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The Common Metrics Initiative

The NIH Clinical and Translational Sciences Awards (CTSA) Consortium is charged with accelerating and improving clinical and translational research, but its potential is so far only partially realized. In order to maximize the Consortium’s impact, NCATS is implementing the Common Metrics Initiative, which employs a set of common metrics for use in collaborative management based on the principles of the Results-Based Accountability (RBA) framework. The Common Metrics Initiative uses a set of developed Common Metrics to help focus all activities, as a network and at the hubs, on making significant, measurable improvements in research translation and workforce development.

Project Description

The Common Metrics Initiative is implementing a set of metrics, a management framework known as Results Based Accountability (RBA) and a software platform called Clear Impact Scorecard (Scorecard). Tufts CTSI was selected by NCATS to lead the implementation of this initiative including the testing of developed metrics, providing training on implementing and using the RBA framework and Scorecard software, and providing coaching and opportunities for collaborative learning.

Hubs were divided into three groups for the training and implementation of the RBA framework. This assignment was based on site preference. Regardless of start date, each hub had a 100 day intensive implementation period. During this time hubs formed an implementation team that participated in online training on the metrics based management concepts and software.

Project Activities

This guide provides an overview of a suggested process for implementing the Common Metrics initiative at your CTSA hub. Project activities include:

**Results Based Accountability (RBA) and Scorecard Training** - Live and recorded webinars to build knowledge and skills in the Results Based Accountability (RBA) management framework and in setting up and using Scorecard.

**Common Metrics Training** – Live and recorded webinar describing the initial set of common metrics. Each hub will select one metric to use in applying the RBA framework. Hubs will move on to collect the remainder of the metrics after an initial training period.

**Coaching and Check-in calls** - Conference calls to discuss each hub’s progress in collecting metrics, applying the RBA framework, and using Scorecard. The Tufts team and will provide guidance, technical support, and facilitate peer learning and problem solving.

**Collaborative Learning Sessions** - Monthly webinars on topics of interest and hub presentations of best or promising practices in metric collection, RBA application, and Scorecard use. Resources from the learning collaborative will be available online.
Project Implementation

Who should be part of the team?

We recommend that hubs assemble a team to address the implementation of the common metrics, the RBA framework and Scorecard system. Outlined below are several roles that will be helpful in supporting the project. We recognize that each hub will configure their team as is best suited to their current staffing and needs. Some hubs may have the same person assume more than one role or two people may share the same role. The core team may also decide to select additional team members to assist with the project to address specific metrics.

- **A project leader** who serves as the expert on both the RBA framework and the Scorecard software for your hub. People with strong project management and quality improvement skills would be good candidates for this role. This person will be responsible for helping other team members at your hub learn and implement the RBA framework as well as helping others learn the Scorecard software and granting access to new users. Based on scheduling and workloads, your hub may choose to have project co-leaders. Scheduling and communications with your hub will be coordinated through the project leader and the principal investigator.

- **A project champion** who ensures that everyone involved at your hub is on board and committed to the ultimate success of the project. This person should be able to help span the silos in an organization.

- **A metric data collector** who will oversee the collection of metric data and a **metric topic expert** who is directly involved in making any management or operational decisions intended to improve the metric results. Based on staffing capabilities, these roles may be filled by one individual or be two separate roles. In addition, you may wish to have a different metric topic expert for each of the metrics. We recommend that the person (or persons) filling these roles participate in the training sessions so that they can assist hub leadership in making decisions based on the RBA framework.

Training

The education and training process includes building the knowledge and skills to effectively use the Results-Based Accountability framework and Scorecard software. Live and recorded webinars were provided to share knowledge about RBA and Scorecard and begin to build skills through hands on exercises. All training materials are available on the Tufts CTSI website and our iLEARN portal:
Onboarding Call - A conference call was held to review the first set of Common Metrics, planned project activities, timeline, guidance on finalizing implementation team and answering questions about the project.

