PHRED 8D Problem Solving Software

PHRED Solutions
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Why use PHRED for Problem Solving?

- One Single System – handle all problems from the customer complaint to the internal plant through to the supplier
- Database – use knowledge to reduce problem costs and learn from your mistakes
- Standard Process – common view of the problem from the customer complaint, across production sites through to the supply chain
- Easy to Use – create a large number of skilled problem solvers; the more problem solvers there are, the more problems you will solve
- Out of the Box – no maintenance, no IT hassle, very low per person cost

Internal Problems

- PHRED is simple enough for anyone in your organization to use.
  - The more problem solvers you have, the more problems you will solve, improving overall quality and saving money
  - Individual departments have their own forms relevant to their needs
- Database so you can search and view all problems across the company
- Manage actions and timescales with email reminders
- Automatic reports and charts to save time
- Find true root cause and eliminate repeats with a robust root cause process
- Share information within and across your plants, allowing for solutions to similar problems to be viewed, speeding up the problem solving process

Supplier Problems

- Your suppliers can login to PHRED and enter their 8D information
  - One supplier cannot see another's problems or your internal problems
  - Accept or reject their solution
  - See exactly what's going on inside your suppliers
- Hold your suppliers to your standards
- Make the information visible and accessible. Know what's going on with each supplier or a group of suppliers and have the information you need for chargebacks, etc.
- Database, Reports and Charts so you can view past problems and compare suppliers
- Set email reminders to ensure that suppliers are keeping to their timescales
- Find true root cause and eliminate repeats with a robust root cause process

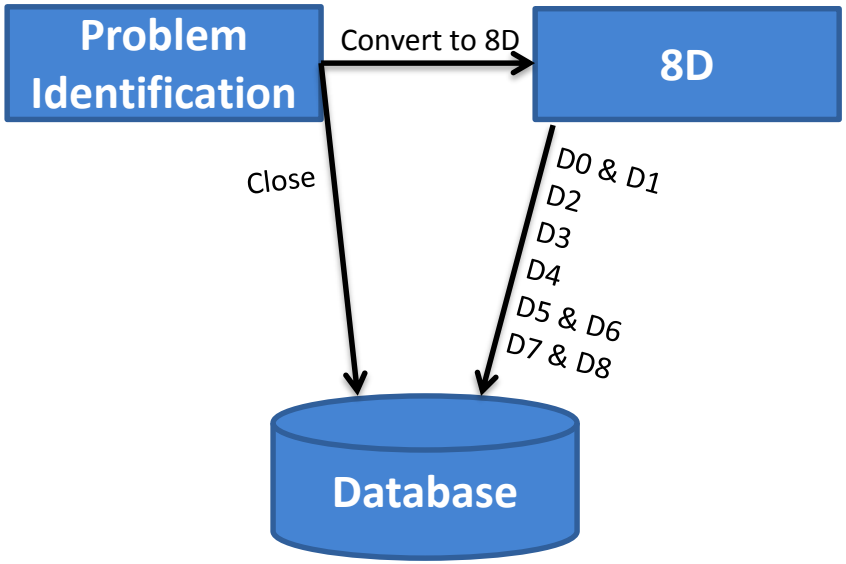
Customer Complaints

- Capture your customer complaints directly by the customer entering them into the system, from your customer support department, or by linking directly with a CRM such as Salesforce
  - Eliminate much of the administrative costs of back and forth phone calls and emails with the customer
  - PHRED can be configured to the reports you need such as different 8D formats or one-page summary reports
- PHRED will keep track of all due dates, actions, open vs closed and send email reminders where appropriate
  - Problems and their responses will not be lost or forgotten
- Automatic Reports and Charts
  - Save time with automatic 8D and One-Page reports and charts
  - Generate 8D and customer complaint reports in your customer's formats

PHRED is Configurable

- PHRED can be configured by the quality department without IT assistance; A few people in your company will have access to the Admin tab where they can make changes to the system when needed
- PHRED Solutions will complete the initial configuration in 2 days on your site, while at the same time, training your administrators on how to use the Admin section and make changes yourselves. After 2 days, the system will be ready to use and configured to your requirements.
- Please bare in mind, the screen shots below are from our demonstration system. These screens will be configured to match your specific needs such as the forms, the name of each step, your locations and departments, etc.

Screen by Screen Walk-Through



Problem Identification - Issues are identified, worked and tracked on a single screen. The issue can then be closed here or converted to an 8D.

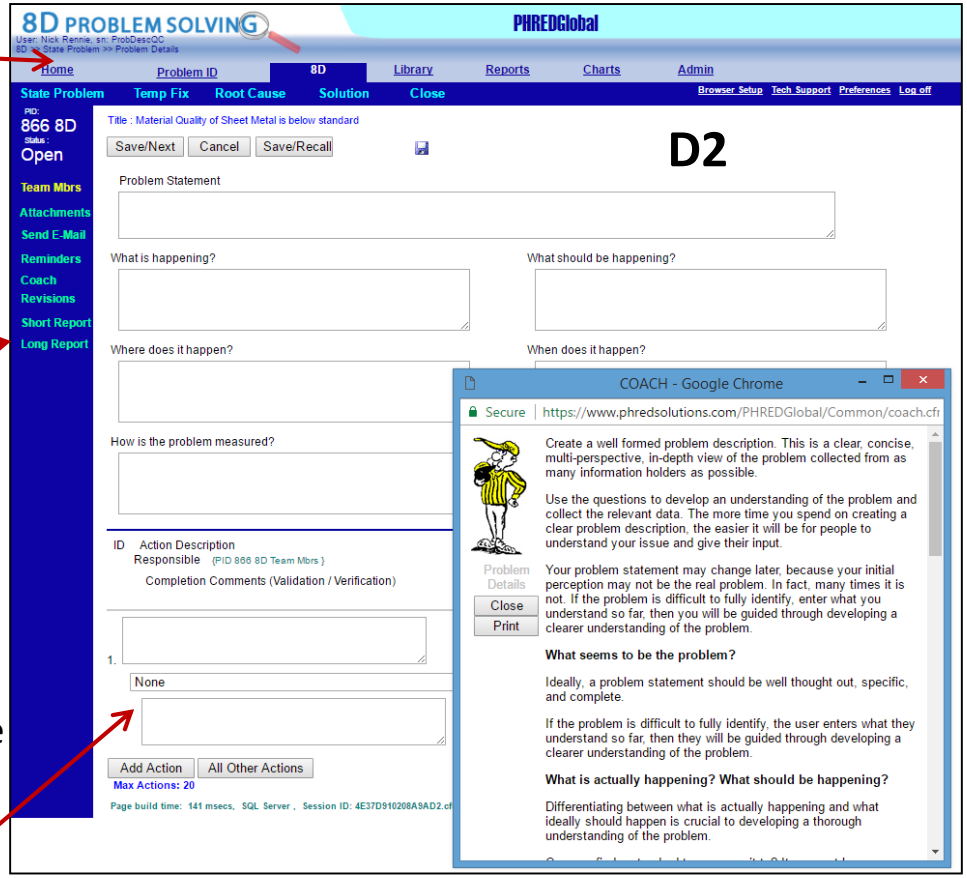
8D - Users are guided through all D-steps.

Database - As issues are identified and 8Ds are being worked on, they are captured in the database.

Supplier and Customer Portals - Suppliers, customers and contract manufacturers can each have their own secure area in the shared system to enter, edit and manage problems with you.

