



FIAT CHRYSLER AUTOMOBILES

# 2016 Warranty Reduction Initiative Supplier Town Hall

Tony Brenders

Vice President – Global Head of Supplier Quality

2/23/2016

NAFTA  
REGION



DODGE



Jeep

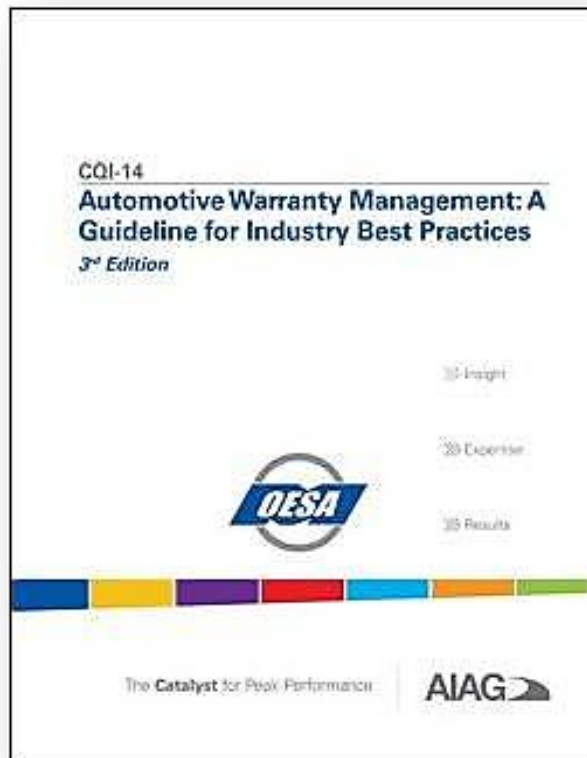


SRT

## Action

***Pilot conducted with 22 focused suppliers***

***Implementation of CQI-14 “Automotive Warranty Management: A guideline for Industry Best Practices”***



## CQI – 14 OBJECTIVE

1. *Promote advances in consumer satisfaction*
2. *Provide continuous warranty improvement*
3. *Implement robust warranty management programs*

Organizations shall use CQI-14: Automotive Warranty Management, 3rd Edition to integrate warranty into their quality management system.

## CQI-14 Implementation into FCA US Practices

**2006**

- Developed consumer-centric warranty management

**2010**

- FCA US adopted CQI-14
- Developed to require no customer intervention

**2015**

- CQI-14 was revised to be more automotive focused
- Retitled - Automotive Warranty Management

**2016**

- Improve proactive warranty reduction actions
- Provide tools, training and support

*\*5 vehicle manufacturers (FCA US, Ford, GM, Nissan, Toyota) & 17 suppliers developed the CQI-14 guideline published*

## Adopt SAWRP Practices

- Supplier is responsible to provide a warranty champion

## Implement a CQI-14 Process

- Self assess to CQI – 14 annually
- Requires monthly warranty report

## TS Audit Guidelines

- Review warranty tools and data provided by FCA
- Management involvement & process owners established / metrics
- Rapid verification of claims
- An established warranty lessons learned data base
- Analysis tools for “No Trouble Found” data

## Self Assessment Disconnect Identified in Pilot

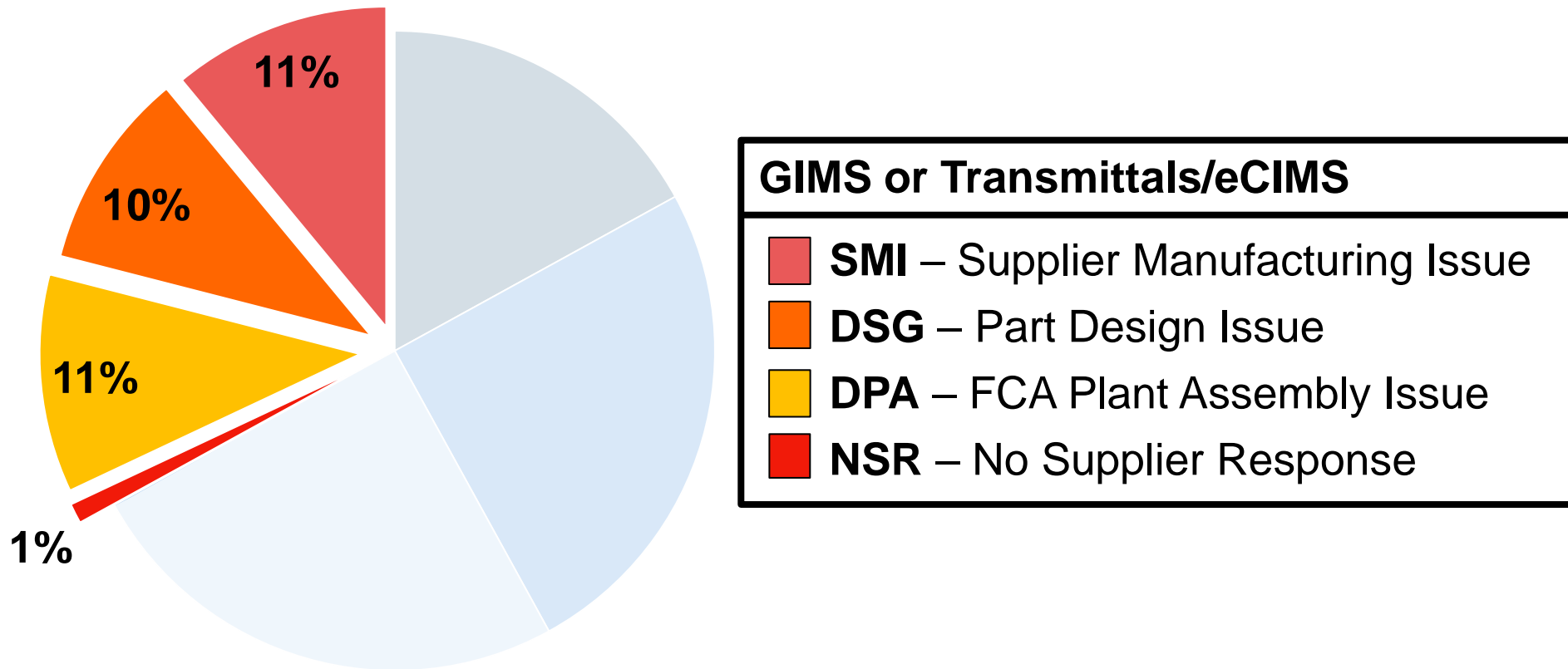
***Suppliers incorrectly identified themselves on the CQI-14 self assessment***

The scoring method will be defined as follows:

Score	Definition
1	No warranty analysis capability
2	Limited capability and inconsistent application
3	Developed capability and consistent application; effectiveness not clearly measured.
4	Strong capability and consistent application; effectiveness clearly measured
5	<b>Fully compliant with AIAG warranty analysis - Benchmark level process.</b> Robust capability and constant application; measurements linked to KPIs.

