

# Component Registration

## Side Frames, Bolsters, Couplers

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# Agenda

- Brief over of the component tracking initiative
- Current status of wheelsets
- 2012 Component Framework Phase 2 status
- 2012 Castings Project overview and status
- Castings registration deep dive



# CEPM Component Tracking Objectives

- Support Recall of Components identified with safety issues
- Support equipment owners with details of components on their equipment
- Capability to track performance of components related to component life, failure rates, and history of the component



# Industry Requirements

- Establish industry rules for reporting component details and application to equipment
- Develop a re-usable framework that can support many different types of components, such as wheelsets, bolsters, side frames, brakes, cushioning units, traction motors, PTC, etc.
- Maintain Confidentiality of reported data



# Information Online – www.railinc.com/cepm

Railinc Corporation | CEPM Project - Microsoft Internet Explorer provided by Railinc

https://www.railinc.com/cepm



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### CEPM Program Overview

The Comprehensive Equipment Performance Monitoring (CEPM) program is a multi-phase, multi-year initiative to create a rail industry process and related technology tools for capturing data around railcar equipment components. CEPM will help railroads, rail equipment owners, repair and wheel shops, and other industry participants have a complete view of rail equipment health and performance. This will enable managers to make decisions that improve rail safety, lower the cost associated with equipment maintenance, and run more efficient and effective rail operations.

The program's first phase—CEPM-Wheelsets—centralizes the registration of wheelset component details and identifies the application of wheelset components, including AAR and non-AAR repairs. The component-level data created through the CEPM program will be available through Railinc's Umler™

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User ID:

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### RailSight

Greater visibility. Better tracking. Learn more here.



REFERENCE FILES

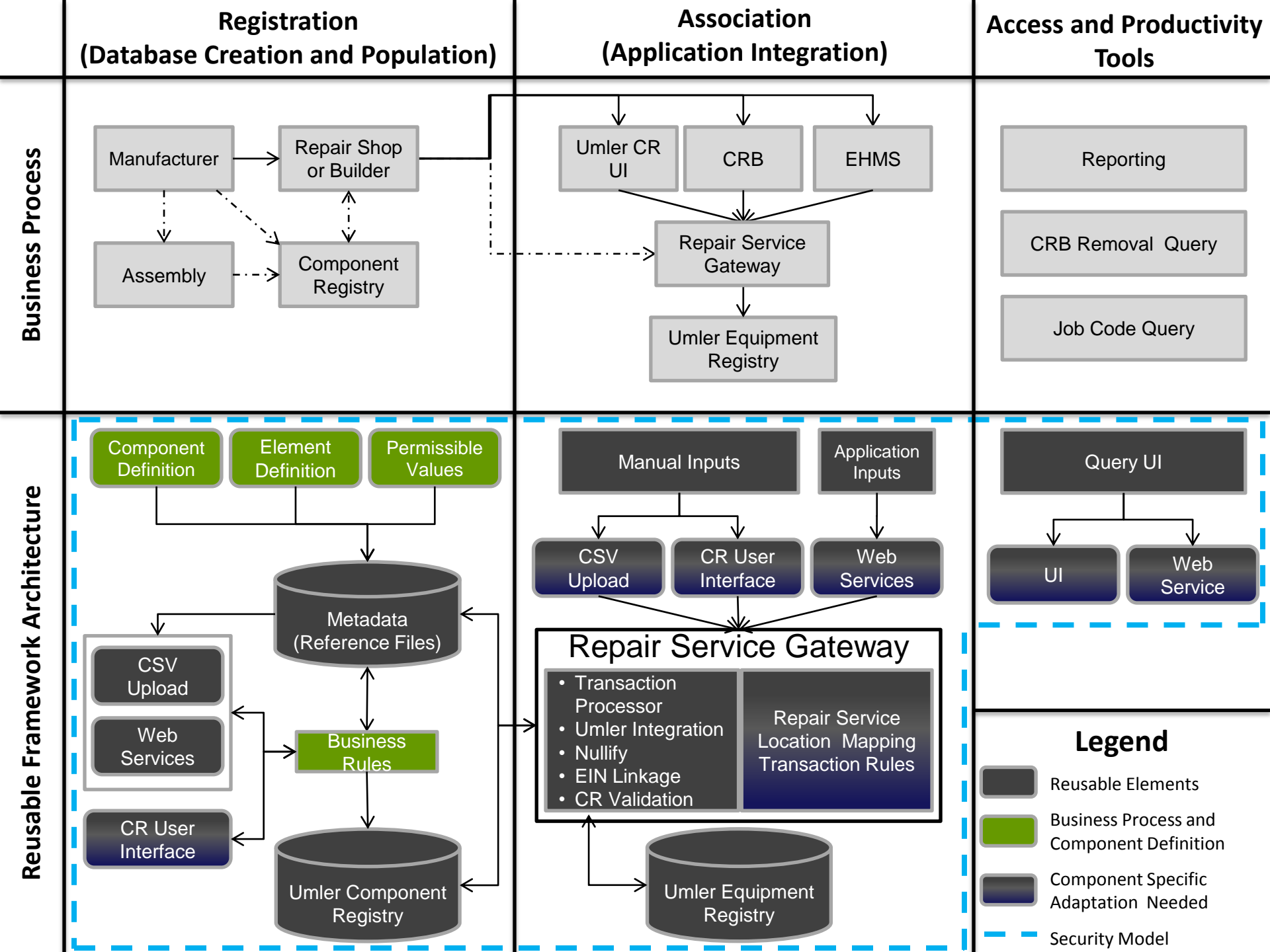
### FindUs.Rail

Quickly find critical contacts from across the rail industry.