Functions Available on all Screens

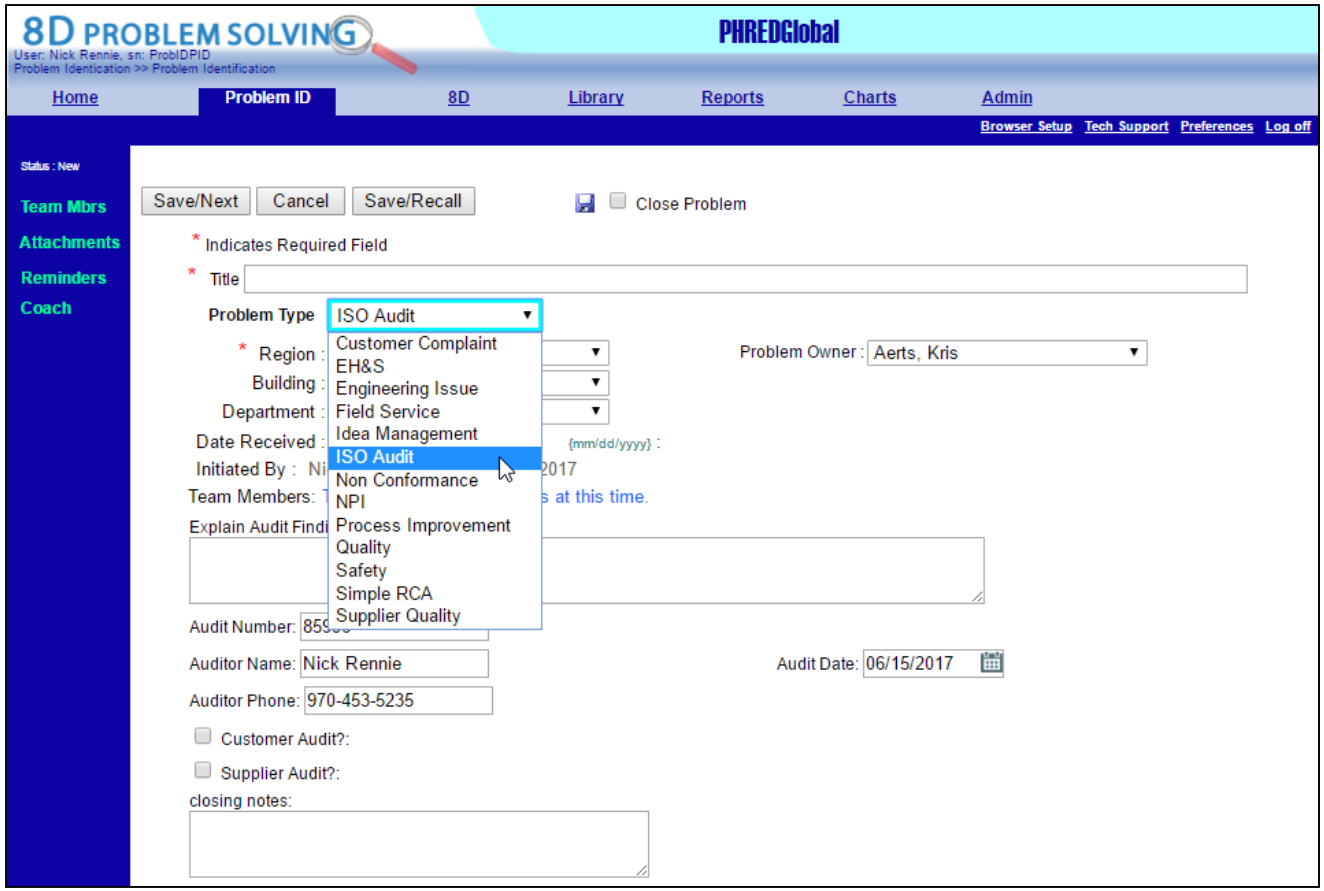
- Top Menu Bar
  - Home: All *your* Problems and Actions
  - Notification: Single screen to identify a problem and associated data
  - 8D
  - Library, Reports & Charts
  - Admin: Make your own changes to the system
- Left side bar functions
  - Attachments
  - Reminders: Set up the schedule for action email reminders by problem
  - Report: See the report for the problem you are currently working on
  - Add Team Members
  - Coach & Help: Online training on how to use the system
- Actions at the bottom of each screen
  - Assign actions to Team Members
  - Emails reminders are sent automatically when an action is assigned, updated or overdue



Problem Identification

Identify a problem, assign team members and collect the data surrounding it.

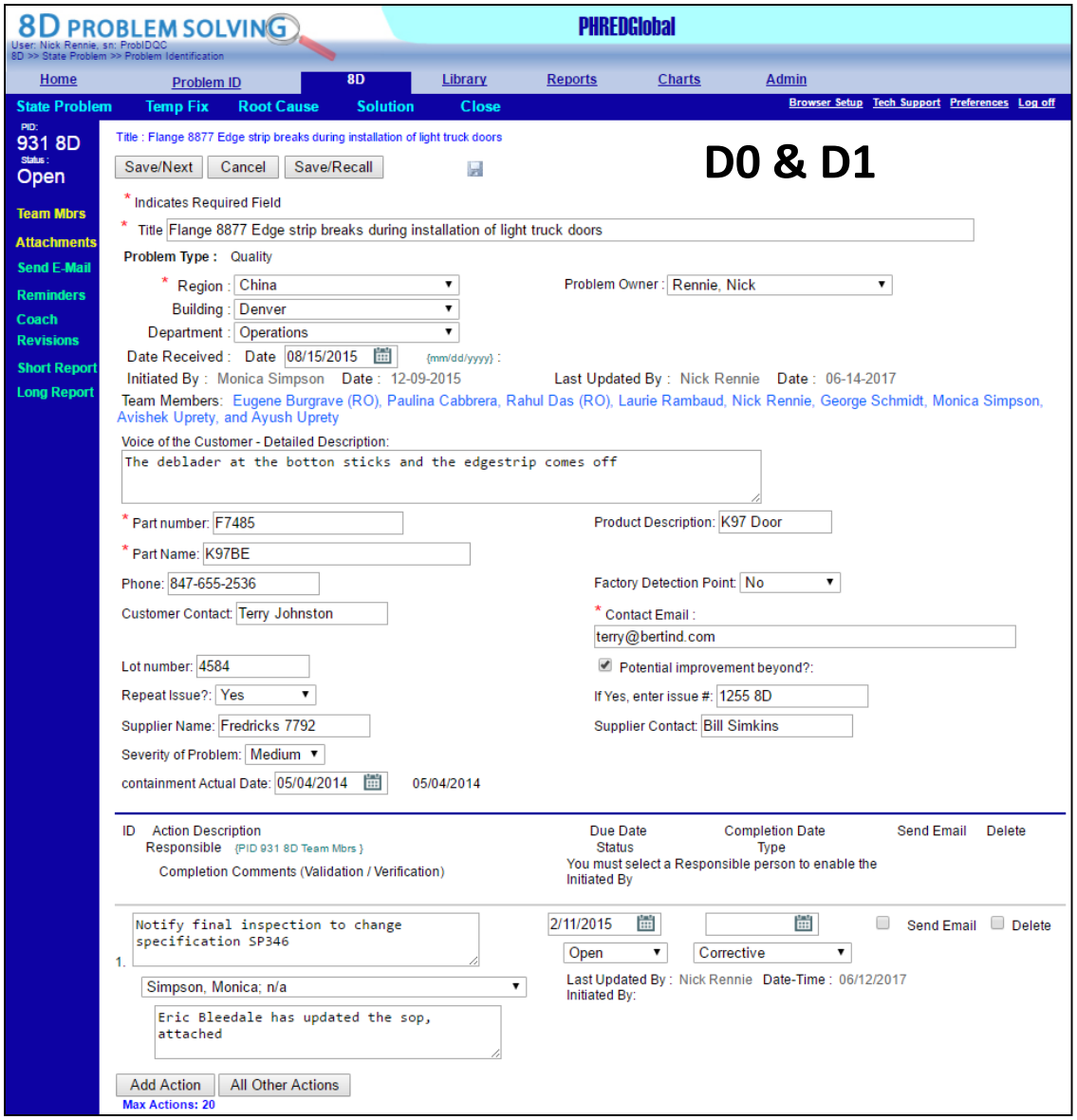
- A one page form to identify a problem and say what was initially done
- Configure multiple Notification types, allowing for different forms for different types
- The Notification type you choose will determine which fields appear on the form
- You can close it here, or convert it to a new 8D



State Problem: D0 & D1

Identify a problem, assign team members and collect the data surrounding it.