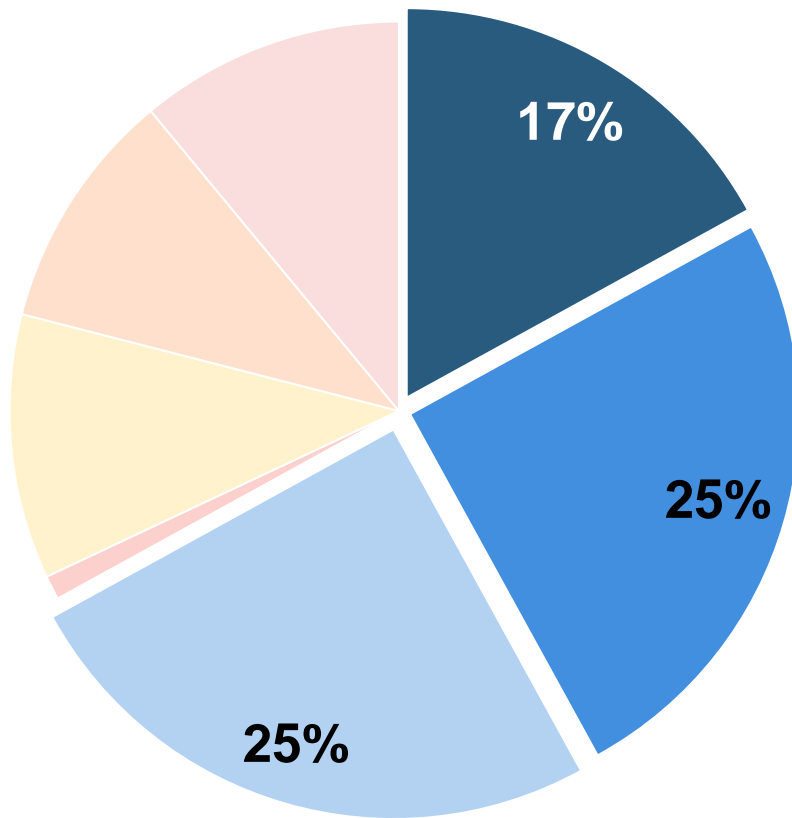
## Pilot Findings

### *Recognizable claim distribution identified from pilot program*



## Pilot Findings

***Suppliers we identified as TS certified and CQI-14 compliant showed significant untapped warranty reduction opportunities***

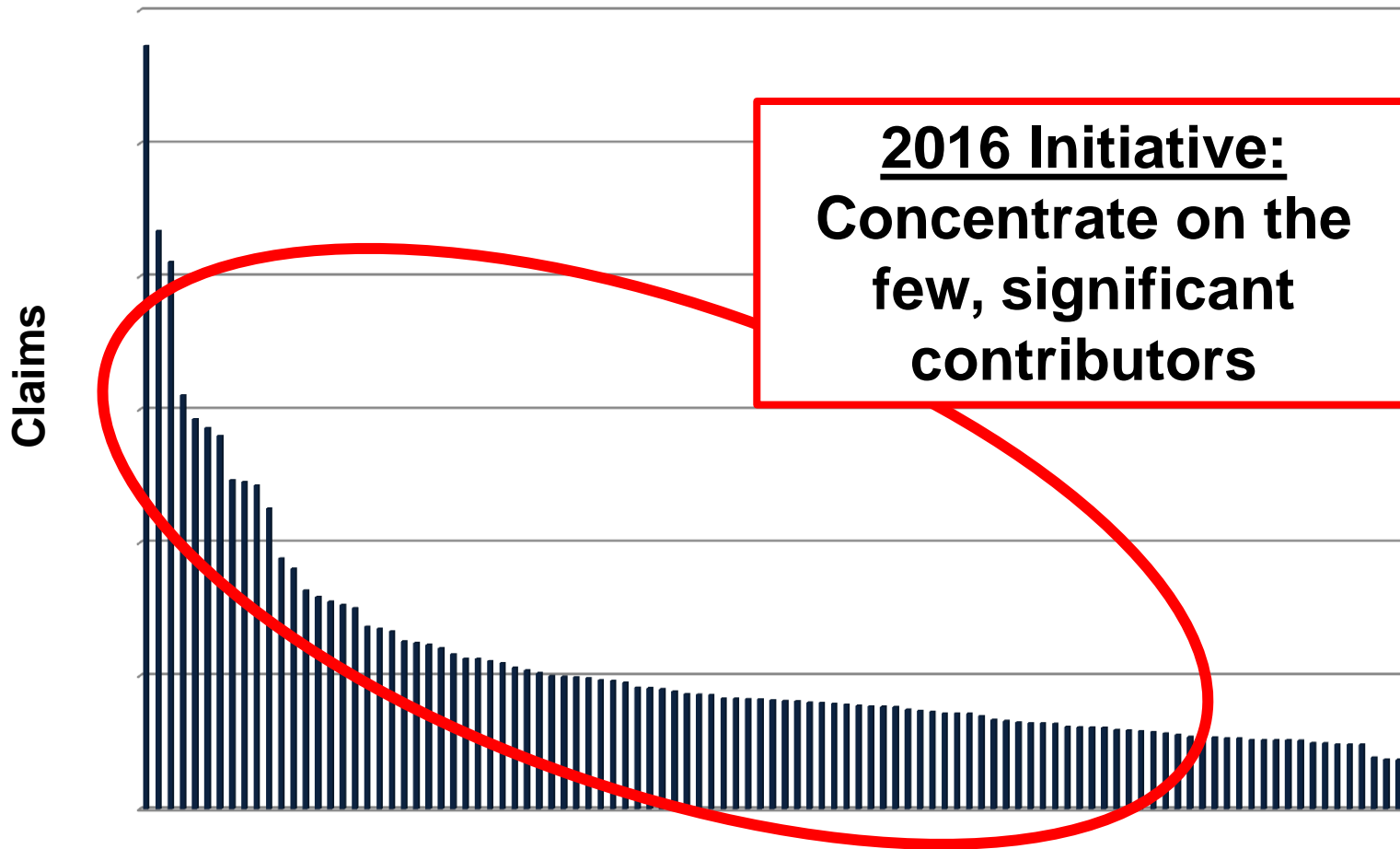


**No Assignable Cause - Opportunity**

- ADC** – Adjoining Component or System Issue
- NTF** – No Trouble Found
- DDI** – FCA Dealer Issue