Results-Based Accountability and Clear Impact™ Scorecard Training – Training included a mixture of pre-recorded lectures, software training videos and live interactive webinars to build knowledge and skills in the Results-Based Accountability (RBA) management framework and in setting up and using the Scorecard software. These trainings were designed for the hub’s project leader, metric data collector and metric topic expert.
**PI Training Sessions** - A separate training session with an overview of the RBA framework and Scorecard software was provided for hub PIs. Recordings are posted on the website.

**Kickoff Call** - This session was for the full team and featured updates on the project timeline, examples of completed scorecards, and guidance on moving forward in the process including training the full hub team, selecting metrics, beginning data collection and application of the RBA framework in management decisions.

**Coaching and Individualized Support**

The Tufts Team supports hubs in applying the RBA framework and using the Scorecard software through regularly scheduled individual and small group check-in calls and technical assistance. During the calls, hubs discuss their progress, challenges and barriers in applying RBA and collecting the common metrics, determine additional training needs, and identify best practices. Calls are held every other week as hubs grow in their competency during the 100 day implementation period.

**Collaborative Learning Activities**

Collaborative learning sessions enable hubs to share and learn from their collective experiences and challenges in collecting and improving the common metrics. Sessions are organized around specific metrics or use of the RBA framework. Learning sessions are conducted as webinars and feature hub presentations describing their successes and challenges and tools, forms or other resources they’ve developed. Recordings are available on the Tufts website resource page.

**The Road Map to Success: Moving from Training to Implementation**

Each of the Common Metrics addresses an area of hub operations that contribute to the CTSA Program goal of achieving innovations in research translation and workforce development. We are providing the suggested activities below to help your project leader organize implementation of the RBA framework and Scorecard software at your hub. Moving from the theories learned in the training sessions to full implementation requires time, discipline, and knowledge about how to do the work. This work is, by its nature, a process of experimentation and discovery through which your team works together to determine if resources are used to best achieve the desired impact for your hub.

The items outlined below offer a suggested “road map” as your project leader and their team provide training to other members of your hub, begin collecting data and using the RBA framework to make management decisions for each common metric. Should you need any assistance along the way, please contact our team at TuftsMCCMIHelpdesk@tuftsmedicalcenter.org.
<table>
<thead>
<tr>
<th>Implementation Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Hub RBA &amp; Scorecard Resource Team</strong> - Identify the individuals who will join you in collecting the Common Metrics and implementing Results-Based Accountability (RBA) and the Scorecard software. These people will represent your Resource Team. Suggested team roles are described on page three of this guide. Please provide the Tufts Team with a complete list of your resource team members.</td>
</tr>
<tr>
<td>2. <strong>Team Training</strong> - Provide training to additional staff and team members about the Common Metrics Initiative, the RBA framework and Scorecard software. We will provide you with materials and a sample presentation to assist you in building your hub’s capacity to implement the metrics and RBA framework. We are also available to assist your Resource Team by phone, email or webinar.</td>
</tr>
<tr>
<td>3. <strong>Common Metric Selection</strong> - Identify the first Common Metric you’ll use to apply the RBA framework and create a Turn-The-Curve plan. Please inform the Tufts Team of your selection. This is the metric we’ll ask you to discuss in our coaching and check-in calls.</td>
</tr>
<tr>
<td>4. <strong>Engage Metric Stakeholders</strong> – Identify the individuals you need to engage in your first metric’s Turn-the-Curve plan. This will include key stakeholders (providers, customers, and partners) in the programs and activities associated with the metric. Decide how you will engage those stakeholders (e.g., attending Turn-the-Curve planning meetings, responding to a draft plan, playing a role in implementing the plan) and involve them as soon as possible.</td>
</tr>
<tr>
<td>5. <strong>Collect Metric Results</strong> - Plan and implement the processes to collect the metric data (e.g., surveys, electronic data collection systems, and record reviews). Questions about metric Operational Guidelines can be directed to NCATS at <a href="mailto:CTSCACommonMetrics@mail.nih.gov">CTSCACommonMetrics@mail.nih.gov</a>. We will publish Frequently Asked Questions on our resource website.</td>
</tr>
<tr>
<td>6. <strong>Enter Metric Results in Scorecard</strong> - Enter your collected data into the Scorecard for your selected metric and graph your historic and forecasted baselines. Questions about using the Scorecard system can be addressed to <a href="mailto:support@resultsscorecard.com">support@resultsscorecard.com</a> the Tufts Team at <a href="mailto:TuftsMCCMILHelpdesk@tuftsmedicalcenter.org">TuftsMCCMILHelpdesk@tuftsmedicalcenter.org</a> or 617-636-8722.</td>
</tr>
<tr>
<td>7. <strong>Develop a Turn-the-Curve Plan</strong> - Develop and implement a Turn-the-Curve Plan for your selected metric and record your progress in the Scorecard system.</td>
</tr>
<tr>
<td>8. <strong>Small Group Coaching Sessions</strong> – Join check-in calls and coaching sessions to provide updates on your progress, collaborate with the Tufts Team and a small number of hubs in peer learning and joint problem solving, and receive technical assistance. Conference calls will be held every other week for the first 100 days after RBA training.</td>
</tr>
<tr>
<td>9. <strong>Collaborative Learning Sessions</strong> – Participate in monthly webinars on topics of interest and hub-led presentations of best or promising practices in metric collection, framework application, and software use.</td>
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</tbody>
</table>
Results Based Accountability