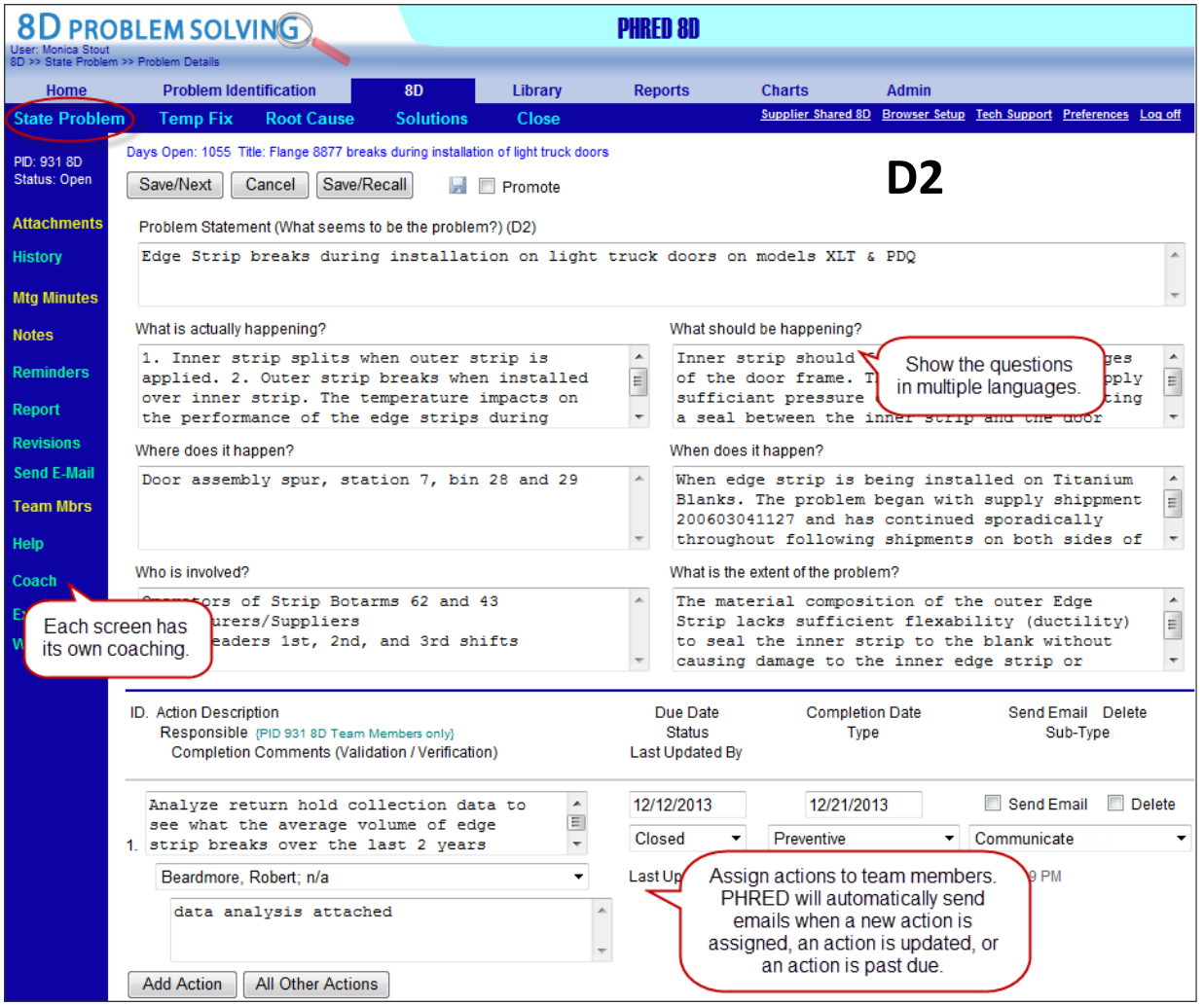
- Configured by your administrator to reflect the data collection needs/structure of your company
- Automatically populate some fields from other systems (SAP, Salesforce, etc.)
- You can have multiple notification types for a single 8D
- You can have multiple notifications attached to an 8D



Describe the Problem: D2

Create a clear description of the problem in 7 easy questions or less.

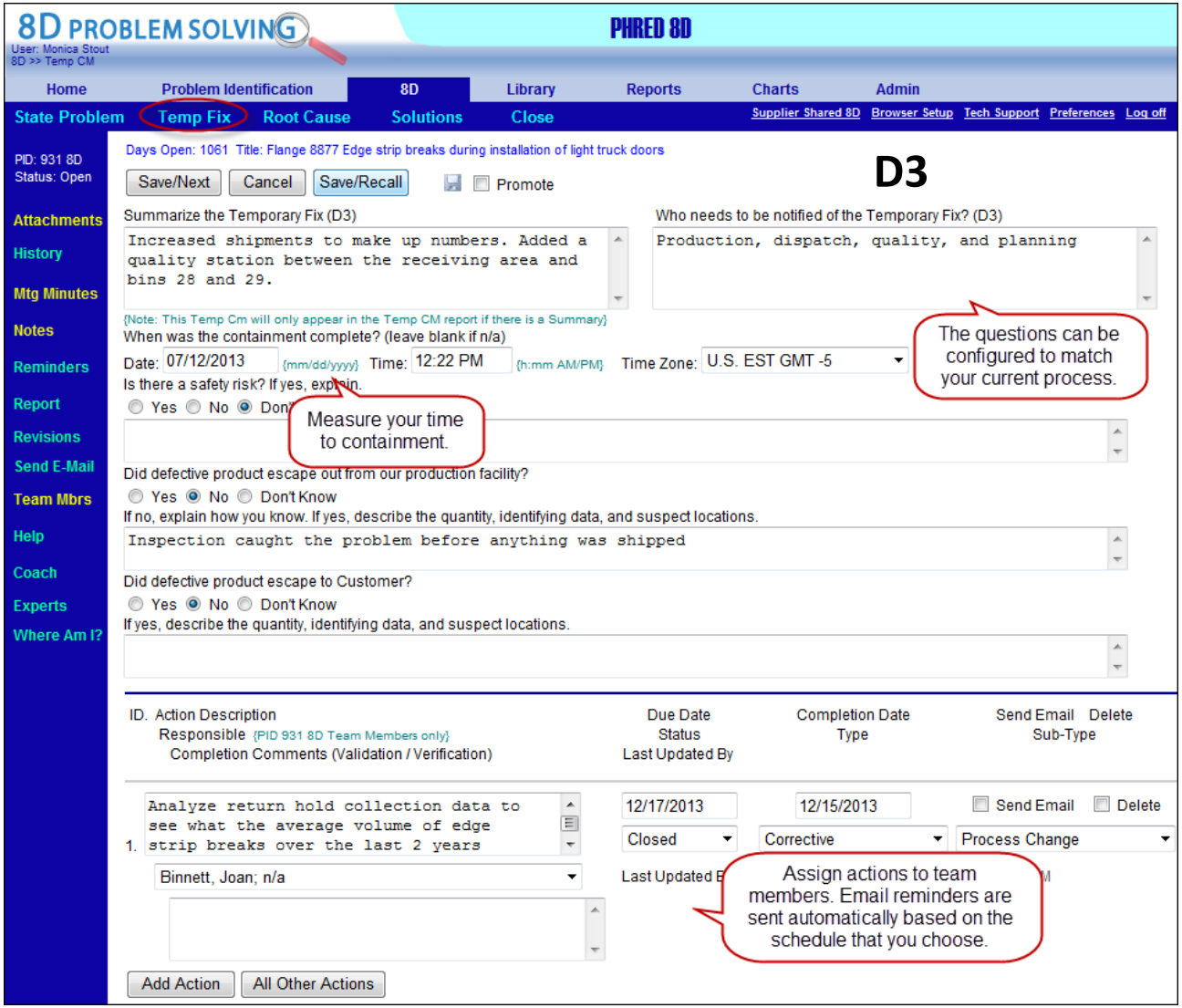
- A single screen is used to create a well formed problem description
- PHRED gives the investigators the right questions to ask to develop an understanding of the problem & collect the relevant data
- Visible to the team, experts, managers and other people with similar problems



Temporary Fix: D3

Describe the actions and notify the right people.