***67% of Claims Remain Unaddressed***

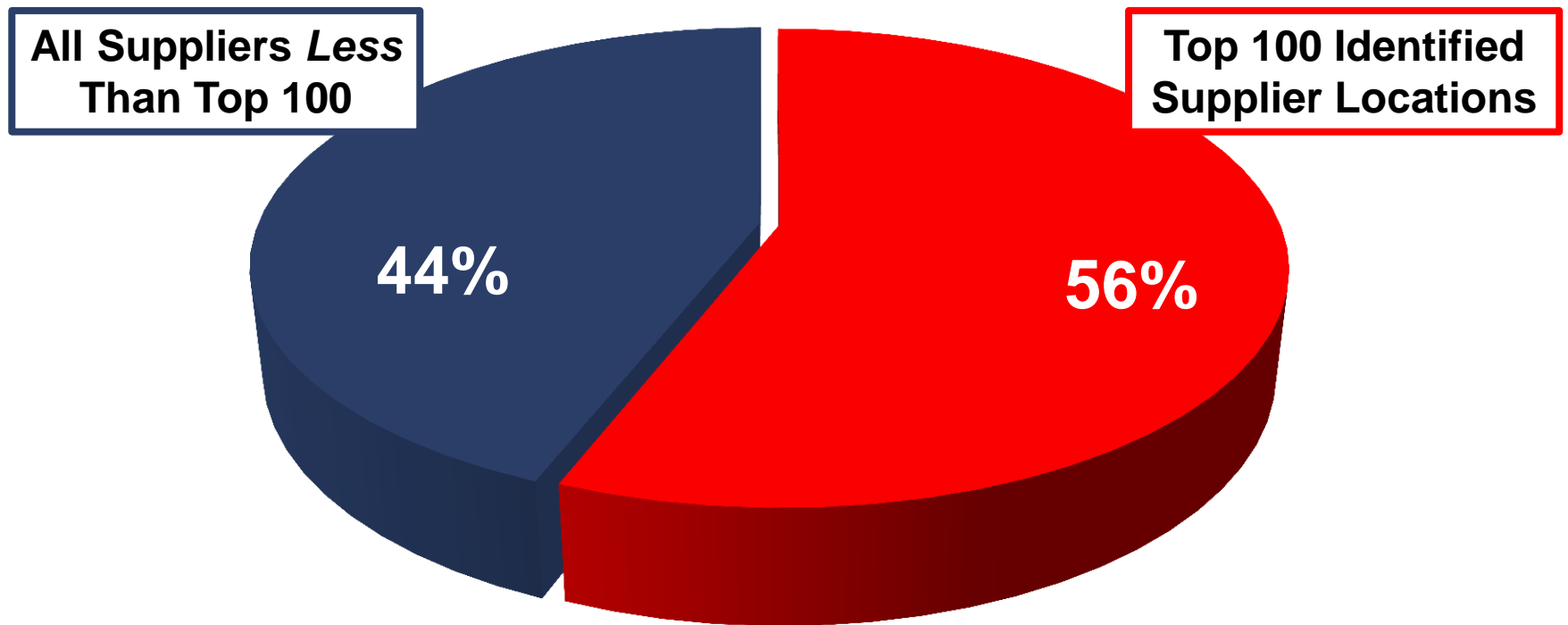
## Highest Contributing Supplier Associated Claims



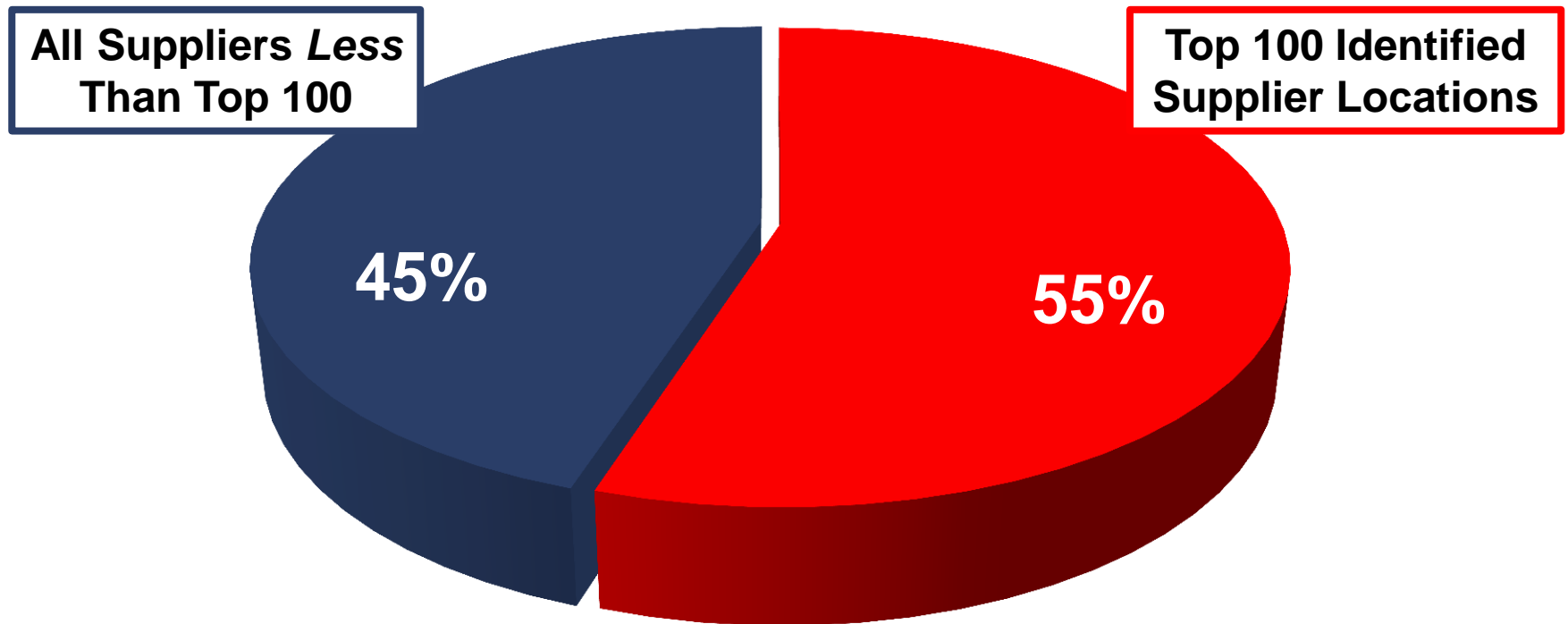


## All 2015 Supplier Associated Claims

*These suppliers are the **largest claim contributors** and have the biggest impact on warranty*

