

## **Early Detection Early Resolution (EDER)**

1, Powerpoint presentation which explains the information flow of issue detection to Toyota Canada

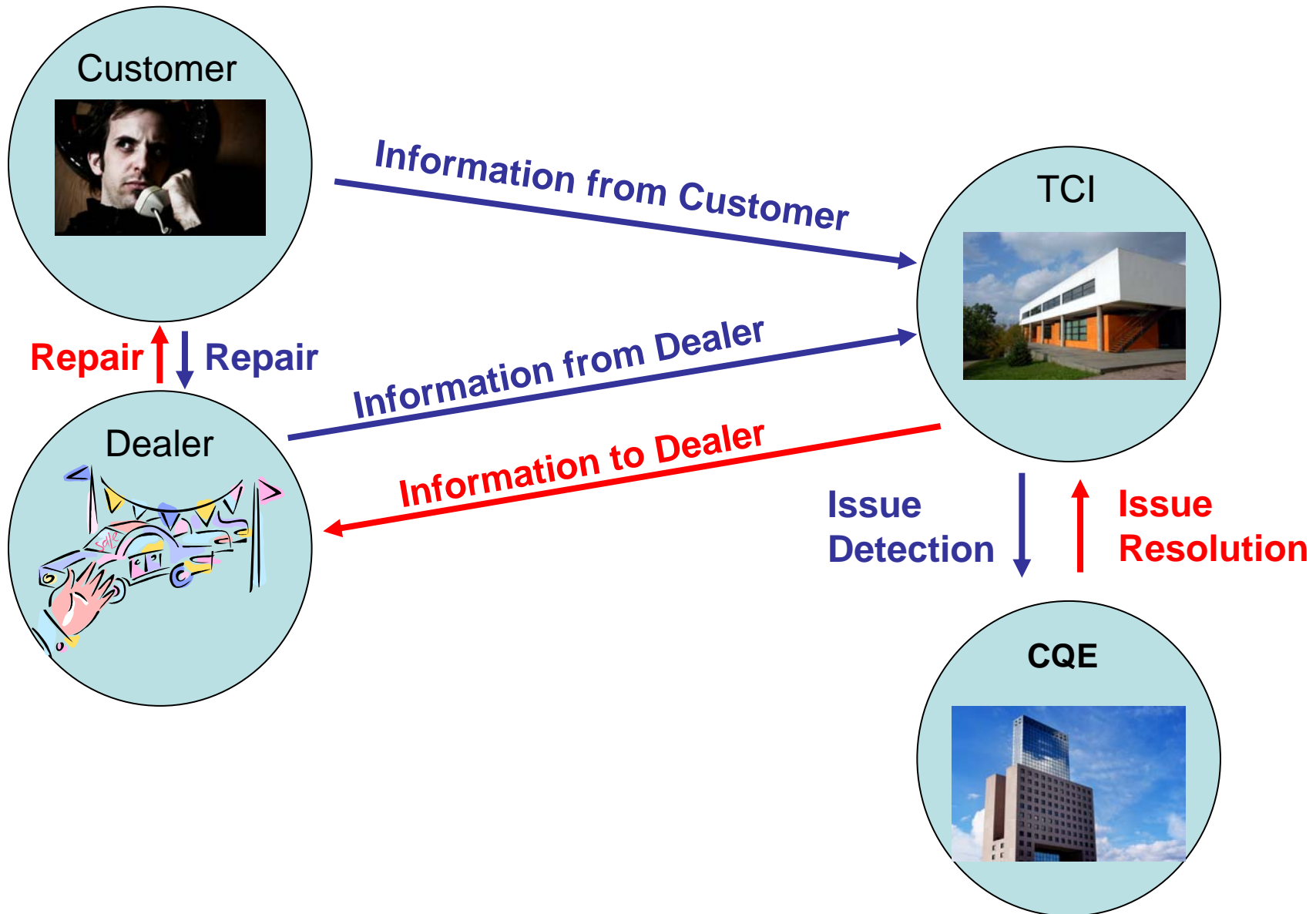
- Information comes from Customers, Dealers or Toyota Headquarters
- Issues are prioritized - highest priority being safety
- Detection and analyzing systems are in place to facilitate quicker detection
- Toyota Motor Corporation stations quality control engineers in Canada