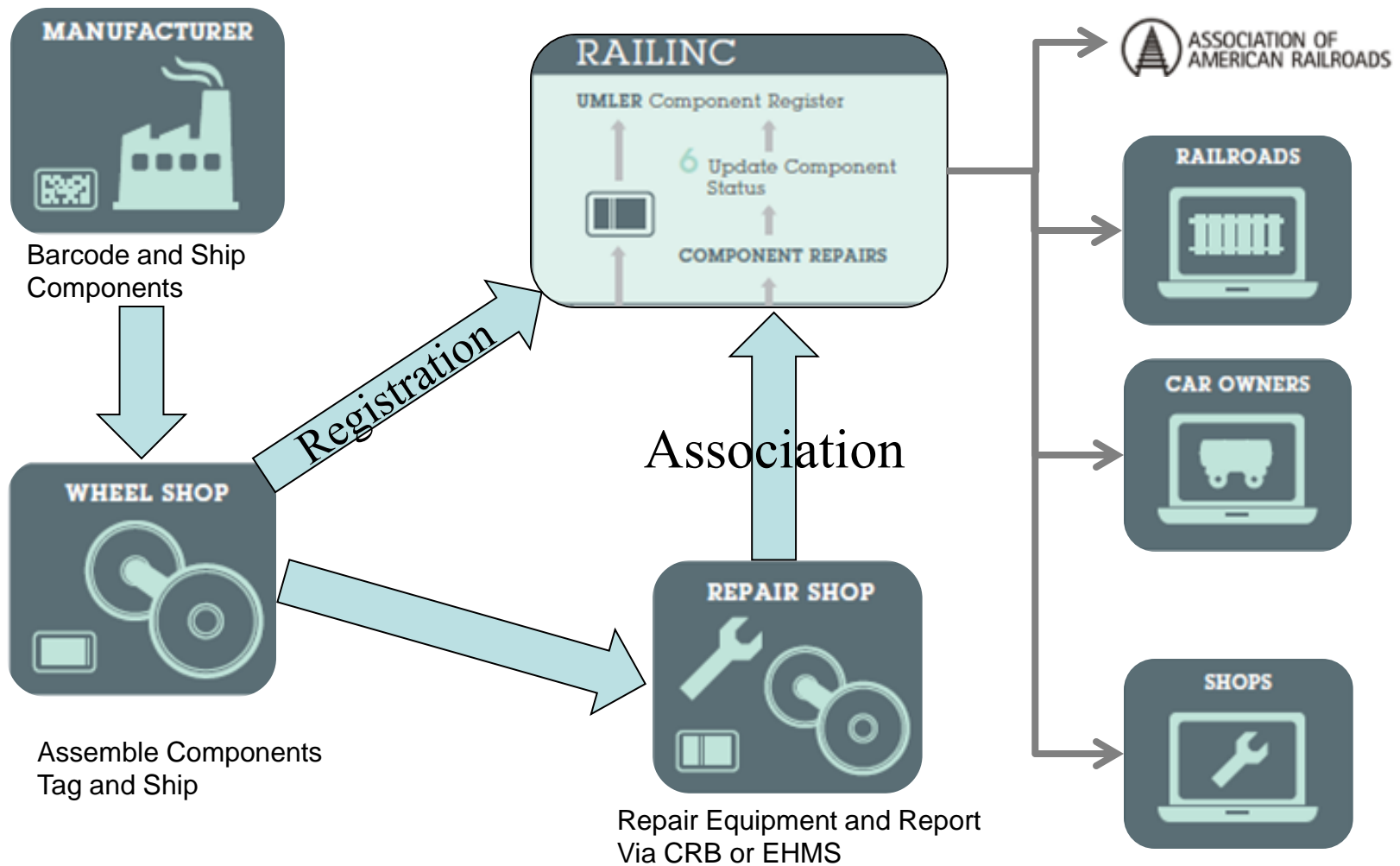
## Documents available at Railinc.com

- **S-920 Industry Bar Code Specification**
  - Details about 1-D and 2-D barcodes
  - Appendix A - Wheelset Data Glossary
  - Currently being updated to include Castings Data Glossary
- **Umler Component Registry Reference Files**
- **Component Registry Overview**
  - Go-Guide
  - FAQ's





# Wheelsets Process Flow







# Wheel, Axle and Bearing 2D Bar Codes

OEM & Reconditioners produce these Bar Code Labels



**WHEEL NEW**  
**GK 123456 11 / 01**  
**CH 36 D 241.25**

Rim / Finger : 22 / 0  
Plate: CrvS  
Facility: GRFI  
Heat: 1234ABCD  
Date: 2/1/11 18:55:12

