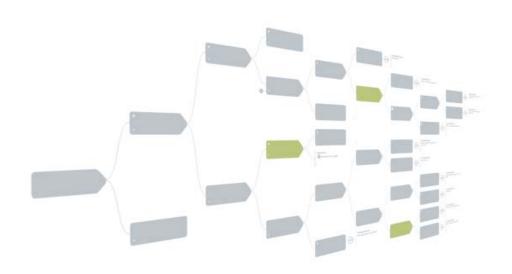
## causelink enterprise

root cause analysis software

# **User Guide**

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#### INTRODUCTION

Causelink Root Cause Analysis (RCA) software helps you investigate incidents and solve problems. The system stores all your records in a central location and provides an easy way to collaborate with team members. Reports give you a birds-eye view of records across your organization, helping to improve problem-solving and RCA program efforts.

The instructions below are intended for Causelink End Users, Managers, Administrators, and IT Administrators.

#### **END USERS - Account Setup Email**

Each user will receive an email with a link to setup their Causelink Enterprise account\*. Click the "Create your account" link and complete the form, including username and password, to setup an account.

\*Note: if your organization is using Active Directory or Active Directory Federation Services for authentication, you will simply use your standard username/password to access Causelink and you will not receive the account setup email.



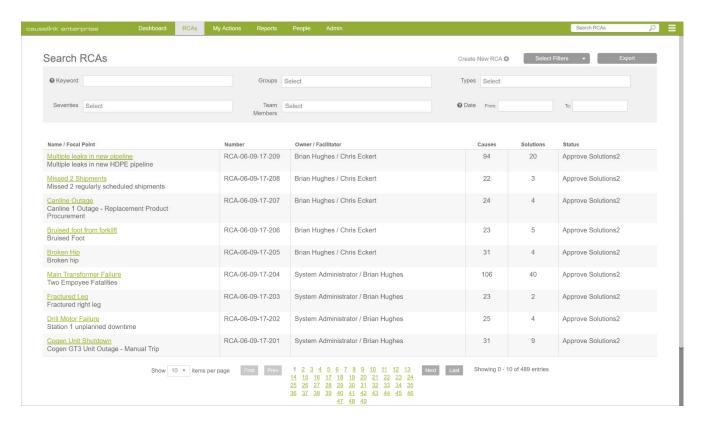
Example Account Setup Email

#### **Dashboard**

To access the Enterprise dashboard, open a browser and navigate directly to the Causelink URL, which is unique to your organization. Enter your username and password and the dashboard screen appears, with settings to configure reports and filters to show the information most important to you.

#### **Search RCAs**

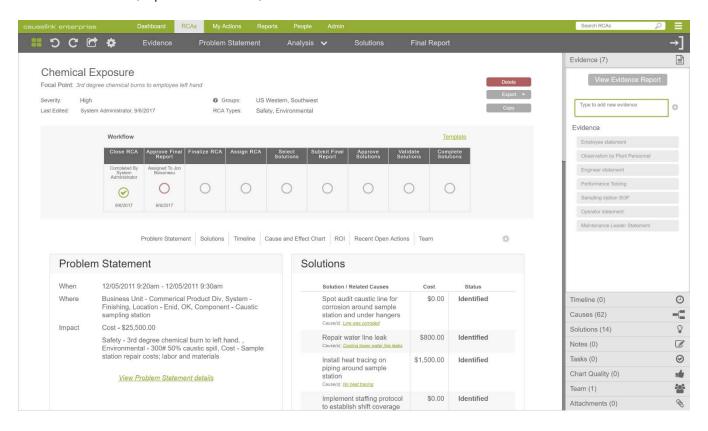
Located under the RCAs button, the search screen defaults to the records that have most recently been edited. Utilize the filters at the top of the screen to narrow your search. Click "Select Filters" to choose which filters you would like to have available. Click on an RCA name to open that record, or use the icons that appear to open a read-only version or create a PDF.