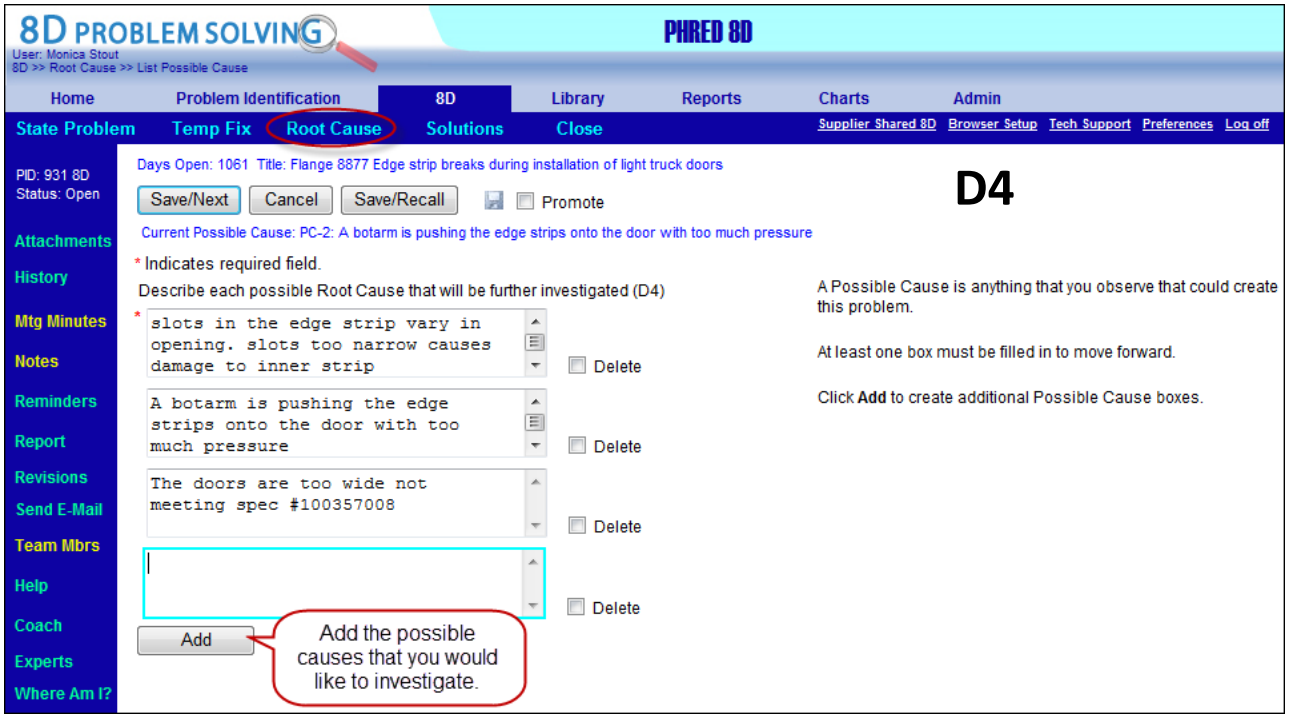
- Control the situation at the scene of the problem, in the supply base, at the customer and across the organization
- Measure your time to containment
- Ensure that the Containment Action is removed when the issue is closed and the relevant people are informed

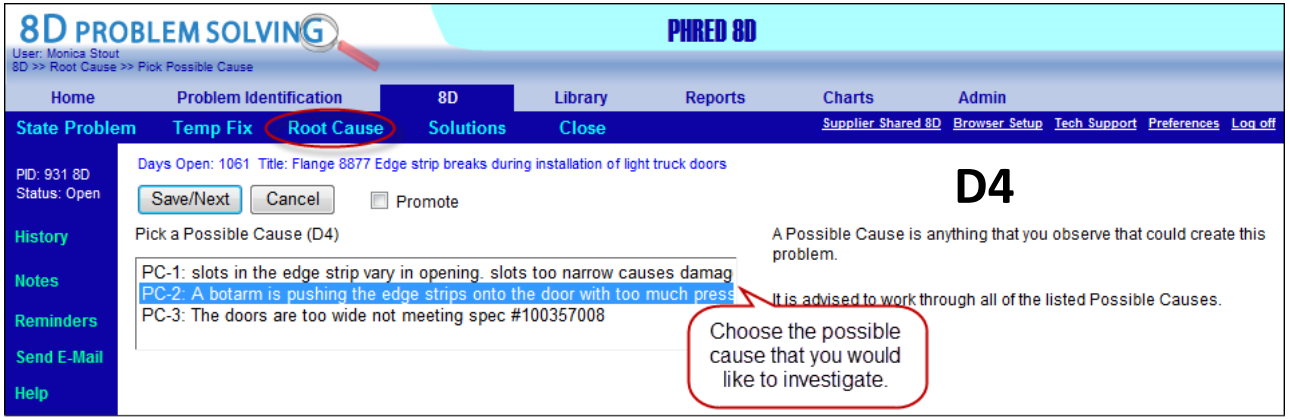


Root Cause: List and Pick a Possible Cause: D4

Describe the possible Root Causes and choose one to investigate.

- PHRED breaks down the process of finding root cause into a series of simple steps that everyone in the organization can use
- Step 1 is to list the possible causes. Each will be investigated to Root Cause or eliminated as a dead end
- Step 2 is to pick a possible cause to investigate. It is typical to investigate each possible cause