**Railroad Wheel Corp**



**AXLE 6.5 x 12 F+**

SN / Heat: 123123 ABCDEF  
Type: RWS  
Class: 7  
Condition: 2  
Facility: GRFI  
Converter: ABCD  
Plating: AXIS1234  
Conv Date: 6/1/11 18:55:12  
Mfg Date: 2/1/11 18:55:12

**Railroad Axle Corp**



**BEARING NEW**  
**12345678 6.5 x 12**  
**11 / 01 GG**

Facility: TRBC  
Seal: HDL  
Cert: 01A  
Ring: SureFit  
Cage: STD  
Grease: 3201  
Date: 2/1/11 18:55:12

**Railroad Bearing Corp**



Wheelshops read Bar Code Labels



# Standard 1 dimension Bar Code

## Applied to Wheelset by Wheelshop



Applied to the Wheelset once registered in the Component Registry

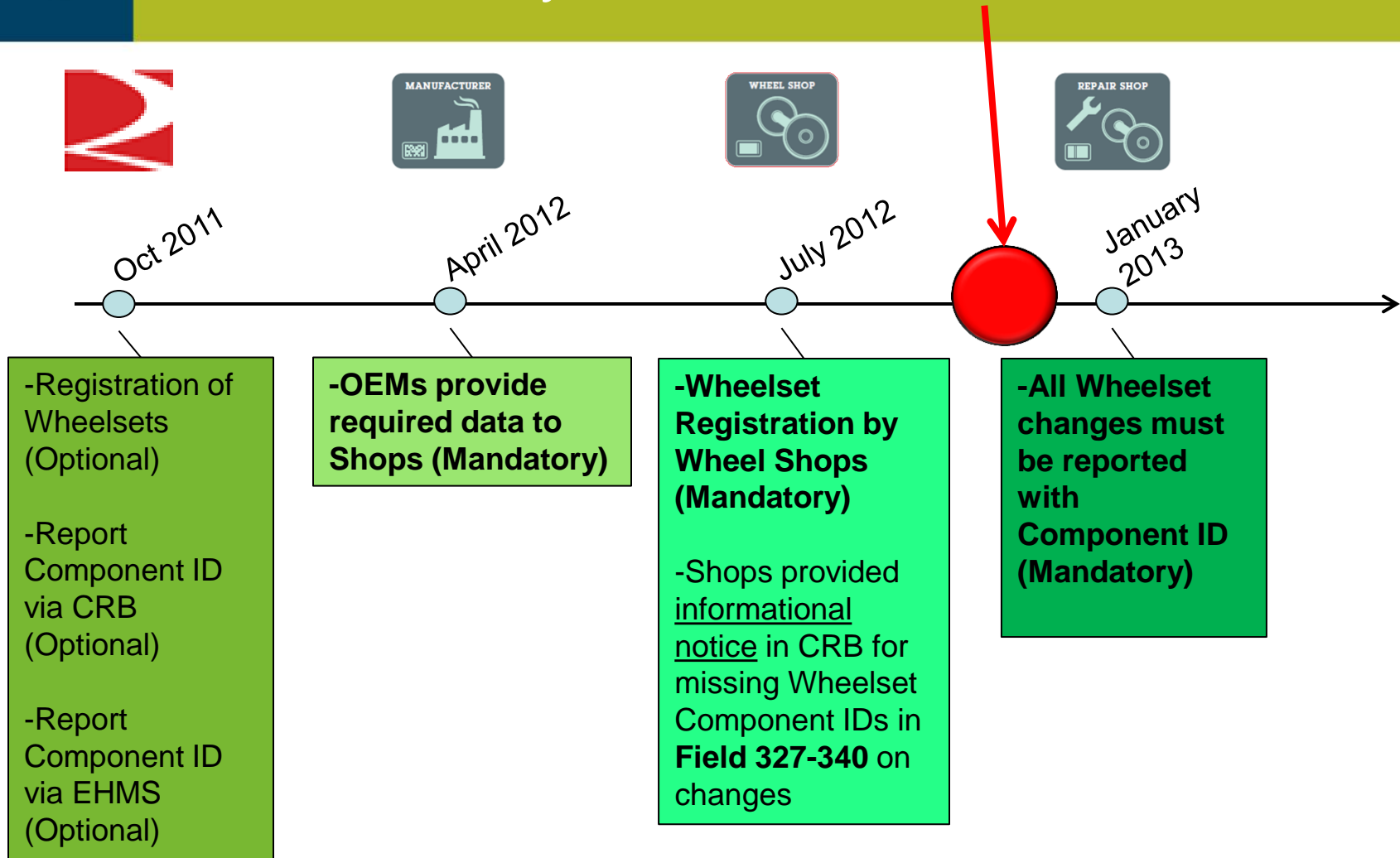
Must remain attached to Wheelset from wheelshop until wheelset is placed under car.