#### **RCA Records**

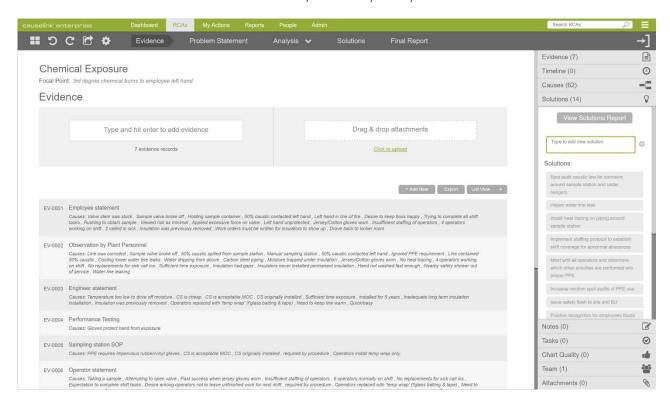
All navigation and content related to an RCA record are located below the top green bar. The icons in the upper left provide access to the overview page, undo & redo, export, and settings. The major steps in an investigation are links across the top gray bar: Evidence, Problem Statement, Analysis, Solutions, and Final Report.

There is also a sidebar displaying a summary of RCA data. The sidebar allows you to rapidly add new records, open the details, and interact with the cause & effect chart.



1. The *Overview page* allows you to define general tags related to the RCA, such as Severity, Type, and Group. You can also change the workflow template, edit, or complete specific workflow steps. Workflow tracks RCA progress, work assignments, and RCA next steps. When a step is marked as complete, you are prompted to assign a user and due date for the next step. The RCA initiator, owner, facilitator, and team members receive an email notification every time an RCA workflow step is completed, unless your Administrator has turned off email notifications for that step. The system provides 3 workflow templates, which can be modified or added to by a Causelink Administrator. Click the cog icon below workflow to configure the content you'd like to see on the Overview page.

- 2. The *report pages* allow you to document all sections of the report; Problem Statement, Summaries, Evidence, Solutions, Notes, Actions, Team, and Attachments. Other key features available on most report pages include:
  - List/Detail view this button allows you to modify how much content you see on the page. It does not change the content, rather it changes how the content is displayed.
  - Sequence change the order in which records appear by dragging and dropping them where you want. Changing the sequence does not change the record ID.
  - Attachments add attachments by clicking the Add button, or by dragging and dropping one or more files onto the attachments page. Attachments can be related to one or more evidence, solution, note, or action record.



3. Accessed under the Analysis button, the *Timeline* documents a linear series of events related to an incident. Click the add new event button in the toolbar or click in the main content area to edit an existing event. Event records include start date/time, end date/time, title, description, and associated attachment. The time for each event can be described down to the millisecond. When the timeline is complete, add events as

causes on the chart or into the sidebar to begin the cause & effect analysis.

- 4. The *chart* allows you to define the cause and effect relationships related to the analysis. To get started, move your mouse to the right side of the focal point and click the + button, creating a new cause. Use this same technique to add causes to the top, bottom, left, or right of any cause on the chart (with the exception of the focal point). Other key features of the chart include:
  - Double-click a cause to edit the description
  - Drag and drop causes to change their parent/child association
  - Drag causes into the sidebar to place them in Cause Storage
  - Drag causes out of Cause Storage back onto the chart
  - Drag evidence, solutions, notes, or actions from the sidebar onto causes to create associations
  - Use Control + click to select more than one cause at a time for coloration or deletion (Mac users use 'option+click').

#### Other notes about RCA records:

- The settings page is accessed by clicking the cog icon in the upper left, next to export. This page allows you to define view permissions and currency for the record you are working on.
- The owner or facilitator, as defined on the team page, will usually be the default
  assignee for RCA workflow steps, depending upon the step definitions in
  administration. One exception is when Admin defines a specific user to be assigned
  to a step. With edit access to a record, you can change the assignee at any time.
- Define who can view each RCA (in addition to the Team) from the settings page.
   Default visibility options are set by your administrator. Visibility options may or may not be adjusted, depending upon the administrative settings.
- View, Edit, and Delete capabilities are set on the team page and in the "By Role" permissions set in Admin. Options available to each user depend upon the Role

assigned to that user and the capabilities defined for that role. However, users defined as Owner and Facilitator are always able to edit the record.