What is Results-Based Accountability™?

Results-Based Accountability™ (RBA) is an approach to decision-making used to collaboratively develop and implement strategies that will produce measurable impact for customers and communities.

How does RBA work?

RBA starts by identifying and measuring the desired impact of a program, an organization, or an effort involving multiple organizations. In the CTSA Program, these measures are the “Common Metrics.” RBA then provides a simple, disciplined approach to decision making that focuses on achieving the greatest possible impact for customers or a community. This approach is sometimes referred to as “Turn-the-Curve Thinking”.

RBA also provides a comprehensive framework for managing and understanding the relationships among the activities of multiple stakeholders. This framework encompasses strategies to improve the well-being of whole populations (e.g., rates of cancer, heart failure, or diabetes in a community) and strategies to improve the well-being of the customers (or patients or clients) of programs, agencies, and multi-agency systems (e.g., the blood pressure of the patients of a heart clinic).

At the heart of RBA is the principle that, when it comes to the public good, decision makers should first ask, “Are we doing the right things?” before asking, “Are we doing those things right?” This principle recognizes that a program could perform well on its own merits and still not be what is needed. To use a medical analogy, an antibiotic might work well for what it is designed to do but will not be what is needed in a treatment regimen if the patient has a virus. RBA organizes decision making at every level – within communities, multi-agency systems, agencies, and programs – to begin with asking whether we have selected the “means” that will best achieve the desired impact for a community or a set of customers.

For the CTSA network, this principle means asking whether the network’s resources – from across all of the hubs and NCATS – are being used in the best ways to achieve the desired impact of the network. Is the network, according to the Common Metrics, making the best use of its collective resources to improve the speed, cost, and impact of biomedical research translation and to meet the demand for a clinical and translational research workforce? For a hub, this principle means asking if the resources of the hub are being used in the best ways to achieve, per the Common Metrics, the desired impact of the hub.

At both the network and hub levels, the Common Metrics are necessarily broad in their scope, serving as touchstones for the strategic management of significant resources. Strategies focused on the Common Metrics will, therefore, also tend to be comprehensive and far reaching in scope. This fact does not mean, however, that a strategy focused on a Common Metric will be focused exclusively on that Common Metric. As a practical matter, any strategy will include numerous components each of which should and will have its own measures. For example, a strategy to improve the percent of scholars served by a hub who receive grants (a Common Metric) might include the implementation of a new writing program for scholars focused on grant writing. In the implementation of this component of the strategy, therefore, the hub would track improvements in writing skills of the scholars in the writing program. The data on writing skills could be readily captured almost in real time (e.g., in writing tests and assignments) and utilized to improve the program over a relatively short period of time. The Common Metric – the percentage of scholars receiving grants—will

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1 Adapted from materials authored by Mark Friedman of the Fiscal Policy Studies Institute.
gauge the success over a longer period of time of the multi-faceted strategy to support scholars (including but not limited to the new writing program).