Readable by almost any bar code reader



# CEPM Industry Timeline

You are  
Here





# Component Registry Project Status

## Wheelsets

- Project began January, 2011
- S-920 Bar Codes specification was published
  - Available in Section F of the MSRP
- Wheel, Axle and Bearing OEM and Re-Conditioners began bar coding their products. (April 2012)
- Wheelshops began Registering wheelset (July 2012)
- Railinc began backfilling Component Registry using CRB data (July 2012)
- Field Registration available September 20<sup>th</sup>, 2012
- ~50,000 new wheelsets registered to date
- ~1000 associations



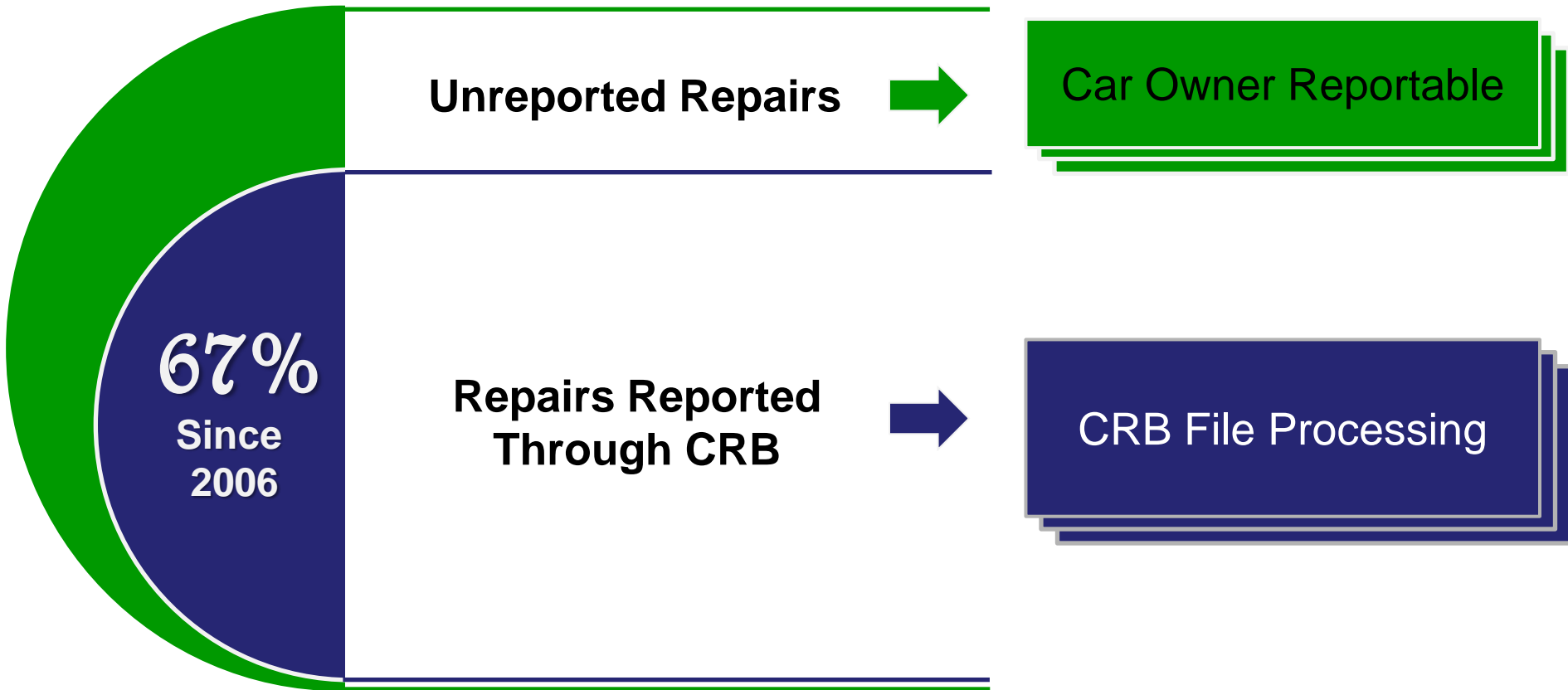
# Component Registry Project Status

## Component Registry Backfill

- Processing CRB Data Exchange files
- Wheelset repairs are converted into Registered wheelsets using Job Codes
- Registered Wheelsets are Associated to Equipment ID being repaired
- 2.4 Million wheelsets Registered and Associated
- Began processing June 2012 DX files
- Will finish processing Jan 2006 by end of September.



## Two Categories of Backfill Data





# CRB Backfill = 2.5 M Wheelsets

21,000 CRB  
Files - 2006 to  
Present - FIFO



Filter for  
Wheelset  
Repairs



Create  
Registration  
File



Create  
Association  
File



Upload  
Registration  
and  
Association  
Files

98% Success Rate



## Early Warning Recall Automation - Goals

- 1. Easily identify components for recall**
  - New query functionality with save and modify capabilities
- 2. Flag components under recall with EW number**
  - Includes associated and unassociated
- 3. Add cars with recalled components to EW**
- 4. Remove cars from EW when a recalled component is unassociated**
- 5. Notify when recalled component is associated to a car**
- 6. Continuous add and remove logic**





## Early Warning Recall Automation – Reporting Inspections

- **Users will continue to be able to report inspections directly to Early Warning as they do today**
  - A reminder will be displayed to update the component registry information as well
- **The Component Registry will send a final inspection (MH) on behalf of the reporter only when a recalled component has been replaced.**
  - MH is the only inspection type reported by the component registry