- If another user is currently editing a record, the RCA will open in Read-only mode for all other users, regardless of their permissions.
- Define the Map location by entering the Map address on the problem statement screen. The Map feature can be disabled by your Administrator.
- Cause Types: The cause and effect chart allows you to define a type for each
  cause. This helps your team identify solutions that can be effectively controlled.
   Cause types are Transitory, Non-transitory, Transitory Omission, and Non-transitory
  Omission.
  - o Transitory:
    - Changes
      - Transition points
      - Energy transfers
      - Change in state/status
      - External force applied
      - Operation performed
      - Trigger/Catalyst/Decision point
      - Often the last cause to present
  - Non-transitory:
    - Objects
      - Tangible: Hardware/Systems, Environment
      - Intangible: Goals, standards, procedures, rules, laws, training, specifications
    - Properties/Attributes
      - Construction materials, design intent, color, other attributes
      - Attitudes, assumptions, culture
    - Status
      - Quantity
      - Velocity

- Position/location relative to other objects
- Omission: An omission is the absence of something that should have occurred or should have been in place and can be either transitory or nontransitory.
  - Transitory omission omitting a task or step
     EXAMPLES: not turning off valve, not following a procedure, not completing quality check prior to shipment.
  - Non-transitory omission a missing object, property and/or status.
     Often, the result of a past transitory omission.
     EXAMPLES: Missing safeguards, barriers, procedures, systems; Steps missing from quality check; not wearing safety glasses; did not trap error in code.

#### **Other Application Notes**

- Mobile Support type your Causelink URL into the browser on your mobile phone to gain access to RCAs and Action Items.
- Email notifications the application sends the following emails:
  - a. RCA Workflow updates about completed steps are sent to all team members (when enabled by your Administrator)
  - b. My Open Actions (Frequency defined by your Administrator)
  - c. Solution Changes for any RCA where I'm on the team (Frequency defined by your Administrator)
  - d. Deleted RCA When an RCA is deleted all team members receive an email, unless the "Don't send..." box is checked in the delete window.
  - e. Forgot Password Email sent to user
  - f. Create RCA When an RCA is created all team members receive an email.
  - g. New User Registration email sent to user (When not using Active Directory or Active Directory Federation Services)
- Actions The system tracks three types of actions:
  - a. Workflow Each RCA workflow step triggers an action that must be completed in order to move on to the next workflow step.
  - b. Solutions Once a solution is approved an action is triggered and remains an action until the solution status is marked as validated.
  - c. Tasks Create a Task in the Report > Tasks page of an RCA.

- User Accounts Add/edit users who have access to the system on the People page.
  When you add a user, they receive an email prompting them to register an account,
  including defining a user name and password. Manager roles and above may add
  users by uploading a .csv file, as defined on the People page. Note, if your
  organization has integrated with Active Directory, this process may be different,
  depending upon your Active Directory settings in Administration.
- People Accounts People records can be created from the People page when you
  want to reference an individual's involvement in an RCA, but do not want to provide
  them with a license and credentials to the system.
- Groups Group definitions allow you to control who gains access to RCA records.
   This also allows you to filter RCAs for reporting purposes.
- RCA Search This feature allows you to search RCAs by keyword, users, severity, date range, groups, types, status, and other filters.
- Search wildcard Enter \* for wildcard search options, such as data\* to return database.
- Final Report clicking "Add from chart" from the Final Report page will copy the cause and effect relationships from the chart to the cause and effect summary text area.
- My Actions this page tracks all actions assigned to the logged in user across all RCAs in the system. This is the same "Open Actions" list that is emailed to users periodically.
- Licensing mechanism Licensing is based upon concurrent usage. If you reach your limit, it will not allow more users to gain access.
- As a security measure, our software locks an account for 5 minutes after 5 failed login attempts.

#### Reporting

Causelink provides the following reports, the results of which can be modified with the Report Criteria at the top of each page:

Common Cause – This report searches the text in all causes in all RCAs that the
user has access to and looks for matching words and their derivatives across
causes. For example, if the text "cable in path", "cables in path", or "cabling in path"
exist in more than one cause, it will appear in the report as a common cause under
one term, "cable in path". Within the common cause report, you can ignore terms