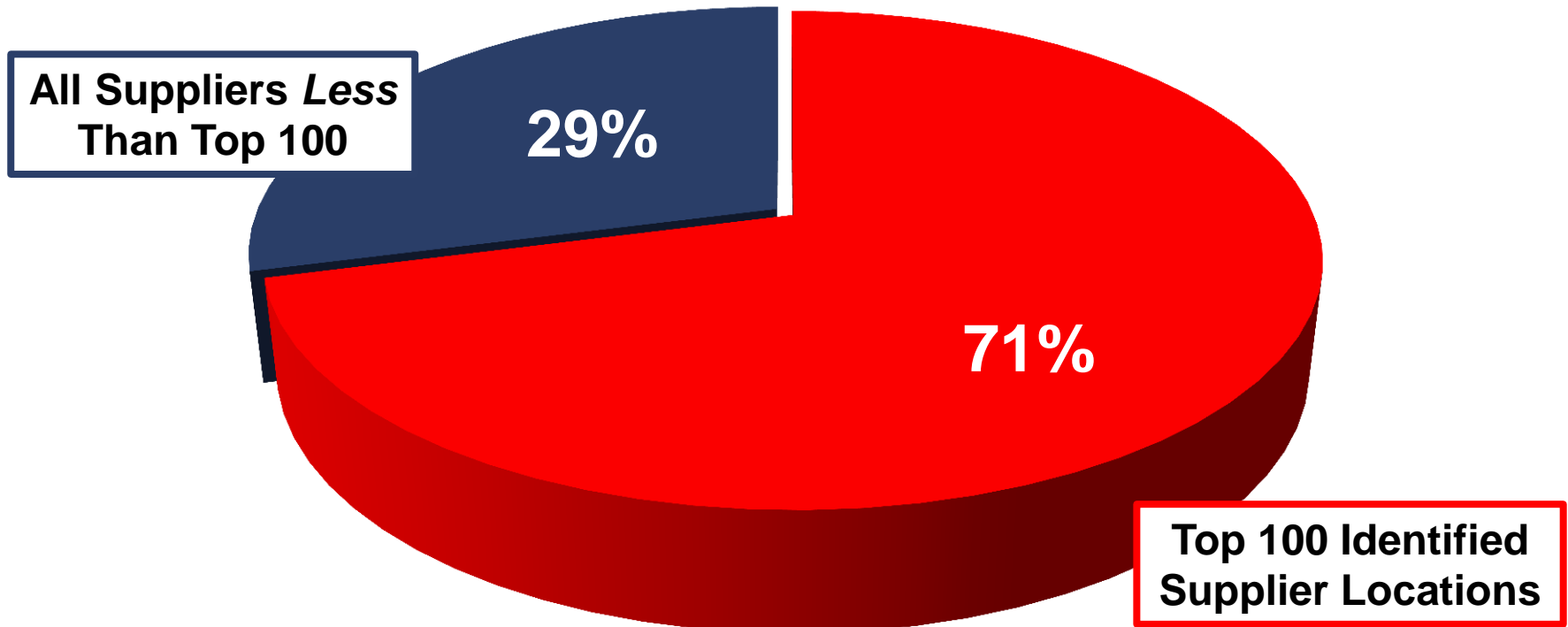


## All 2015 Supplier Associated Cost



## All 2015 Product Related Issues (PRI)

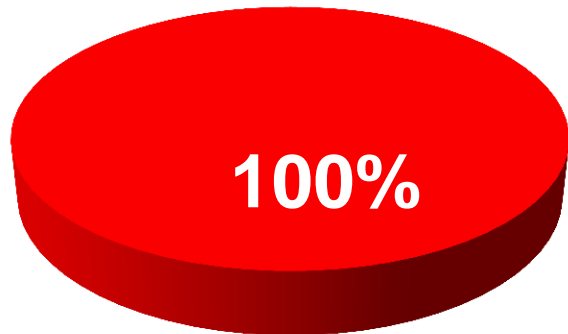
***76 supplier responsible PRIs were issued last year  
Top 100 suppliers accounted for 54 of them***