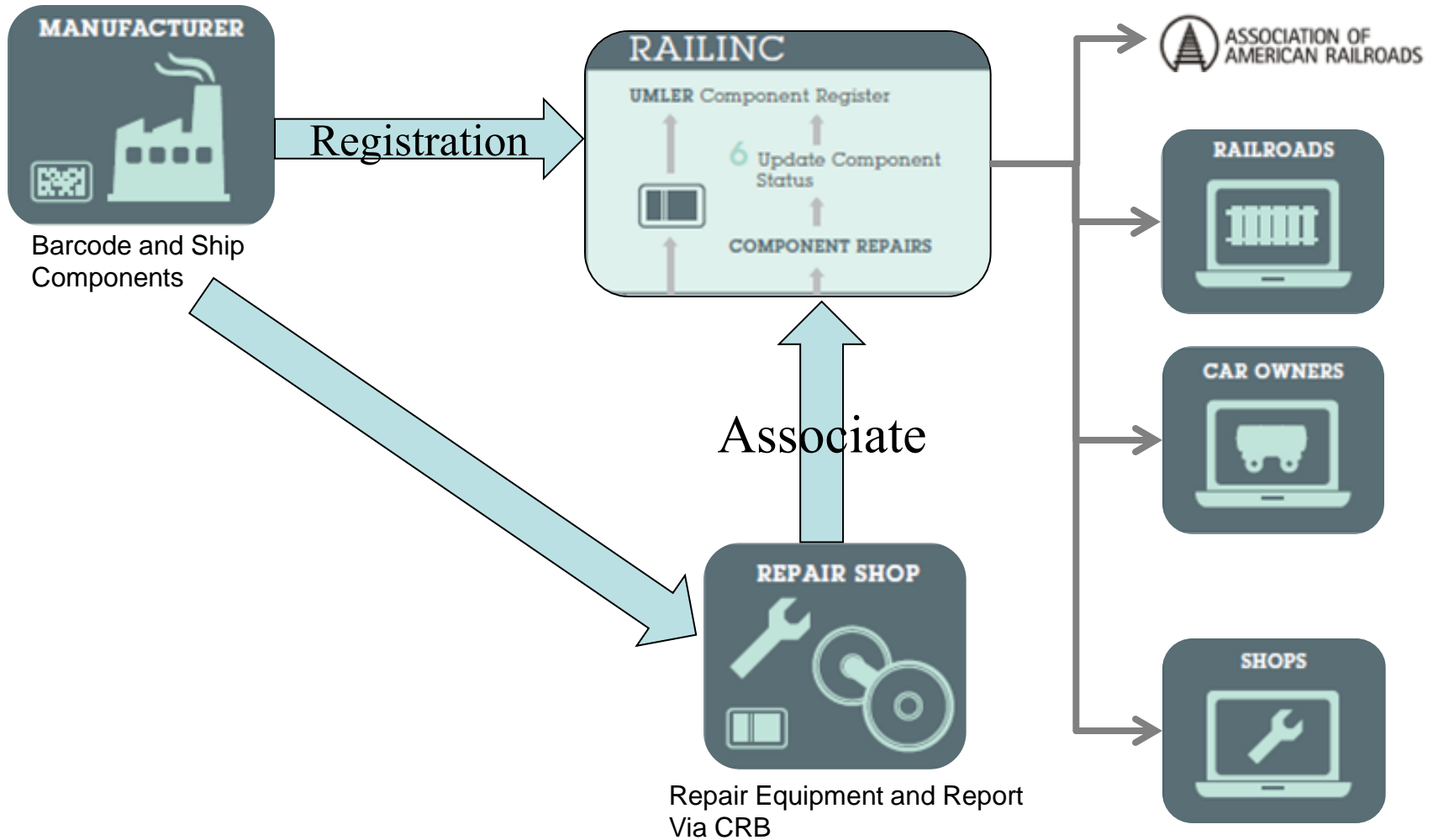
# Component Registry Project Status

## Bolster / Side Frames / Couplers

- Project began January, 2012
- Side Frame / Bolster Registration, available (June 2012)
- Coupler Registration, will be available (Dec 2012)
- S-920 Bar Codes specification is currently being updated for Castings
  - Including Data Glossaries for Side Frame, Bolster, Couplers



# Castings Process Flow





# Data Glossary

1. Defines the details about the data being captured for Side Frames, Bolsters and Couplers.
2. Each component has a different and unique Data Glossary
3. Details contained in Data Glossary:
  1. Data Element Name
  2. Example of data
  3. Definition
  4. Mandatory or Optional
  5. Size of Data Element
4. Data Glossaries are available on Railinc.com website under the CEPM project.