- that do not apply to your business. Once clicked, these terms are listed under "Ignored list" and can be brought back to the main list by clicking "un-ignore".
- Actions This report allows you to view all actions across the enterprise. It defaults to displaying open actions across all action types.
- Workflow History The workflow report includes all RCAs that have been closed and displays the average, minimum, and maximum amount of days it takes to complete each step, the entire RCA, and days between activities. The intention of this report is to provide managers with a look into where bottlenecks may exist within their RCA program.
- Solutions The solutions report displays all solutions that have been entered into the system, who they are assigned to, due date, cost, and their status.
- Workflow Status This report displays data for two workflow-related areas:
   Workflow Over Date Range and Currently In Process. Workflow Over Date Range
   displays the number of records that were opened and closed within the date range
   you've defined. Currently In Process displays the number of open records for each
   workflow step and disregards any date range you've entered.
- Return on Investment (ROI) The ROI report compares the cost of approved solutions with the Actual Impact and Investigation costs. The formula for ROI is ROI = (Actual Impact-Investigation Cost-Approved Solutions Cost) / (Approved Solutions+ Investigation Cost) x 100. In this report, you can choose to exclude records with missing data, which will remove any record that doesn't include data for all three of these variables.
- RCAs by Facilitator This report displays open records over the selected time period for each user who is defined as Facilitator for a record.

#### **Permissions**

- Role-based permission for viewing, editing, and deleting records are defined in Administration. Each user is assigned one role.
- RCA View permission defaults and options are set in Administration.

- RCA Team Permissions for the team to edit, view, or delete an RCA are controlled on the Create RCA, RCA Team, and Import pages. Only one person can edit an RCA at a time.
- RCA Viewing Control who can view an RCA (in addition to the Team) on the overview page for that record. The default setting for "Visible to all users" is defined in Administration.
- Group-level permissions When enabled by Administration, this allows you to control which users have "read" access to specific groups' RCAs. Because users are associated with groups, this allows you to set view permissions for more than one person at a time.
- Read-only mode If you open an RCA that you do not have edit access to, it will open in read-only mode.
- See the Administration section for permission details for specific roles.

#### **Causelink Desktop Client**

You may use the Causelink Desktop Client to perform individual Root Cause Analyses (RCAs). When you are ready to share your analysis with your team, simply export the .srca file, then import it into Causelink Enterprise. When importing, you are prompted to define the team for the Imported record.

#### **ADMINISTRATION**

Causelink Enterprise ships with one "IT" role account. By default, the IT role has permission to view and edit all data within the application (See below for details on all roles). Login with the URL provided by the system administrator who installed the application. *Please make sure to change the default password after you login by clicking the name in the upper right corner of the application.* 

#### Groups

Controlled in Administration > Groups, groups help to segregate parts of your organization for user access and data filtering purposes. You can assign team members and RCAs to specific groups, defining which user groups can view specific RCAs. You are also able to search for RCAs or run reports by group.

If you integrate with Active Directory, you can sync your Active Directory groups into Causelink and associate users with those groups.

#### People and Users

The People page displays users of the application and individuals referenced within RCA records who do not have access to Causelink. Causelink Users are differentiated with a small icon.

Administrators and Managers can add users to the application, as long as the new user's role is not equal to or higher than their own. For example: Administrators can add users in the Manager, Analyst, or Participant roles. As you add users, make sure to define their role, group(s), and email address so that they have access to the correct RCAs and receive emails for actions assigned to them. See below for the permissions associated with each role.

When you add new users, they receive an email prompting them to access the system and setup their account.

If a user tries to login unsuccessfully 5 times within a short period of time, they will be locked out of the system for 30 minutes.

#### **Roles and Permissions**

The system defaults to the following Role-based permissions, which can be modified by the Administrator and IT users.

- Participant can view all RCAs in their groups
- Analyst can view all RCAs in their groups
- Manager can view all RCAs in the system
- Admin can delete all RCAs in the system
- IT can delete all RCAs in the system

RCA access permissions are defined with the following hierarchy; System Rules > Admin > Create RCA/RCA Team/Import Pages.

#### System Rules

- RCA Initiator can delete and edit RCAs they create, regardless of their assigned Role.
- RCA Initiator and Owner can edit the team page, regardless of their assigned Role.
- RCA Owner and Facilitator are always able to edit the record, unless a user with a Participant role is assigned.
- An RCA Owner or Facilitator may be able to delete the record if their Role gives them permission to do so.
- If a user's Role gives them RCA Edit ability, that user can edit the team page.
- Participant Roles are not able to Create or Edit RCA records.
- The "View Permissions" in an RCA record cannot escalate a user's "By Role" access levels as set in Admin.

• You are never able to escalate a user's role-based permissions from the Create RCA, RCA Team, or Import pages.

In addition, the following roles and permissions are supported. Each user is assigned to one role.