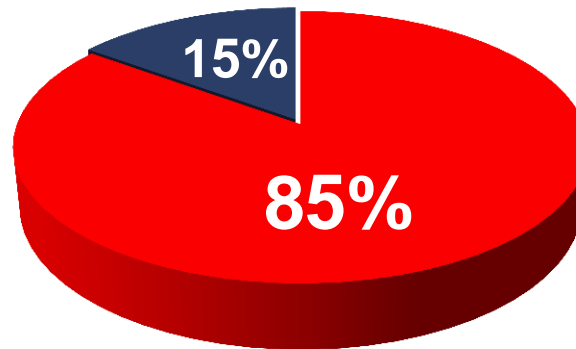
## Recurring Top 100 Supplier Locations

***Top 100 supplier locations identified as top warranty contributors consecutively over the past three years***

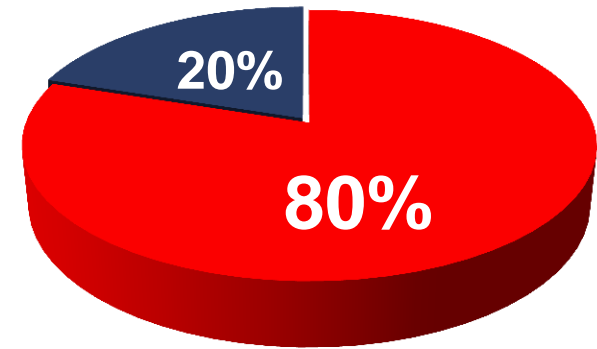
# 2015



# 2014



# 2013

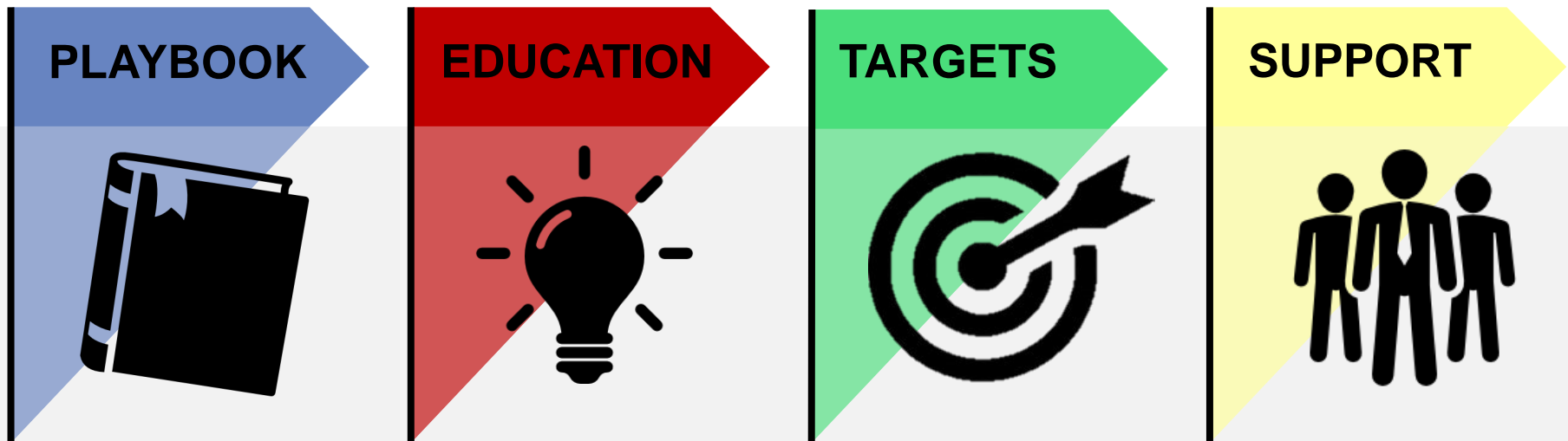


■ Top 100 Recurring Suppliers    ■ Other

## Improve Internal to Better Support External

### 2016 FCA Tool Kit

*Enhanced focus on warranty reduction and development for continuous improvement*



## Improve Internal to Better Support External

### PLAYBOOK



- Practical tools that supplement the CQI-14 manual
- Resources used to better equip SQEs in identifying and resolving warranty issues

## Playbook Tools - Problem Resolution

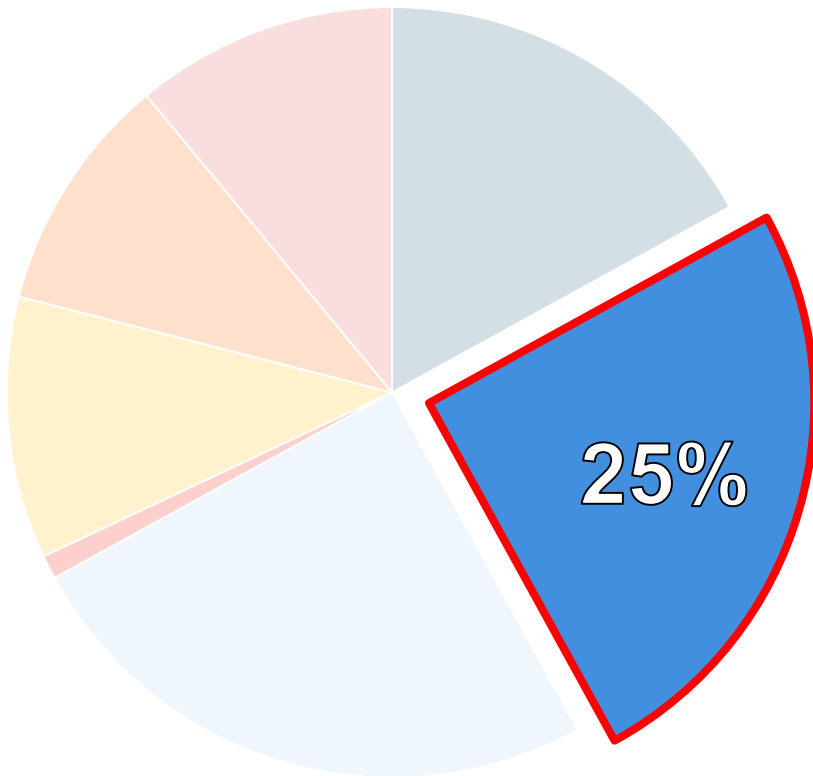


# NTF

## Needs Team Focus



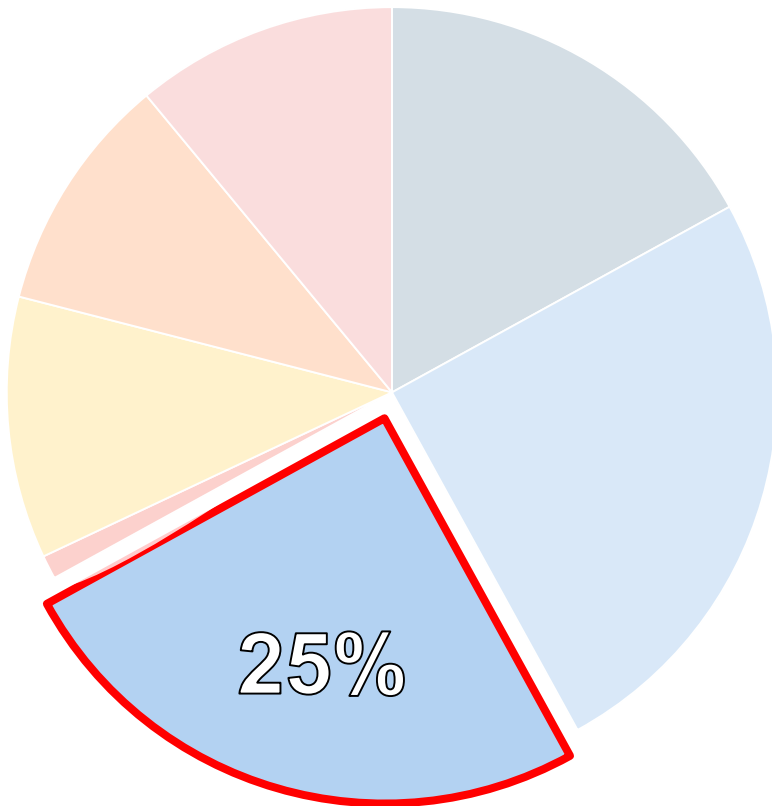
## Playbook Tools – No Trouble Found (NTF)