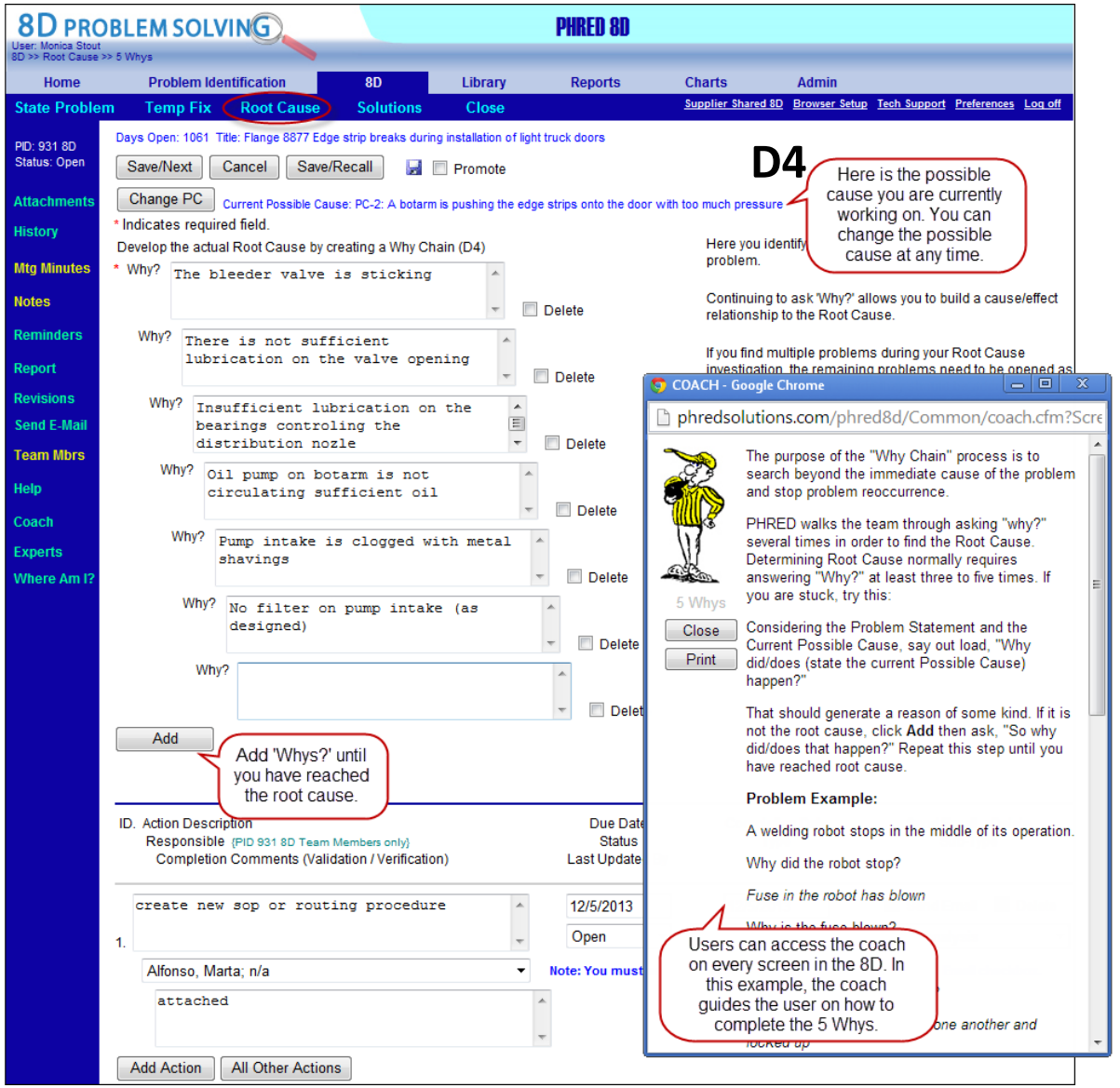




Root Cause: 5 Whys Root Cause Analysis: D4

Classic 5 Whys

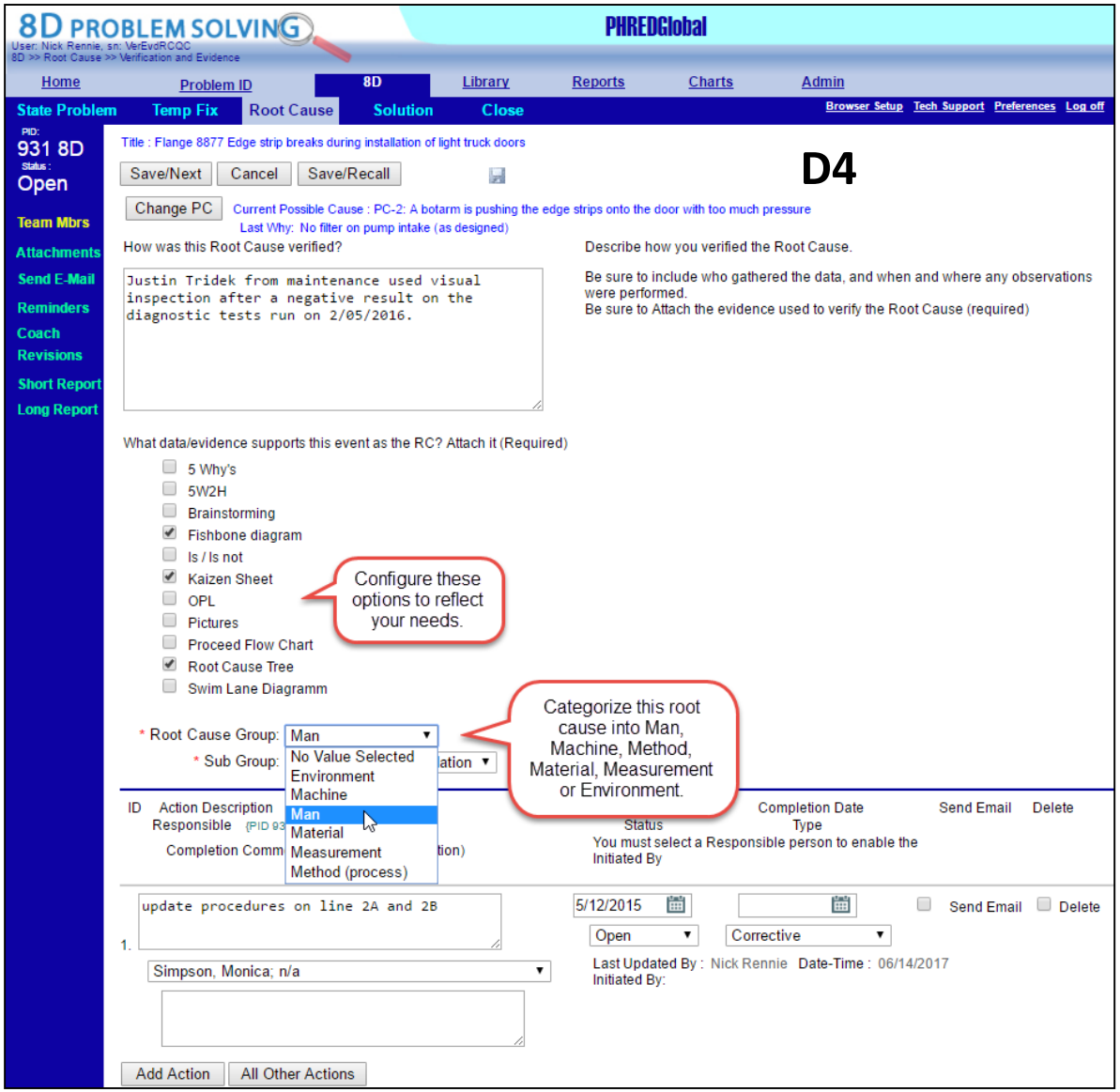
- PHRED walks you through asking "why?" several times in order to find the Root Cause of a problem
- Inexperienced users can access the coach, which walks you through how to complete the 5 whys. This can be configured to match your existing training manuals, etc.
- As the 5 Whys are visible to colleagues and experts, the quality is improved



Root Cause: Verification: D4

Describe how you tested the Root Cause

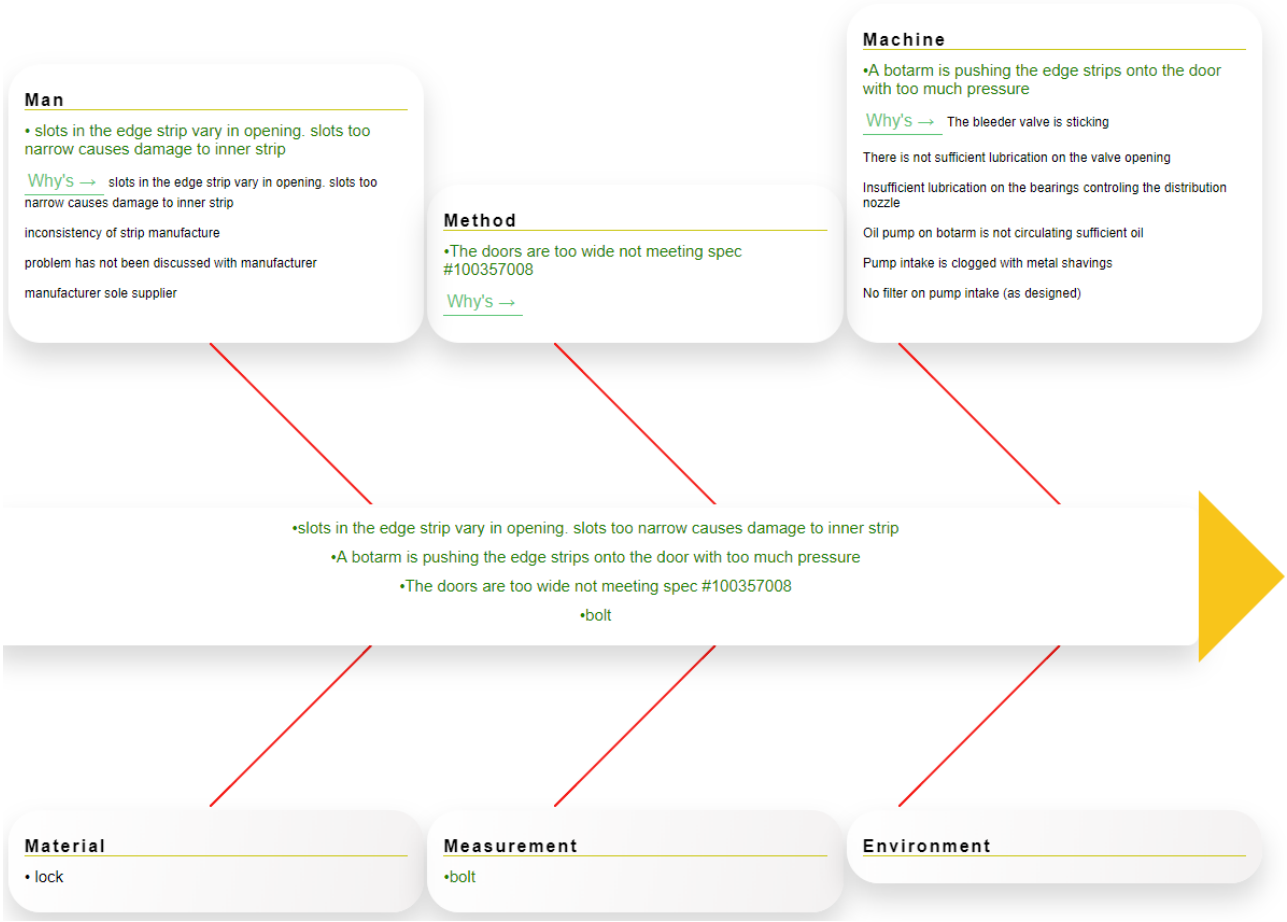
- Each why chain is worked through to see if it is a valid Root Cause worth testing or if it is a dead end
- Collect the data and evidence that supports the Root Cause
- Classify the Root Cause for your metrics



Root Cause: Fishbone Option: D4

Automatically create a fishbone/ishikawa diagram.