- Participant Role
  - Can only search for and view RCAs based upon data associated with their group or specific user account, or the RCA is marked as 'Visible to all users'
  - Cannot create or import records
  - Cannot create User or Person records

#### Analyst Role:

- Can only search for and view RCAs based upon data associated with their group or specific user account, or the RCA is marked as 'Visible to all users'
- Can only search for actions associated with their group or specific user account, or the RCA is marked as 'Visible to all users'
- Can search for/view users and people across enterprise
- Create, Update People accounts
- Cannot Delete People accounts
- Can create new RCAs

#### Manager Role:

- All the permissions of an Analyst, plus;
- Create, Retrieve, Update, Delete Participant and Analyst accounts (except Active Directory users)
- Create, Retrieve, Update, Convert, Delete People accounts
- Can ignore common cause terms

#### Administrator Role:

- All the permissions of a Manager, plus;
- o Create, Retrieve, Update, Delete all Participant, Analyst, and Manager accounts
- Assign users to groups
- Has access to most administration section of application (all but About and System Settings)
- Add, edit, delete groups
- Can edit or delete all RCAs

#### • IT Role:

- All the permissions of an Administrator, plus;
- o Create, Retrieve, Update, Delete all accounts

- Can access system settings
  - Link Timeout
  - Map
  - Email Settings
  - Authentication
- Can access the About page (current users, version)

#### **Administration Settings**

The following features are available to users with the Administrator role.

- Permissions
  - Define Role-based permissions for the application
  - Define RCA View Permission defaults and edit options
- General Settings
  - License Key each key is associated with a concurrent user limit. When you
    decide to change your user limit you'll receive a new key from Sologic and will
    need to input it here (Sologic makes this change for SaaS users).
  - Report Number define report number structure, which allows you to autoincrement report numbers and insert dates for new RCA records. Once set, the report number field is no longer editable by end users.
  - Login Text define text that will display underneath the un/pw on the login page
  - Analytics enter a google tracking ID if you'd like to view Causelink usage statistics within Google Analytics.
  - Cause Colors define colors for cause boxes that are associated with solutions
    of a certain status. This definition will be utilized by all system users, but can be
    overridden by the custom cause color tool in the chart for specific RCAs.
  - Logo define the logo that will appear in the problem statement onscreen and in the printed report.
  - Currency This field allows you to set a default currency for all RCAs created within the Enterprise system.

#### RCA Data

- Where These definitions are used in the Where section of the Problem Statement. If "Always Show" is checked, the where category will display in the problem definition by default. If unchecked, the category will only be available in the Where dropdown menu.
- o Impact These definitions are used in the Impact and Potential Impact sections of the Problem Statement. If "Always Show" is checked, the impact category will display in the problem definition by default. If unchecked, the category will only be available in the impact dropdown menu.

- RCA Types Types are defined on the RCA overview page and are used as a filter option in RCA Search and Reports. An RCA can be classified as one or more RCA type.
- Severity Levels Severity levels are defined on the RCA overview page and are used as a filter option in RCA Search and Reports.
- Communication This section determines the time and days the action item and solution change email notifications should be sent.
- Workflow This section allows you to configure numerous workflow templates. The
  system ships with three templates, which can be modified and added to. Within each
  template you are able to change the number of workflow steps, the default role (for
  action assignment), the number of days the next action should be assigned in the
  future, whether it should spawn a new RCA version on completion, and whether the
  team should be emailed upon completion.

#### **IT Settings**

In addition to the Administrative Settings, the following features are available to users with the IT role.

- About page displays version number, lists active tokens, and provides the ability to revoke an active token.
- Link timeout period This is used for forgotten password and user registration links. The links to these features will expire after the time period entered here.
- Email Settings Use this section to define your internal SMTP settings. This section must be completed in order for Causelink Enterprise to send notification emails.

Name	Description
From	The email address the systems will appear to send mail from.
Host	The host name or IP address of your email exchange server.
Port	The port your email server listens on.
User	A user name valid to your email server.
Pass	Your user's password, if your email server requires one.
Use SSL	Check this box if your email server requires the use of SSL.

- Authentication Settings The default authentication method is to use the Causelink Enterprise user database. However, if you would like to integrate with your Active Directory system, input your settings in this section.
- Map enable the map feature as appropriate for your business needs. Generally, organizations with more than one location or where problems occur in diverse geographic locations can make use of this feature. However, if your organization does not allow access to google maps, you will likely need to disable this feature.