Within the RBA framework, whether the writing program achieved its desired impact of improved writing skills is a separate question from whether the hub achieved its desired impact of increasing the rate of scholars with grants and publications. If the writing program is successful on its own terms but there is no discernible improvement in the rates of grants and publication over time, the hub might ask whether a different factor is at play. For example, the hub might determine that seed funding is a more significant factor and decide to increase the scope of its pilot funding program. Conversely, if the writing program succeeds and the performance on the Common Metric also improves, RBA will at best show why a causal relationship could be inferred (e.g., participants in the writing program consistently performed better on grants and publication than non-participants) but evaluations and studies would be necessary to substantiate such an inference.

RBA is by design simple and common sense. It uses data and transparency to ensure accountability for the well-being of children, families and communities and the performance of programs. And by being simple, transparent, and data-driven, RBA helps groups to surface and challenge assumptions that can be barriers to innovation and to build collaboration and consensus in the decision making process.
The Turn-the-Curve Decision Making Template

This template is an overview of the step-by-step RBA “turn-the-curve” decision-making process.

<table>
<thead>
<tr>
<th>Program, Organization, or Multiparty Enterprise:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. How are we doing?</strong></td>
</tr>
<tr>
<td>Graph the baseline history and forecast for the measure</td>
</tr>
<tr>
<td><strong>2. Why?</strong></td>
</tr>
<tr>
<td>Briefly explain the story behind the baseline: the factors (positive and negative, internal and external, current and anticipated) that most strongly influence the curve (or trend) of the baseline.</td>
</tr>
<tr>
<td><strong>3. Who can help?</strong></td>
</tr>
<tr>
<td>Identify key partners who might have a role to play in turning the curve of the baseline.</td>
</tr>
<tr>
<td><strong>4. What would work?</strong></td>
</tr>
<tr>
<td>Determine your options for strategies that would work to turn the curve of the baseline. Include no-cost/low-cost strategies.</td>
</tr>
<tr>
<td><strong>5. What do we propose to do?</strong></td>
</tr>
<tr>
<td>Determine what you (and your partners) will do to turn the curve of the baseline.</td>
</tr>
</tbody>
</table>
Step-by-Step Guide for Use of RBA in Decision Making

1. How are we doing?

Present the data for the measure on graph with:

   a) an historic baseline (e.g., 3 years of data, if available) and
   b) a forecast assuming no change in your current level of effort (e.g., for 3 years)

There will not be historic data available for all of the Common Metrics at the time they are being implemented. Such data, however, will be accumulated over time. Where no historic data is available, just provide a forecasted baseline. In most cases, you will need to develop the story behind the curve (explained below) in order to make a forecast for the baseline.

2. Story Behind the Curve

In order to “turn the curve” of a performance measure, it is necessary to understand the factors that impact that measure. In this section, list the key factors behind the trend line for the performance measure. Identify: (1) contributing factors that should be preserved or expanded to sustain performance and (2) restricting factors that are hindering performance.

This “force field analysis” below illustrates how factors may be viewed according to their contributing and restricting influences on the curve of the performance trend.
It is important to identify not just the most immediate and easily observed factors impacting the trend line (i.e., the “proximate causes”), but to engage in the kind of rigorous analysis, including research as appropriate, that will identify the underlying or more systemic factors (i.e., the root causes”). Taking time to understand root causes and the complexities of the factors impacting the trend line will often lead to insights that inform innovative strategies. A cause and effect diagram, also known as a fishbone diagram, can be used to identify the underlying causes of the trend line. For metrics about the time required in a process (i.e., median IRB duration), a process map can be used to identify the sources of delay. Appendix C includes information on creating a cause and effect diagram and a process map.

Once the root causes have been identified, prioritize those root causes according to which have the greatest influence on the trend line and, therefore, are the most critical to address to turn the curve. List the root causes, in order of priority (that is, based on which will have the most influence on the trend for the curve), distinguishing those that are contributing to the trend from those that are restricting the trend. The best format is a “bullet” for each root cause that includes a title and a brief description.