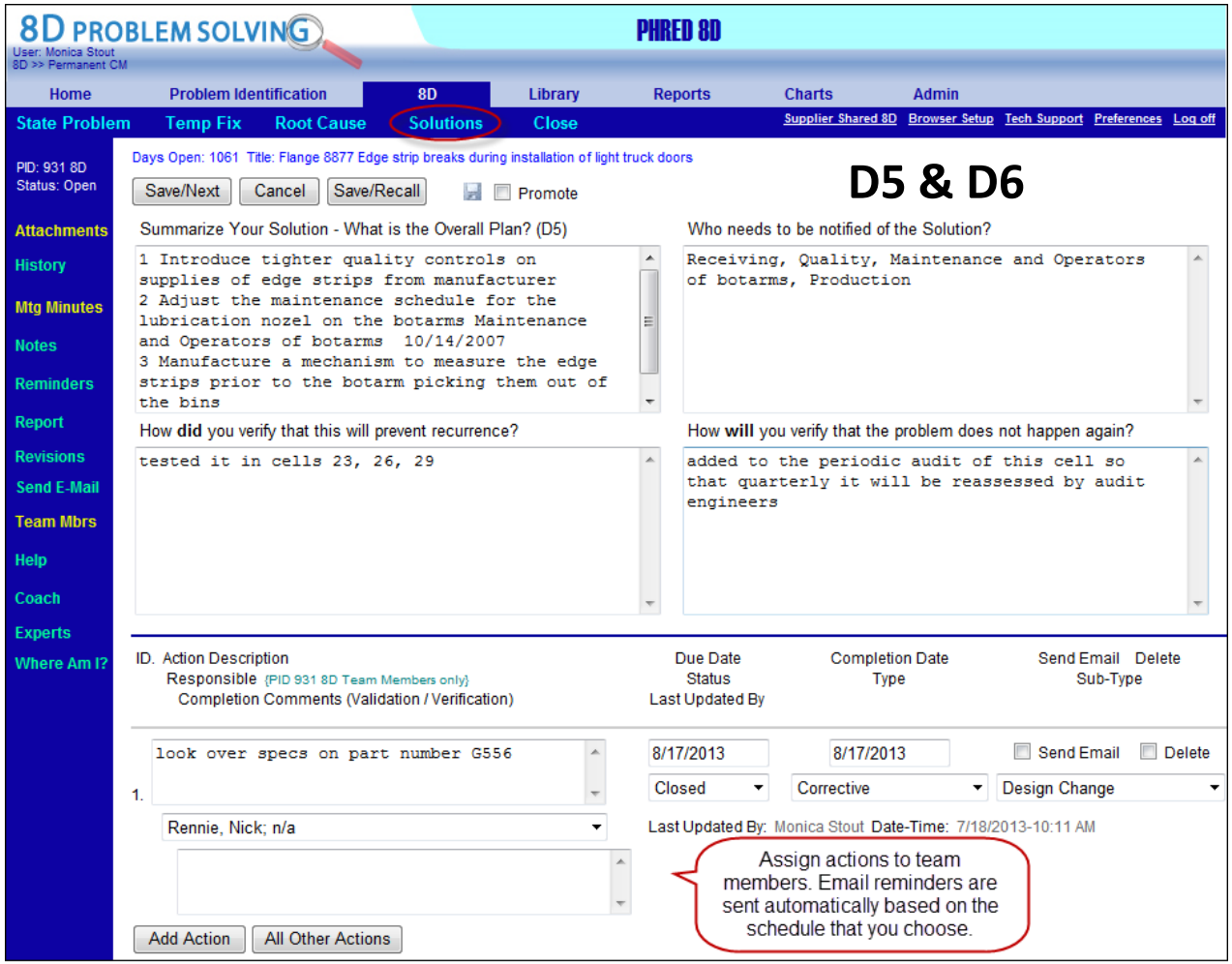
- By problem, the user can decide if they want to include a fishbone diagram
- The system automatically creates it, making it easy for anyone to use
- Include the diagram in your reports for customers and internal



Solutions: D5 & D6

Outline the solution and verify that it will prevent recurrence.

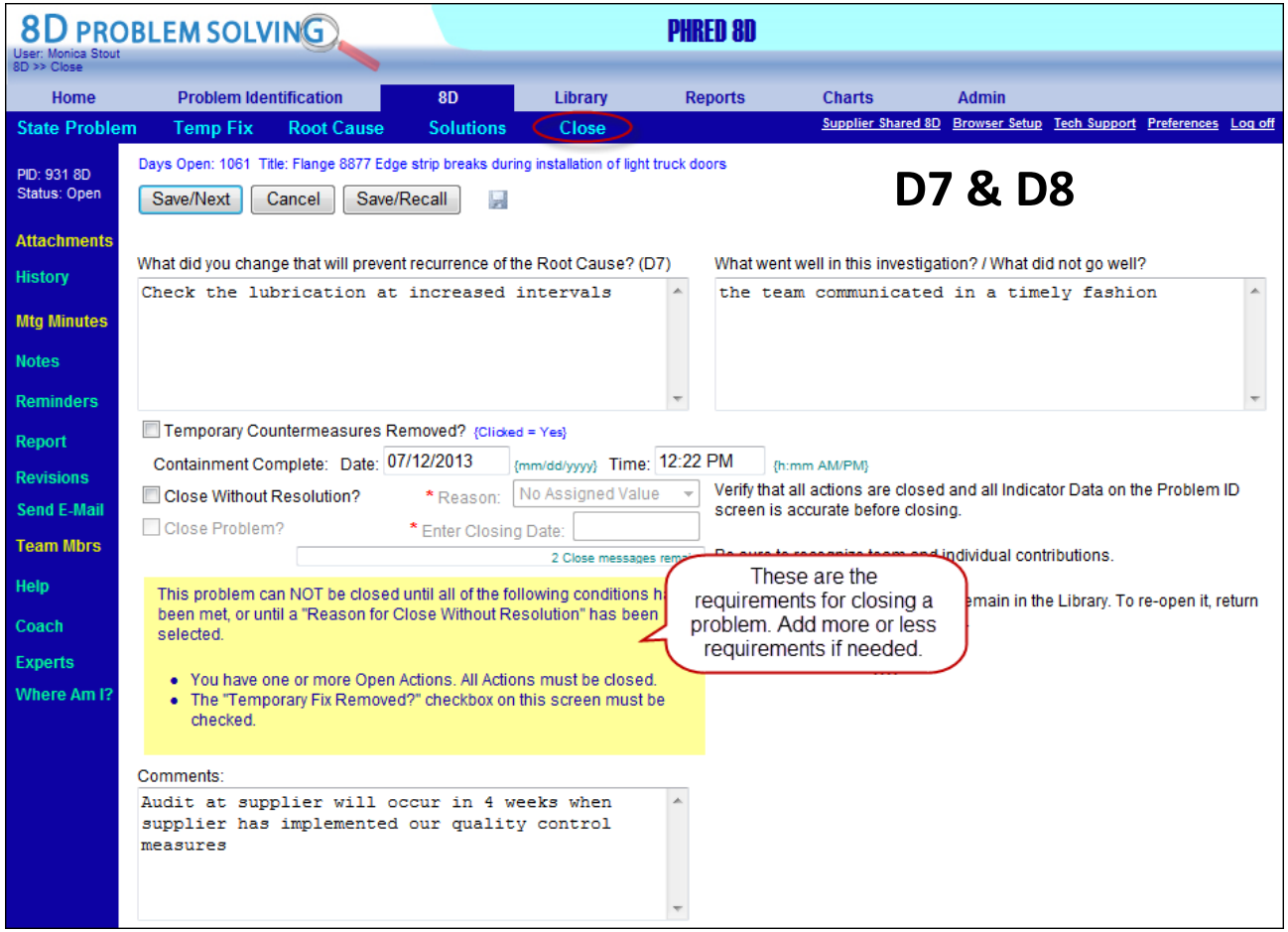
- Present the solution for agreement and implementation
- Configure the questions and the Coach to match the justification and approval processes of your company
- Assign and track actions for solution implementation