2. Common Platform – Dealer Management System

- Document explains benefits of a common information sharing platform and \$244 Million investment
- System facilitates early exchange of vehicle service information from Dealers to Toyota Canada

Toyota Canada Inc.  
Technical Operations  
Early Issue Detection Process

# Information Flow – General Overview



# Information Flow – Inputs to TCI

How does TCI get quality related information from Customers and Dealers?

1. Customers can:

- contact the Customer Interaction Center (CIC)

2. Dealers can:

- submit Flash Product Reports (FPR)

- contact TCI Technical Assistance

3. TCI can:

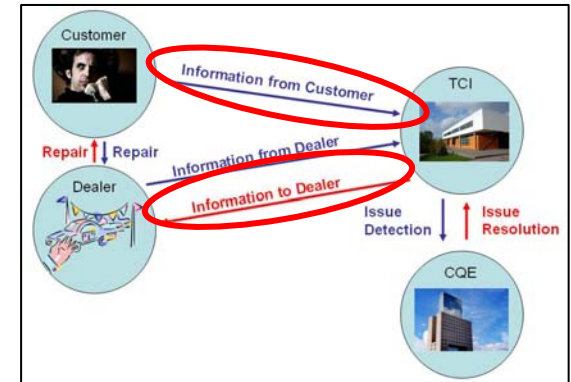
- analyze warranty claims

- analyze customer paid repairs

- analyze part sales

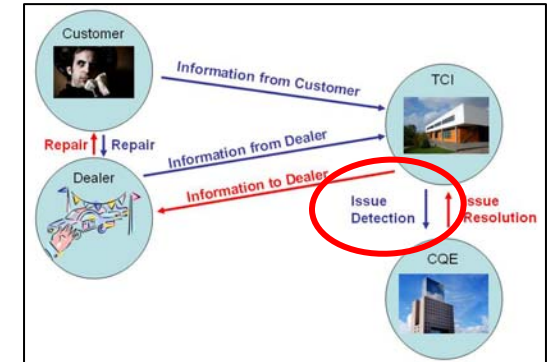
- analyze recovered parts

- see the actual vehicle in the operating environment



# Information Flow – Issue Detection

- How does TCI detect issues?
  - Special consideration given to safety related repairs/complaints
  - Consolidate all inputs and analyze trends for: high frequency, difficult to diagnose and/or difficult to repair
  - Go and See activity with CQE
  - Inspect recovered parts and/or attempt duplication on TCI cars



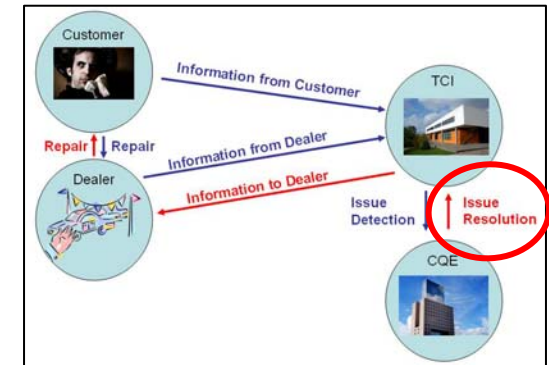
# Information Flow – Issue Detection

- How does TCI report issues to CQE?
  - Field Technical Report (FTR)
    - one VIN per report
    - details customer complaint, vehicle symptoms, diagnosis method and potential cause

# Information Flow – Issue Resolution

## 1. How does CQE resolve issues?

- Detailed investigation in lab and/or real world
- Work with design, manufacturing plant, supplier, etc. as needed
- Field fix for existing vehicles is determined
- Countermeasure for vehicles yet to be produced is determined



## 2. How does TCI get this information from CQE?

- Technical Information (TI) document

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## TMC – Special QA Activities in Canada