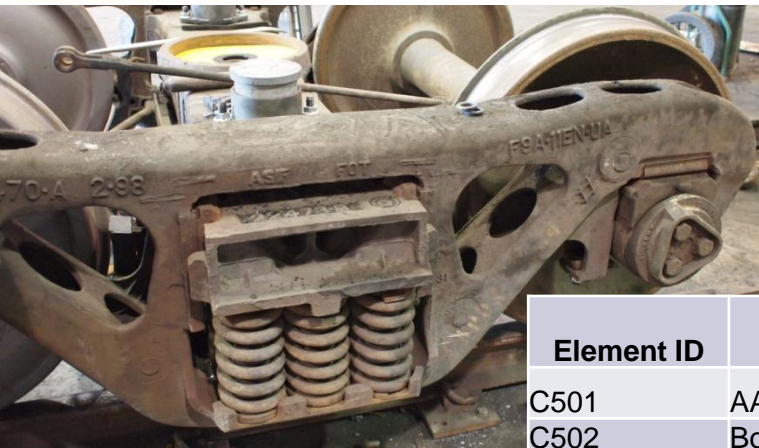
# Bolster Data Glossary



Element ID	Data Element	Size	Example	Required / Optional
C401	AAR Foundry Facility Code	4	ABCD	Mandatory for new
C402	Bolster Cast Month / Year	5	"08/12"	Mandatory
C403	AAR Design Features Code	12	B9S-04AN-UA	Mandatory
C404	AAR ID Code	8	B+2233	Mandatory
C405	Manufacturer's Pattern Number	12	557VM	Mandatory
C406	Manufacturer's Drawing Number	16	77948	Mandatory for new
C407	Manufacturer's Drawing Number Rev	3	AB	Mandatory for new
C408	Serial Number	10	NA12345	Mandatory
C409	MFG Heat Number	10	1234	Mandatory for New
C410	MFG Heat Treat Load Number	12	123456	Mandatory for New
C411	AAR Reconditioner Facility Code	4		Mandatory
C412	Cast Trademark	4		Mandatory
C413	Classification Date	10	mm/dd/yyyy	Mandatory
C414	Condition Code	1	1 - New	Mandatory
C415	Pocket wear plate installed	1	Y / N	Mandatory
C416	Converted Bolster	1	Y / N	Mandatory



# Side Frame Data Glossary



Element ID	Data Element	Size	Example	Required / Optional
C501	AAR Foundry Facility Code	4	ABCD	Mandatory for new
C502	Bolster Cast Month / Year	4	1012	Mandatory
C503	AAR Design Features Code	12	F9A-11EN-UA	Mandatory
C504	AAR ID Code	8	B+4528	Mandatory
C505	Manufacturer's Pattern Number	12	470A	Mandatory
C506	Manufacturer's Drawing Number	16	77665	Mandatory for new
C507	Manufacturer's Drawing Number Rev	3	AH	Mandatory for new
C508	Serial Number	10	JN27132	Mandatory
C509	MFG Heat Number	10		Mandatory for New
C510	MFG Heat Treat Load Number	12		Mandatory for New
C511	Reconditioner AAR Facility Code	4		Mandatory
C512	Cast Trademark	4		Mandatory
C513	Classification / Recondition Date	10	mm/dd/yyyy	Mandatory
C514	Condition Code	1	1 - New	Mandatory
C515	Column wear plate installed?	1	Y / N	Mandatory
C516	Nominal Wheel Base	2	70	Mandatory
C517	Button Count	1	3	Mandatory



# Coupler Data Glossary



Element ID	Description	Size	Example	Mandatory / Optional
C601	Condition Code	1	1 = New	Mandatory
C602	AAR Code Number	14		Mandatory for New
C603	Catalogue Number	12	SBE60DE	Mandatory
C604	Cast Month	2	MM	Mandatory
C605	Cast Year	2	YY	Mandatory
C606	Serial Number	8		Mandatory
C607	Cavity Number	2	1 or 2, A or B	Mandatory
C608	Conditionally Approved Flag	1	Y or N	Mandatory for New
C609	Coupler Manufacturer Facility Code	4		Mandatory
	Manufacturer Trademark		image	Mandatory
C610	Heat Number	10		Mandatory for New
C611	Heat Treat Load Number	12		Mandatory for New
C612	AAR Reconditioner/Classification Facility Code	4		Mandatory for Recond
C613	Classification Date	10	MM/DD/YYYY	Mandatory for Recond
C614	Reconditioned Heat Treat Load Number	12		Mandatory for Recond
C615	Reconditioners Tag	2	RG or CE	



# Castings will use 1 dimension Bar Code

Applied to Side Frame  
or Bolster or Coupler  
by Foundry



Applied to the Casting  
once registered in the  
Component Registry

Must remain attached to  
Casting from foundry  
until component is placed  
under car.

Readable by almost  
any bar code reader





# 1D Barcode can be pre-printed

Foundries and Re-Conditioners can preprint barcodes since the data is serialized.

This also enables centralized management of the codes for multiple location of shops.





# Prerequisites to Component Registration

1. Contact Railinc
  - Get a Company ID
  - Register for an SSO User ID
2. Read the User Guide and Specifications to understand the requirements for reporting
3. Request Access to Umler from your Umler Company Administrator (that may be you)
4. Request Component Maintenance Access from your Umler Company Administrator
5. Determine how AAR Component IDs will be managed by your company



# Castings Registration with Railinc

Companies have two ways to register castings

Railinc.com

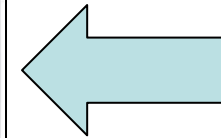
- Input one component at a time
- Upload CSV

XML via Web Services – Real time transactional integration

Web Service will allow foundries and re-conditioners to automate reporting of information through their own systems