Audit and Close: D7 & D8

Prevent Reoccurrence, Close & Audit

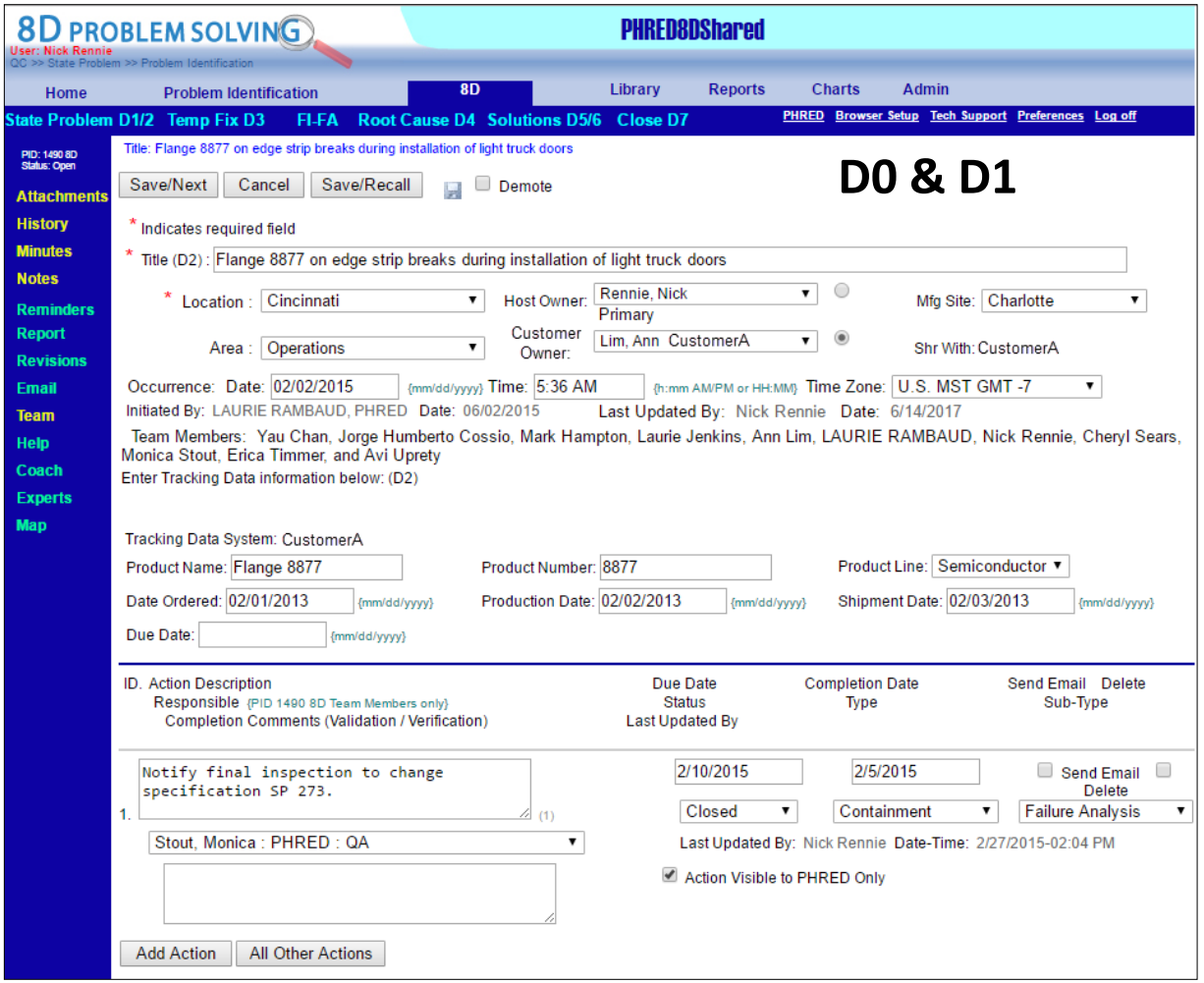
- Implemented solutions are audited for success
- Knowledge is shared between expert groups, knowledge networks and possibly customers and the supply base
- Decide what your Close Requirements are and configure the system to match them



Customer Complaints

Customers enter their problems in your system, each in a secure area. (D0)

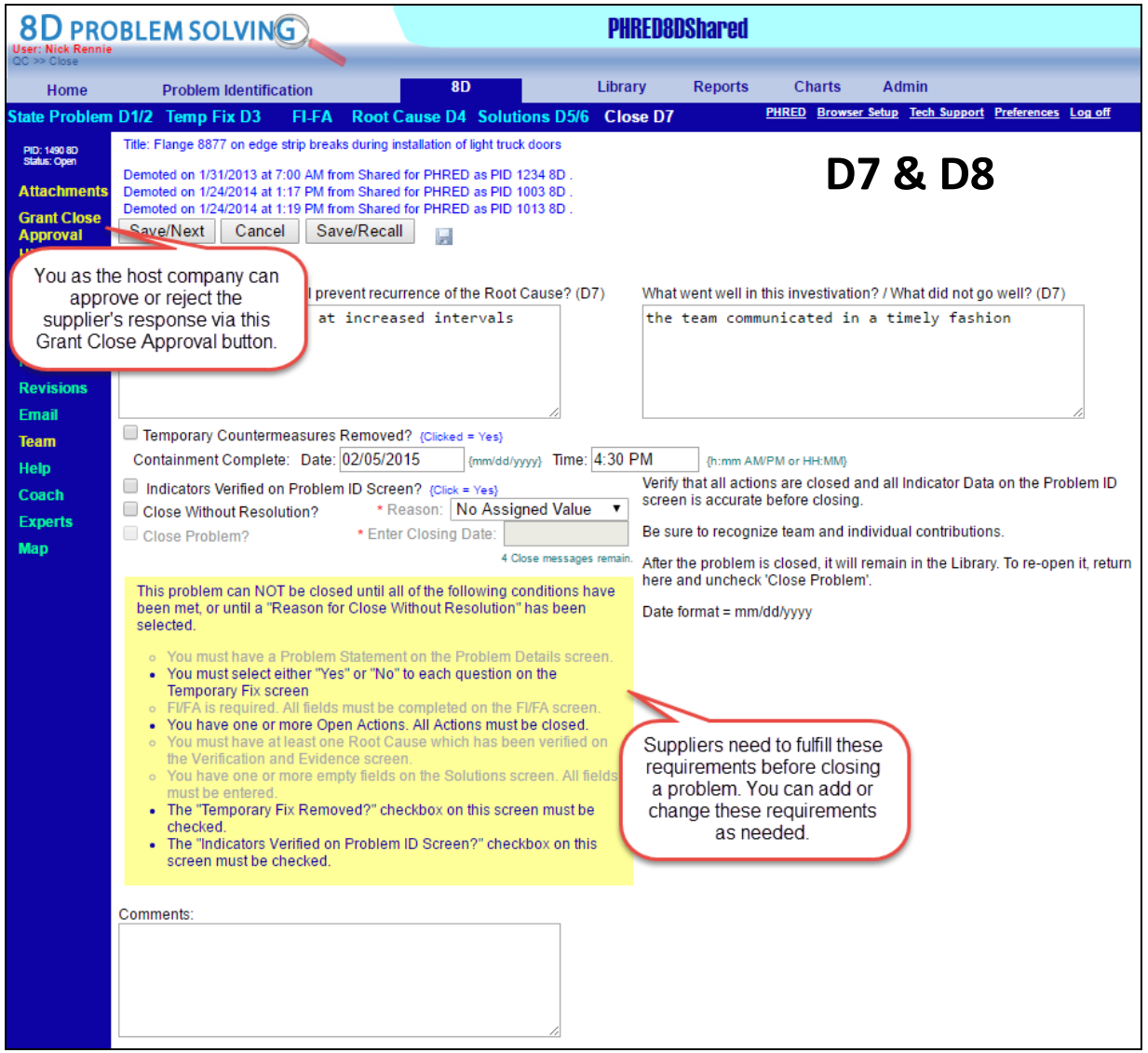
- PHRED will be configured to match your customer forms.
- Capture your customer complaints directly by the customer entering them into the system, from your customer support department, or by linking directly with a CRM such as Salesforce.
- Save time without having to exchange emails and calls with you customers.



Supplier Issues

Suppliers and contract manufacturers can enter, edit and manage problems with you, each in their own secure area.