3. **Who are key partners with a role to play in turning the curve:**

Identify potential partners, both in and outside of your hub, university, etc., who may have a role to play in turning the curve. The identification of root causes impacting the trend line will often point the way to the types of partners who need to be engaged. Partnerships are especially important when focusing on factors beyond your immediate control. Partnering with others who also have a stake in the particular customer results effectively expands influence.

4. **What would work to turn the curve:**

Identify what would work to turn the curve. A strategy may, of course, involve the discontinuation of existing activities or programs as well as the implementation of new activities or programs. The following are criteria to consider in determining what strategies would work:

- **Does the strategy address one or more of the root causes you have identified?**

  The alignment of a proposed strategy with a root cause provides the rationale for selecting that particular strategy: it is the link between the “end” (as measured by the performance measure) and the “means” (the strategy).

- **Are the proposed actions evidence-based?**

  What research or other evidence is available to demonstrate that the strategy has a reasonable chance of turning the curve? There may, of course, be times that data are limited and you must move forward with the best judgment of experienced professionals; however, in most cases a strategy should be supported by research or evidence.

- **Have “no-cost/low-cost” options been developed?**

  Funding is often a critical need and careful thought must be given to ways to increase funding where needed. However, you should also consistently explore “no-cost/low-cost” options (i.e., options that you can pursue with existing staff and/or resources). This line of inquiry, in turn, will help to surface outdated assumptions that stand in the way of innovation.
5. What We Propose to Do to Turn the Curve

Identify the priority strategies (actions, programs, or activities) you propose to undertake to turn the curve. The two most important criteria to consider in selecting priority strategies are leverage and feasibility.

- **Leverage: How strongly will the proposed strategy impact the trend line for the performance measure?**

  Given that resources are finite, decisions with respect to the dedication of resources to a proposed strategy must be based on the expected impact of those resources on the trend line. One way to gauge impact is to assess the importance of the underlying root cause(s) a strategy is designed to address. In other words, the strategies proposed should address the most important root causes identified and, therefore, be geared to having the greatest potential impact on the performance trend for the corresponding performance measure. This concept is sometimes referred to as "leverage."

- **Is the proposed strategy feasible?**

  Can it be done? This question is the necessary counterpart to the question of leverage. Questions of feasibility should be handled so as not to limit innovation. Sometimes the consideration of an apparently infeasible option will be the catalyst in the thinking process that leads to a highly creative and feasible option. Once options for improving feasibility have been adequately explored, however, then leverage and feasibility must be weighed and balanced in choosing strategies. A strategy that has high leverage and high feasibility will, of course, be a prime candidate for an action plan. The choice among other options, however, will likely involve trade-offs between leverage and feasibility and will need to be weighed accordingly.

List the proposed strategies in order of priority. The best format is a “bullet” for each strategy with a title and a brief description.
**Use as a Management Tool**

Turn-the-Curve Decision Making is not static; rather, it is a dynamic management tool. On an ongoing basis, in consultation with key leaders and other stakeholders, managers should use the Common Metrics and associated performance measures (and other available data, including any new information about the story behind the curve, partners, and/or what works) to adjust the forecast and to systematically make corresponding adjustments to strategies where doing so will turn the curve. The following is a schematic of this ongoing process.

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**Strategic Management**

**Performance Measure**

Performance measure data presented as a graph, with both an historic trend line and a forecast.

![Graph with trend line](image)

[Time units (e.g., months or years)]

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**Story behind the curve (the trend line for the measure)**

Key factors (positive and negative, internal and external, current and anticipated) impacting the curve (i.e., impacting the trend line).

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**What we propose to do to turn the curve**

Feasible, high-impact strategies with specific timelines, deliverables and corresponding performance measures. Partners with roles to play in turning the curve.

*Monitor both implementation and the performance measure trend line for improvement and, as new performance measure data are obtained, repeat the process.*
Performance Measures

The selection of performance measures is the first and most essential step in the performance planning process. The following directions will assist you in choosing headline performance measures.