# Comp Registration via the railinc.com website



Login with  
your SSO  
User ID



# Login to the Umler system

**RAILINC** | Launch Pad | RTSOLIS : RAIL - RAILINC CORPORATION | Contact Us | Sign Out

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### Your Applications

- ATSI (Committee Site)
- Early Warning
- EHMS
- Embargoes (Committee Site)
- FindUs.Rail
- Railinc Messaging Console
- UMLER/EMIS**

### Your Notifications

Current Notifications | Past Notifications

Date	Type	Subject
No Notifications		

### Your Support Cases

Your Open Cases | All Your Cases

There are no cases to show

Customer Support 1-877-RAILINC  
Support Hours: Monday - Friday, 0700 - 1900 Eastern Time

[Create a New Case](#)

### Your Subscriptions

Application	Type	
UMLER (Committee Site)	Outage	<a href="#">[unsubscribe]</a>
UMLER/EMIS (Committee Site)	Outage	<a href="#">[unsubscribe]</a>
Single Sign On System	Outage	<a href="#">[unsubscribe]</a>
UMLER O & M	Outage	<a href="#">[unsubscribe]</a>
Circular OT-5	Release	<a href="#">[unsubscribe]</a>
EHMS	Release	<a href="#">[unsubscribe]</a>



# Select Registration from the Component Registry Menu

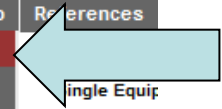


Umler

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- Maintenance
- Upload / Download
- Railinc Admin Functions
- Account Administration
- Contact List
- Component Registry
- Help
- References

- Registration
- Associate Component
- Advanced Query
- Administration >



## Welcome to Umler - Umler Equipment Management Information System

The Umler Equipment Management Information System is a mission-critical Rail Industry database and suite of applications that store and communicate data pertaining to the massive inventory of railway equipment used by the industry. The physical characteristics and restrictions of equipment, status and management information that are contained in Umler © are critical to the industry.

The communication of rail equipment data provides for the safe movement of traffic, smooth interchange of traffic between carriers and means to provide rail customers with the right pieces of equipment for their shipment.

### News and Updates

**June 28, 2012 Umler Release 4.2**  
 Umler Release Highlights \*The elements B030 Builder Lot Code and B031 Built Country will be conditionally mandatory for all equipment built or rebuilt on or after June 28, 2012. \*Users will be allowed to change the Built Date of a particular piece of equipment up to 18 months after the initial add date to the Umler file without the equipment receiving a new Equipment Identification Number (EIN). Any change to the Built Date after the 18 month window will result in the equipment receiving a new EIN. \*When a user inputs an invalid element in a TRAINII, CSV or Web Services message Umler will now: \*\*Ignore the invalid element for a particular transaction type and alert the user via tickler that the element was not processed \*\*Continue processing remaining valid elements of the message for the transaction type  
 New Component Registry Features  
 \*Manufacturers and M-214 Reconditioners can begin registering Side Frames and Bolsters.  
 \*Begin creating Wheelset Registrations from CRB repairs going back to 2006. If you own cars and would like your 2006 2012 Wheelset repairs to be included in the Component Registry, please contact Customer Support for details about this process.

Release: EMIS; Build-Label: jenkins-emis7-release-11, Build-DateTime: 2012-06-26\_17-01-27,

Use spanish for error messages and properties



# Component Registration via Web Interface



Search Add New Upload CSV

## Add New Component to Registry

AAR Component ID:

Company Code: RAIL

Component ID Number:

Component Type: SIDEFRAME

Side Frame  
Bolster  
Couplers  
Wheelsets

Add

- Enter Component ID. System will check that Component ID is not in use.
- Component Type determines what data elements appear on next screen.



# Component Registration via Web Interface

Base Elements

\* Side Frame Condition Code (C514):  = Reconditioned

\* Side Frame AAR Foundry Facility Code (C501):

**Mandatory** → \* Side Frame Cast Trademark (C512):

\* Side Frame Cast Month (C502):

\* Side Frame Cast Year (C518):

\* AAR Design Feature Code (C503):

\* Side Frame AAR ID Code (C504):

\* MFG Pattern Number (C505):

\* MFG Drawing Number (C506):

\* MFG Drawing Number Revision (C507):

\* MFG Serial Number (C508):

MFG Heat Number (C509):

MFG Heat Treat Load Number (C510):

**Conditionally Mandatory** → \* Side Frame Reconditioner AAR Facility Code (C511):

\* Side Frame Classification / Recondition Date (C513):  (mm/dd/yyyy)

Column Wear Plate Installed (C515):

\* Nominal Wheel Base (C516):

\* Button Count (C517):

Save Cancel

Conditionally Mandatory elements are driven by business rules.





## Option #2 – Upload via CSV

The screenshot displays the RAILINC Umler web application interface. At the top, the RAILINC logo is on the left, and the user name 'Umler' is in the center. To the right, there are links for 'RTSOLIS : RAIL - RAILINC CORPORATION', 'Launch Pad', 'Contact Us', and 'Sign Out'. Below this is a navigation menu with tabs for 'Home', 'Query', 'Maintenance', 'Upload / Download', 'Railinc Admin Functions', 'Account Administration', 'Contact List', 'Component Registry', 'Help', and 'References'. The 'Upload / Download' tab is active, and within it, the 'Upload CSV' sub-tab is selected. The main content area has a heading 'Browse files to find a components CSV'. Below this is a form with a text input field labeled 'Filename.csv:', a 'Browse...' button, and a link for 'Download csv format templates'. A 'Submit' button is located at the bottom right of the form. The browser's status bar at the bottom shows 'Done', 'Local intranet | Protected Mode: Off', and a zoom level of '100%'.