- Configure the system to enforce your requirements to close a problem
- Approve or reject the supplier's response via the Grant Close Approval function
- Drive timely actions and responses. Look over your supplier's shoulder as they are solving problems.



Management Reports and KPIs

See an overall view of what's happening.

- PHRED will be configured to get the KPIs and reports you need, including specific 8D formats and one-page summary reports
- With PHRED, you can save time because you will no longer need to prepare your reports manually

Defect Zero

Claim poster Customer Complaint,931

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Title	Customer Internal Claim number	Date	Customer Phone
Flange 8877 Edge strip breaks during installation of light truck doors	F7485	08-15-2015	847-655-2536

Customer Name	Claimed Quantity in pcs	Product Number	Codification	Originator	Claim Reason
Terry Johnston	4584	1255 8D	N/A	Operations	Yes

Exactly how did the customer describe the problem:

The deblader at the botton sticks and the edgestrip comes off

Problem Statement

Edge Strip breaks during installation on light truck doors on models XLT & PDQ

Root Cause Group

2.Man3.Environment

Causes of the Problem

N/A 1 . slots in the edge strip vary in opening. slots too narrow causes damage to inner strip 2 . A botarm is pushing the edge strips onto the door with too much pressure 3 . The doors are too wide not meeting spec #100357008 4 . lock 5 . bolt

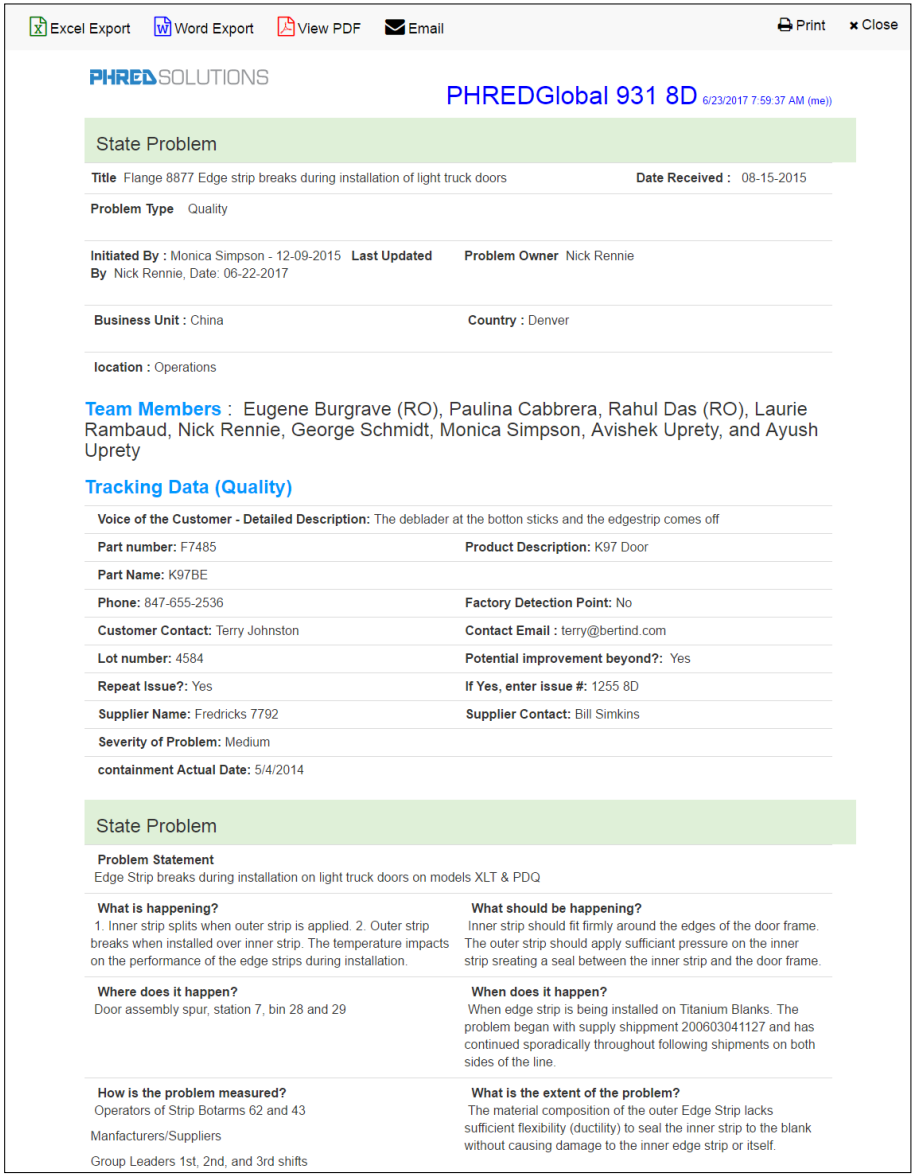
Corrective action

1 Introduce tighter quality controls on supplies of edge strips from manufacturer 2 Adjust the maintenance schedule for the lubrication nozel on the botarms Maintenance and Operators of botarms 10/14/2017 3 Manufacture a mechanism to measure the edge strips prior to the botarm picking them out of the bins

Library & Reports

Save time preparing internal and customer reports. Export to Excel or PDF.

- Search the library by Keyword, Location, Customer, Supplier, Part Number, Problem Owner, etc. Find out if this problem has been solved before.
- The One-Page example to the right will be configured to match the fields, structure and colors that you want.



Excel Export | Word Export | View PDF | Email | Print | Close

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PHREDGlobal 931 8D 6/23/2017 7:59:37 AM (me))

State Problem

Title Flange 8877 Edge strip breaks during installation of light truck doors **Date Received :** 08-15-2015

Problem Type Quality

Initiated By : Monica Simpson - 12-09-2015 **Last Updated By** Nick Rennie, Date: 06-22-2017 **Problem Owner** Nick Rennie

Business Unit : China **Country :** Denver

location : Operations

Team Members : Eugene Burgrave (RO), Paulina Cabbrera, Rahul Das (RO), Laurie Rambaud, Nick Rennie, George Schmidt, Monica Simpson, Avishek Uprety, and Ayush Uprety

Tracking Data (Quality)

Voice of the Customer - Detailed Description: The deblader at the botton sticks and the edgestrip comes off

Part number: F7485 **Product Description:** K97 Door

Part Name: K97BE

Phone: 847-655-2536 **Factory Detection Point:** No

Customer Contact: Terry Johnston **Contact Email :** terry@bertind.com

Lot number: 4584 **Potential improvement beyond?:** Yes

Repeat Issue?: Yes **If Yes, enter issue #:** 1255 8D

Supplier Name: Fredricks 7792 **Supplier Contact:** Bill Simkins

Severity of Problem: Medium

containment Actual Date: 5/4/2014

State Problem

Problem Statement
Edge Strip breaks during installation on light truck doors on models XLT & PDQ

What is happening?
1. Inner strip splits when outer strip is applied. 2. Outer strip breaks when installed over inner strip. The temperature impacts on the performance of the edge strips during installation.

What should be happening?
Inner strip should fit firmly around the edges of the door frame. The outer strip should apply sufficiant pressure on the inner strip sreating a seal between the inner strip and the door frame.

Where does it happen?
Door assembly spur, station 7, bin 28 and 29

When does it happen?
When edge strip is being installed on Titanium Blanks. The problem began with supply shippment 200603041127 and has continued sporadically throughout following shipments on both sides of the line.

How is the problem measured?
Operators of Strip Botarms 62 and 43

Manfacturers/Suppliers

Group Leaders 1st, 2nd, and 3rd shifts

What is the extent of the problem?
The material composition of the outer Edge Strip lacks sufficient flexibility (ductility) to seal the inner strip to the blank without causing damage to the inner edge strip or itself.

Charts

Save time preparing charts and share the information.

- Search and create charts by Keyword, Location, Customer, Supplier, Part Number, Problem Owner and many more.
- Click on any bar within a chart to see which problems are within that bar.
- Export your charts into Excel or PDF.
- Chart failure mode paretos, open vs. closed, problems by plant, supplier & more.

IT/Technical Information

- PHRED can be installed on your own servers or PHRED Solutions can host the system on the cloud
- PHRED does not typically need it's own server; it is less than a gigabyte
- PHRED can interface with other systems within your organization such as SAP or Salesforce to reduce data entry redundancy
- Typically, PHRED requires minimal IT involvement as the Admin section in the system allows for the quality department to make changes to the system themselves

Thank You

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