches  
2D Serial Number

Vision reads the  
2D Serial Number for Part  
Tracking & Traceability



Door Trim

## How SPEDE Vision interfaces to ERP, EDI and Shipping Apps



- ① SPEDE Server Gets Container Label Data from Host Systems**

  - Pulls data needed for container label at start of packing operation
- ② SPEDE TouchScreen Client PC Software**

  - Controls Vision Sensor
  - Verifies correct part; allows for scrap counts; collects OEE data
  - Prints serialized label; inserts a unique Log Record into SQL DB for the label
- ③ SPEDE Server Presents Label Data to Host Shipping System**

  - Inserts data from printed label into Host tables to support later scanning operations

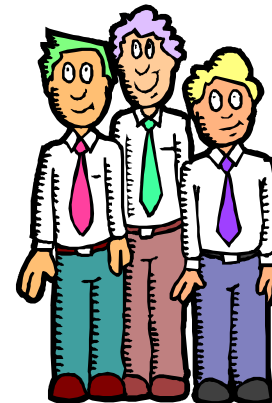
## SPEDE Line-side Solutions Will Boost your Bottom Line:

- Every Container has the Correct Part, Count, Label and Data
  - Accurate Piece Counts, including Good and Scrap
  - Real-time Production Reporting and Visibility
  - Serialized Parts / Container Traceability
  - OEE data capture to improve production efficiencies
- Meets Honda MPRs for an Accurate Line-side Processes



**Everybody's Happy ...**

QC, Management and Your Customers!





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## About Us:

SPEDE Technologies is a software and systems company with 30+ years of IT experience in the automotive industry. We specialize in Automated Line-side Solutions that streamline and error-proof processes for Identifying, Counting, Packing, Labeling, Shipping and Traceability of finished parts.

Our Customers are mid-size to Fortune 500 auto suppliers with multiple plant sites throughout the U.S. and Mexico. They rely on SPEDE Automated Line-side Solutions to keep their mission-critical processes running smoothly and error-free, 24/7.