### Cold Region Office

- 2 CQE Members stationed at TCI (Toronto)
- December – March
- Expedite Early Resolution (quick Go&See, etc.) of field quality issues
- 1 CQE Member also deployed on dealer tour to find new issues & duplicate/confirm issues

### Canada Cold Testing

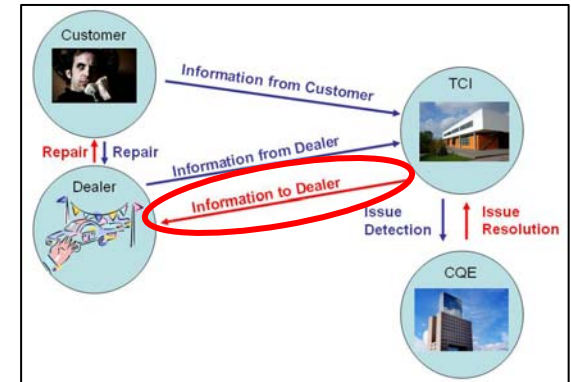
- TMC evaluation of pre-production vehicles for NA market
- Toyota facility in Timmins, ON
- Opened in 1974
- Confirmation of cold start, heater/defroster performance, wiper/washer performance, traction control performance, corrosion resistance, paint chipping resistance, ABS performance, etc.

# Information Flow – Repair Information

1. How does TCI advise dealers of the new Repair Information?

-Publishing Technical Service Bulletin (TSB) or Tech Tip

-Dealer has access to online library via dealer portal to TCI (since 1998)





## **Common Platform Dealer Management System (DMS)**

### **Benefits of a Common Platform**

- Faster to implement process changes
- Consistent meaning , format for all data and easy to interpret
- Due to our group size, the vendor is more responsive to our needs, and more willing to work with us on different innovation
- Better control & planning on technology & implementation

### **Current Situation**

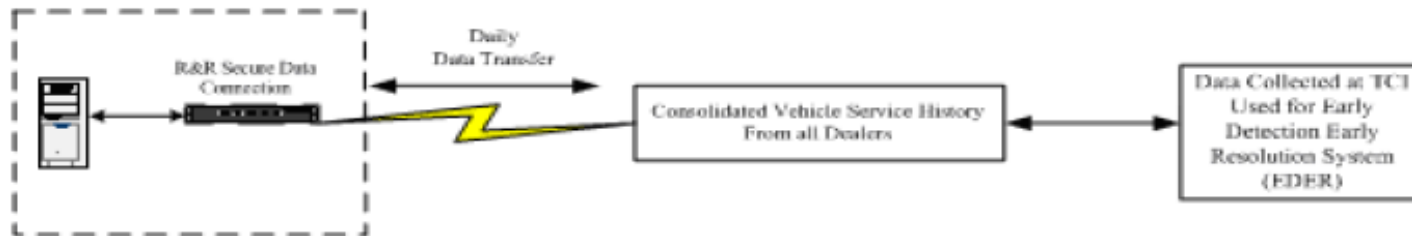
Data Exchange enables TCI and the Toyota/Lexus dealer network to exchange information for the benefit of Toyota and Lexus customers. This exchange of information is made possible through data extraction technology and a common dealer technology platform.

**Consolidated Vehicle Service History (CVSH)** – consolidates all the service records from each dealership's ERA system into a single vehicle report. The report will be listed by Vehicle Identification Number (VIN) and will be accessible through Infostream. The report will include service information such as part numbers, labour descriptions for warranty, internal and retail services and repairs. This comprehensive view of the inquired vehicle will aid the service Technician with vehicle diagnosis and enable Service Advisors to make better recommendations to customers (Determination of root cause condition). This information is used to diagnose trends across the country.

## Diagram

Current

100% TCI Dealer Network on  
Common Platform



## Investment in Common Platform Dealer Management System (DMS)

- Initial dealer set approximately \$32 million dollars.
- Dealer training approximately \$8 million dollars.
- TCI investment in custom enhancements \$4 million.
- Support cost between TCI and Dealer network approximately \$170 million over 12 years
- Total \$244 million invested.