- Needs Team Focus
- Understand relationship between customer complaint & claim
- Warranty claim trend analysis
- Return VIN analysis
- Verify plant receiving/storage/assembly processes
- Use a system approach
- Digital pictures in DPA reports
- Set Quality Narrative Analyzer (QNA) alerts

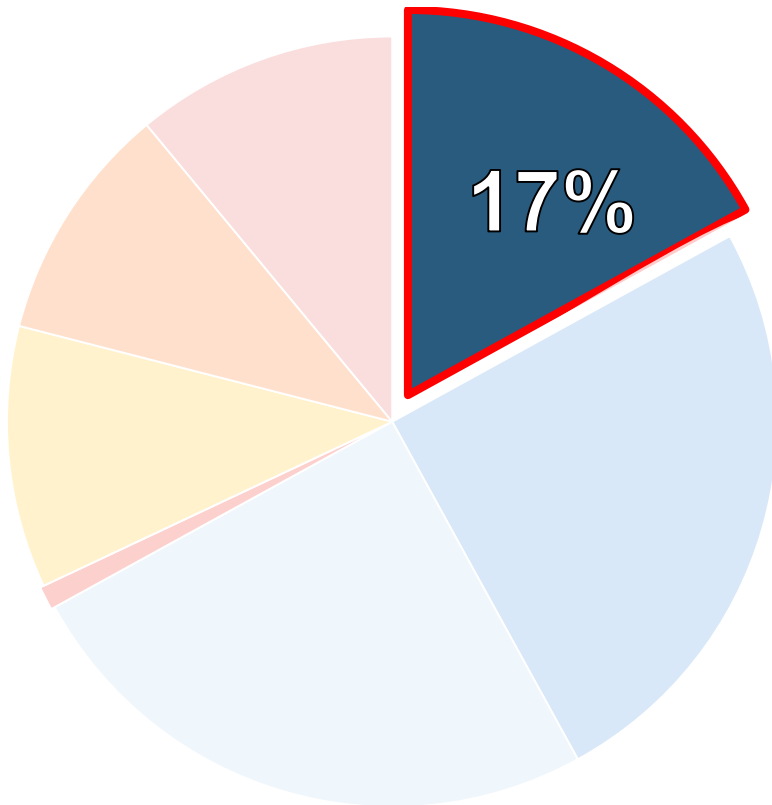


## Playbook Tools – FCA Dealer Issue (DDI)



- Diagnostics part review
- FCA supported dealer calls & visits
- Initiate star cases
- Create GPOPs
- Digital pictures in DPA reports
- Verify appropriate TSBs in DealerConnect
- Set QNA alerts

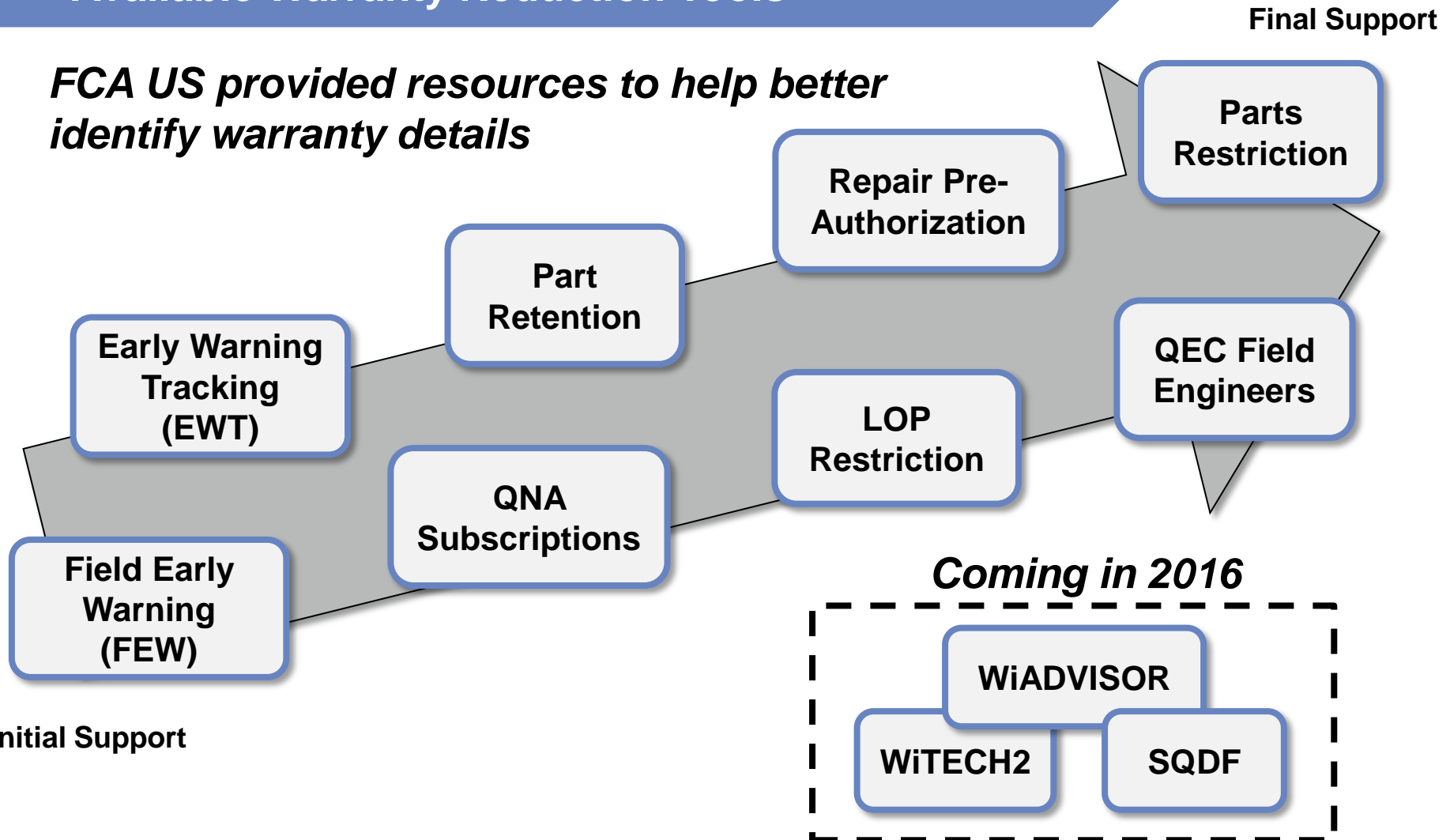
## Playbook Tools – Adjoining Component/System Issue (ADC)