What are Performance Measures?

The network, hub, department, branch or program provides services that are designed to in some way impact its customers/clients. Performance measures simply give you the means to know how well you and your staff are doing at providing those services and achieving that desired impact. A good performance measure gives you and your staff the ability to make changes and see whether those changes improve impact.

The following Data Quadrant, Figure 1, is a tool for sorting and categorizing performance measures.

Sorting Performance Measures: The Data Quadrant

All performance measures fit into one of four categories. The categories, the four quadrants, are derived from the intersection of quantity and quality and effort and effect.

The rows separate measures about effort (what is done and how well) from measures about effect (the change or impact that resulted), the columns separate measures about quantity (of the effort or effect) from measures about quality (of the effort or effect).

Figure 2 shows how these combinations lead to three universal performance measures: How much did we do? How well did we do it? Is anyone better off? The most important performance measures are those that tell us whether our clients or customers are better off as a consequence of receiving our services ("client results," the lower left and right quadrants).

The second most important measures are those that tell us whether the service or activity is done well (upper right quadrant). The least important measures are those that tell us what and how much we do. To answer the two most important questions, that is, to identify candidate for the most important performance measures, follow the following steps, using the Data Quadrant.
Step 1  How much did we do?  Upper Left Quadrant

First, list the number of clients served. Distinguish different sets of clients as appropriate. Next, list the activities or services you provide to your clients. Each activity or service should be listed as a measure. For example, the activity of preparing a certain kind of report becomes “# of the reports prepared” or “# of FTEs preparing the reports.”

<table>
<thead>
<tr>
<th>Effort</th>
<th>Quantity</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Much We Do</td>
<td>How much service did we deliver?</td>
<td>How Well We Do It</td>
</tr>
<tr>
<td># Customers served</td>
<td>% Services/activities performed well</td>
<td></td>
</tr>
<tr>
<td># Services/Activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Is Anyone Better Off?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What quantity/quality of change for the better did we produce?</td>
<td>#/% with improvement in:</td>
</tr>
<tr>
<td>Knowledge/Skills</td>
<td>Circumstances</td>
</tr>
<tr>
<td>Attitudes</td>
<td>Behavior</td>
</tr>
</tbody>
</table>

Figure 2

Step 2  How well did we do it?  Upper Right Quadrant

This quadrant is where most traditional performance measures are found. For each service or activity listed in the upper left quadrant, choose those measures that will tell you if that activity was performed well (or poorly). The measures should be specific. For example, ratio of staff to cases; percent of certain activities conducted on time; average number of activities completed each month; percent of staff with certain levels of qualification/certification.

Step 3  Is anyone better off?  Lower Left and Lower Right Quadrants

Ask “In what ways are your clients better off as a result of getting the service in question? How would we know, in measurable terms, if they were better off?” Create pairs of measures (# and %) for each answer. Four categories cover most of this territory: skills/knowledge, circumstances, attitude, and behavior. Consider all of these categories in developing measures of whether clients are better off.
Selecting Headline Performance Measures

Key to ensuring the usefulness of performance measures is to limit the number used. In most cases, select from the list of candidate measures 3 to 5 “headline measures” (in total, from both the upper right and lower right quadrants). To select these headline measures, rate each candidate measure using the following three criteria:

- **Communication Power**: Does this measure communicate to a broad range of audiences? Would those who pay attention to your work (e.g., voters, legislators, agency program officers) understand what this measure means?

- **Proxy Power**: Does this measure say something of central importance about the agency/division/branch/program? Is this measure a good proxy for other measures? For example, in education, reading on grade level is often considered a proxy for other measures such as attendance, quality of the curriculum, quality of the teachers, etc.

- **Data Power**: Do you have quality data for this measure on a timely basis? To be credible, the data must be consistent and reliable. And timeliness is necessary to track progress.

Rate each candidate measure “high,” “medium,” or “low” for each criterion. Use a chart, like the one shown below, “Choosing Headline Performance Measures.” The candidate measures that have high ratings for all three criteria are good choices for headline measures.