More Efficient way to register components. Refer to the CSV Upload Guide as well as templates that are available.



# CSV upload template

	A	B	C	D	E	F	G	H	I	J
1	TransactionType	ComponentID	ComponentType	BOLSTER-C414	BOLSTER-C401	BOLSTER-C412	BOLSTER-C402	BOLSTER-C417	BOLSTER-C403	BOLSTER
2	AC	8RRA0000060644	BOLSTER	1 CSCO	GW	5	12 B12345678	B1234		
3										

- More Efficient way to register components. Refer to the CSV Upload Guide as well as templates that are available.
- Takes some time to initially setup the CSV template.
- However, it saves time in that you can registers many components at once



# Web Services Integration

Web Services is a method used by 2 computer systems to communicate with each other.

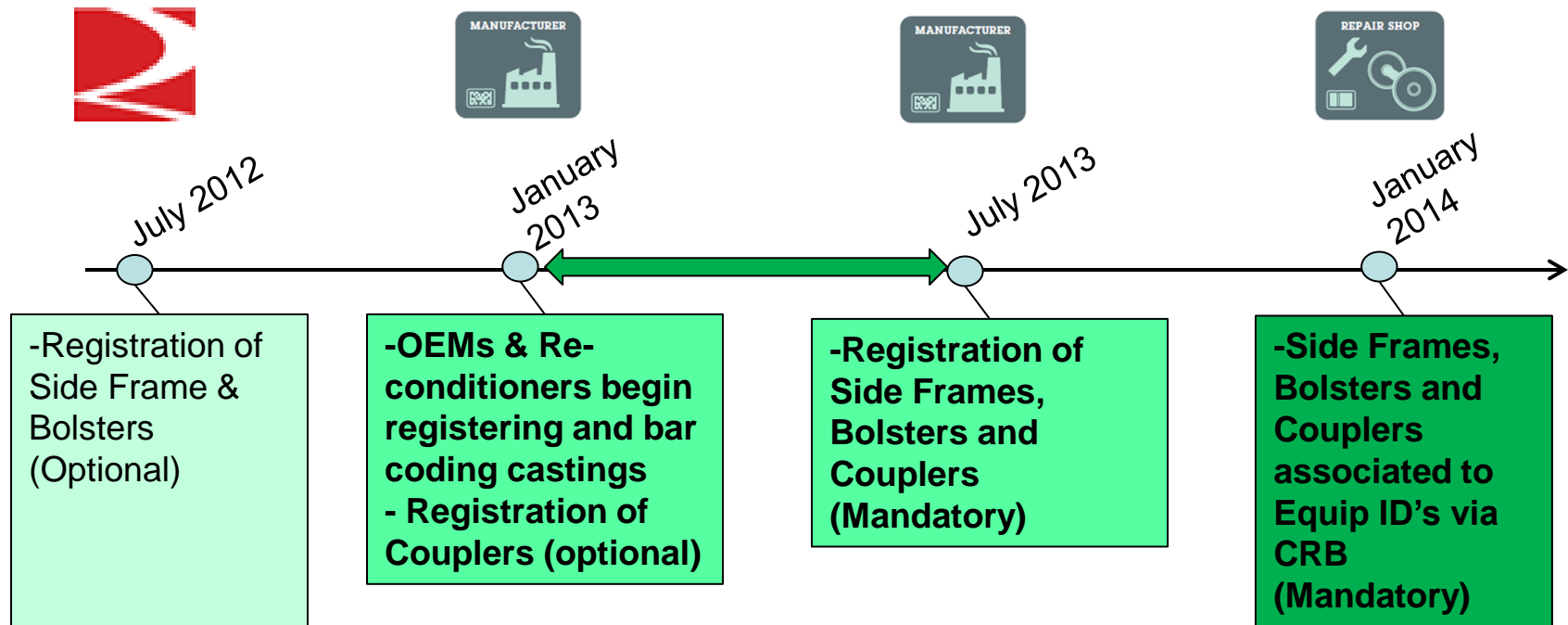
For example, once a Casting is complete the data about the casting is entered into your shop system. Your shop system will register the casting “behind the scenes” in the Component Registry.

If your company is interested in the technical integration of your systems that store Side Frame, Bolster and Coupler information with Railinc’s Umler Component Registry, please contact us [csc@railinc.com](mailto:csc@railinc.com)

Railinc can provide WSDLs and technical documentation to get you started.



# CEPM Castings Industry Timeline



Lesson Learned from Wheelsets: There is a 6 month window from January 2013 – July 2013 for Foundries and Re-Conditioners to:

- Work the bugs and kinks out of the Registration process.
- Report Issues to Railinc

# Questions?

Railinc Customer Support

P: (877) 724-5462

E: [csc@railinc.com](mailto:csc@railinc.com)

W: [www.railinc.com](http://www.railinc.com)



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