- Conduct vehicle reviews
- Engage suppliers in group QEC reviews
- Verify appropriate TSBs in DealerConnect
- Establish adjoining component & system interaction
- Verify plant receiving/storage/assembly processes
- Digital pictures in DPA reports

## Available Warranty Reduction Tools

*FCA US provided resources to help better identify warranty details*



## Improve Internal to Better Support External

### EDUCATION



- Sharing lessons learned & best practice forums
- Reviewing examples and practicing read across
- Providing in-depth warranty training



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# CQI-14 Supplier Pilot Examples

Doug Crichton, FCA US Supplier Quality  
Erwin Delacruz, Valeo Thermal Systems



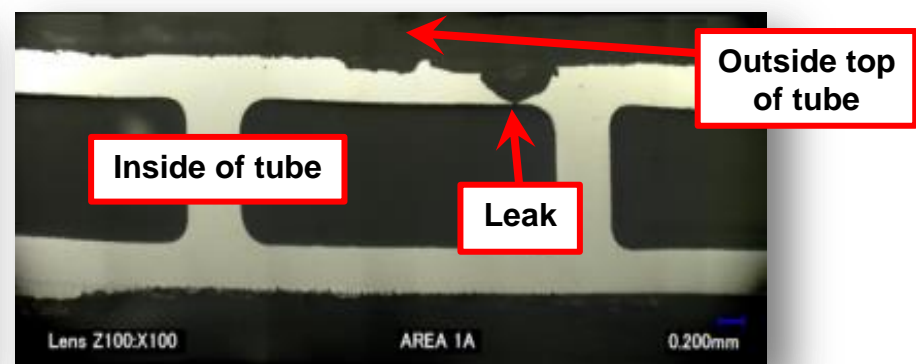
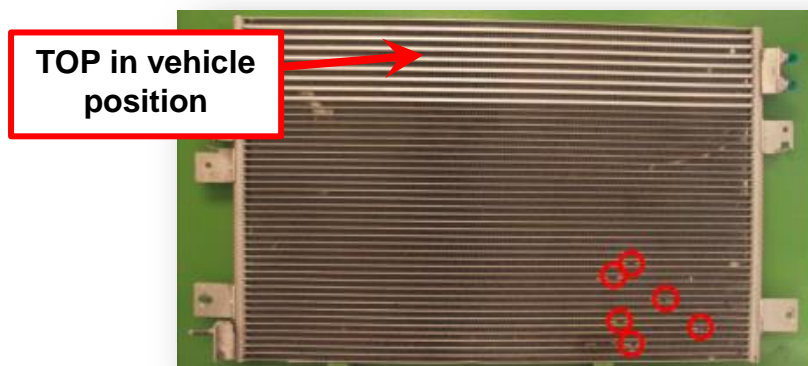
## Issue Description

- Warranty claim data showed an infant mortality claim (5 miles on a vehicle)
- Preliminary analysis by Valeo identified numerous leak points

## Team Approach

Analysis showed penetration on the top of the tubes through from the outside in

- Chemical analysis shows presence of chlorine (Sodium Hypochlorate) all over the TOP surfaces of the condenser and at leak points
- Cause of leak identified is accelerated corrosion due to Sodium Hypochlorate
- No sources of concentrated Sodium Hypochlorate were found inside Valeo



## Root Cause

- Valeo worked with the dealer to get photos of underbody components that exhibited accelerated corrosion
- Investigations led by FCA US identified the cause as insufficient controls to the volume and frequency of Sodium Hypochlorate that was added to treat the water in the FCA Assembly Plant's in-line water test booth



## Next Actions

- FCA cleaned the water storage system and updated the process to ensure the recycled water remains free of any harmful additives



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# CQI-14 Supplier Pilot Examples

Courtney Heinrich, FCA US Supplier Quality  
Michael Breda, MAHLE-Behr





## Issue Description

WK/WD front HVAC assembly blower motor noise NTF reduction

- Previous permanent corrective action improved 4 kHz noise (implementation of foam noise dampener)
- Additional 65 claims remained (30 claims with narrative data)
- Analyzed claims – resulted in dominant category of “noisy”

## Team Approach

1<sup>st</sup> level analysis – Results: NTF

- Powered motors from 3V-12V & listened for noise beyond ambient level

2<sup>nd</sup> level analysis – Results: NTF

- Tier 2 supplier tested motors to an overall dBA level and passed to specification

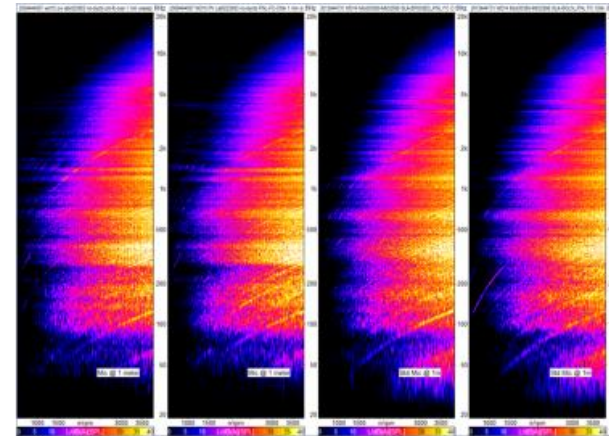
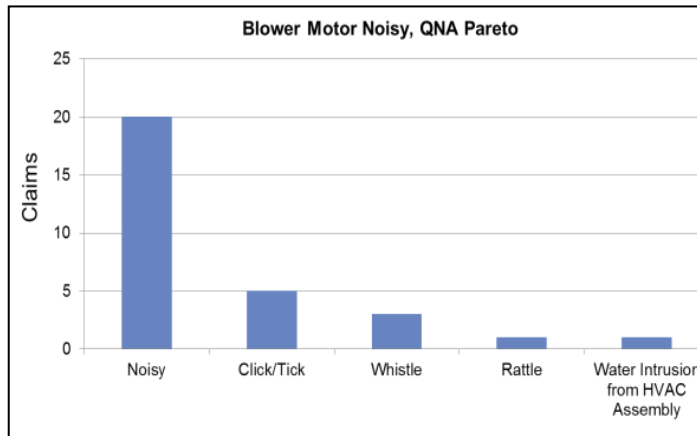
**3<sup>rd</sup> Additional analysis** - Results: 12<sup>th</sup> order noise detected in all motors

- MAHLE-Behr tested motors in NVH lab and reviewed sound profile

## Root Cause

12<sup>th</sup> order noise is inherent of the blower motor design and is noticeable under lower levels of cabin noise

**QNA:  
December  
2015**



**Example  
sound  
profile**

## Next Actions

- Investigate adding a rib to the bottom of the HVAC housing to dampen noise
- Investigate isomount motor design
- Brushless motor design being implemented for new design programs
- Continue with improvements in testing motors from Blower Motor Task Force

Partnership is our Biggest Opportunity

The Valeo logo features the word "Valeo" in a bold, green, sans-serif font. A dark blue swoosh underline starts under the 'V' and extends to the right, ending under the 'o'.The MAHLE BEHR logo consists of the word "MAHLE" in a bold, blue, sans-serif font stacked above the word "BEHR" in a bold, orange, sans-serif font.

***Diligence / Teamwork / Accountability***

## Improve Internal to Better Support External

### TARGETS



- Setting aggressive warranty reduction targets
- Focusing on the significant claim contributing suppliers

## Warranty Reduction by Conditions (C/1000)



- Warranty targets by local commodity code (LCC)
- Remains fixed for 12 months



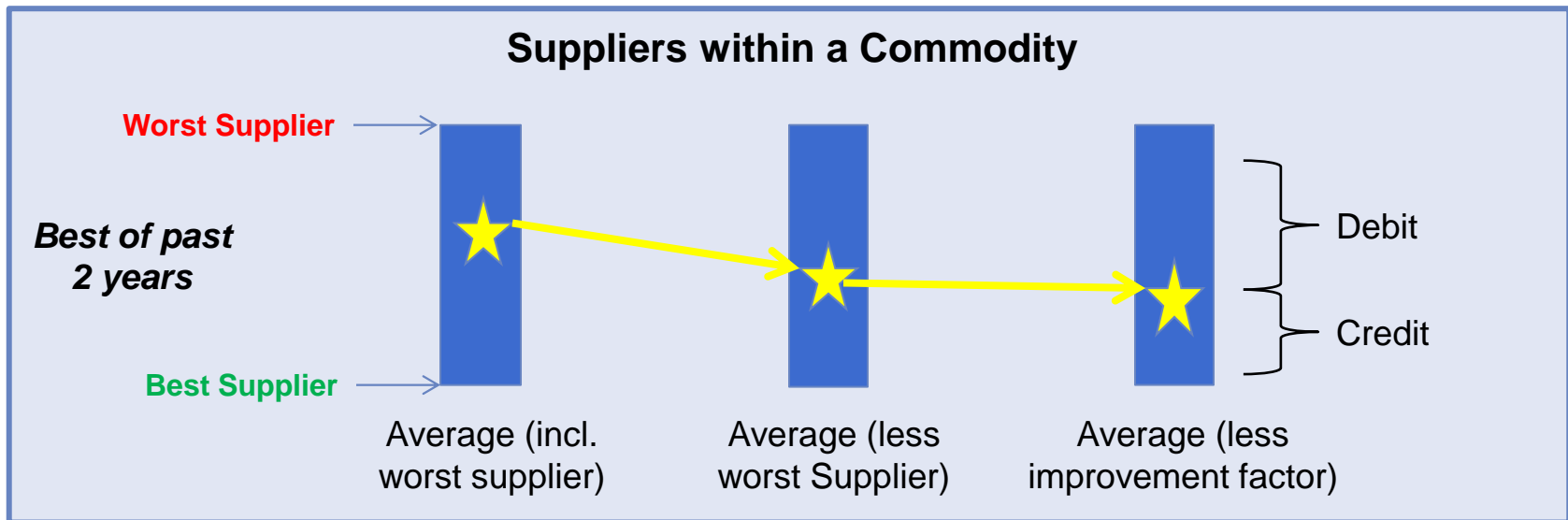
- Targets for each Supplier Manufacturing Location Code (SMLC) that supplies that particular commodity (LCC)
- Targets based on the “So Equipped” divisor



- Warranty target set regardless of responsibility
- Warranty performance is measured by the replacement part for the identified failed component

## Warranty Reduction by Conditions (C/1000)

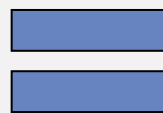
- Relative performance within commodity compared to best of the past two years
- Average within a commodity (without worst offending supplier) and applying the corporate warranty improvement factor



## Target the Numerator → Claims

- C/1000 = Claims/1000 on specific vehicles
- Risks of using 3 MIS C/1000 data
  - Time lag of data
  - Not detecting spills until too late
  - Normalized vehicle count hides high impact customer opportunity

**Reduce  
Claims**



**Reduce  
C/1000**

## Goal Summary

- Each SMLC is provided an individual warranty reduction goal
- Each supplier location was provided a percentage reduction:
  - Modified by accounting for mix of new products and known spills



- Supplier Quality Engineers are being provided aggressive targets
- Providing warranty tools and additional support



## Improve Internal to Better Support External

# SUPPORT



- Identified support from leadership company wide
- Collaborating efforts from Purchasing, Supplier Quality, Manufacturing and Engineering

## Executive Sponsor Responsibilities

- Conduct a review at supplier location during 2016
- Attend top parent supplier meetings with FCA US leadership
- Attend monthly Supplier Quality team performance reviews
- Assist with removing roadblocks

## Overview of Goal Envelope

- 2015 MY Cost and Condition Count Totals
- FCA US Contacts & Executive Sponsor
- 2015 Top 100 Rank
- 2016 Warranty Reduction Target

## Frequency of Warranty Tool Use

- **DAILY** - Early Warranty Tracking (EWT) & Quality Narrative Analyzer (QNA)
- **MONTHLY** - Warranty Information System (WIS)
- **AS REQUIRED** - Global Claims System (GCS) & analyze & solve NTF/ADC/DDI

## CQI-14 CSR Updates

- More in-depth TS audit
- Self assessment completed with FCA US support

## Lessons Learned

- Facilitate lessons learned and warranty read across for future AQP
- Visit the parts return center for part analysis
- Follow up with Quality Engineering Center (QEC)

## Warranty is a Team Sport

- Communicate proactively
- Transparency between FCA US and supplier partners
- Collaborate and resolve all reasons for warranty
- Deeper investigation and read across
- Embrace a culture of continuous improvement
- Treat every claim as a significant event

**PUT THE CUSTOMER FIRST**  
**EVERY PART | EVERY PROCESS | EVERY TIME**