For those measures that are rated high for communication and proxy power, but medium or low for data power, start a data development agenda. These are measures for which you might want to invest resources to develop quality data that would be available on a timely basis.

Scorecard Software

Scorecard is cloud-based software designed to facilitate use of the Results Based Accountability framework in the management and improvement of programs and services. It is a flexible and easy-to-use tool for capturing and reporting program and population-level data. (Detailed information about the Scorecard software is included in Appendix A.)

During this initiative, Tufts is supporting staff at each site to enter data on the common metrics. You may also want to use the software to track data on other measures that are important to your CTSA. The software includes capacity for describing and documenting programs, sharing program descriptions and performance measures with stakeholders, and for project management.

We already have metrics in place. Can we add them to the Scorecard software? Yes, as long as you are reporting on the Common Metrics, you can also use the software to track additional metrics at your CTSA hub.

Scorecard has a helpdesk that includes video tutorials, “Scorecard University” and the ability to ask questions suggest an idea or report an issue. You must be logged into your account to access most of these features, however you can also contact the support team directly at (support@resultssscorecard.com).
### Contact Information

The CLIC CM Implementation team, NCATS staff, and the Clear Impact Help desk are available to answer your questions.

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Contact Information</th>
<th>Areas of Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raquel Ruiz</td>
<td>Associate Director</td>
<td><a href="mailto:raquel_ruiz@urmc.rochester.edu">raquel_ruiz@urmc.rochester.edu</a></td>
<td>Overall Project, Timeline, Training &amp; Coaching</td>
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<tr>
<td></td>
<td></td>
<td>585-275-0575</td>
<td></td>
</tr>
<tr>
<td>Bobbi McCaffery</td>
<td>Senior Trainer</td>
<td><a href="mailto:roberta_mccaffery@urmc.rochester.edu">roberta_mccaffery@urmc.rochester.edu</a></td>
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<tr>
<td>Scorecard Help Desk</td>
<td></td>
<td><a href="mailto:support@resultsscorecard.com">support@resultsscorecard.com</a></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX A

SCORECARD GUIDE

The Scorecard Guide describes the modules and functions of the Scorecard system.
The Users module is responsible for adding and maintaining user accounts and access to your Results Scorecard site. The number of users you can have is limited by your licensed user count on the Billing tab (Visible to Site Owners only).

1. The Add New User button allows you to create new users. If no licenses are available you will not be able to add a new user until you upgrade your account or make an existing user inactive.
2. The number of remaining licenses you have available on your account and the number of active users.
3. The search function allows you to quickly search for a user to edit.
4. The edit button allows you to change user options and reset their password.
5. The key icon denotes the site owner who is the main contact for your Results Scorecard site and has sole access to the RS Connect, API, and Billing administration options.
6. Inactive users appear in their own list at the bottom of the page.
7. To reactivate an inactive user, select the Reactivate button next to their name. This option will be unavailable if you have no remaining licenses.

### Add a New User
To add a new user to your Results Scorecard site:

1. Select the **Add New User** button from the Users list page.
2. Fill out the **Email address**, **First Name**, and **Last Name** of the user. Make sure to double check that the Email Address is correct since this will be the username the person logs in with and will receive their credentials there.
3. Select the appropriate access control. You can use one of the quickset blue buttons to speed up the process and then customize from there. For an explanation of each role click on the question mark next to the item or see the complete list below.
4. Select the appropriate scorecards that the user should be able to access. This tab does not appear if the user is given the "All Scorecards" user role. Note - if a user has access to a scorecard then they will also have access to view or edit (depending on their access control) all the scorecard objects that are on that scorecard. The scorecard object lists will also be filtered to only give the user access to content placed on the scorecards they have access to. If a scorecard object is not on a scorecard the user will not be able to view or edit that object.
5. When you are done select the Save button. When a user is successfully saved an email will be sent to the user with their login credentials. If they do not receive the email within 10 minutes have them check their spam filter for an email coming from resultsleadership.org or resultsscorecard.com

### Edit a User
To edit a user select the edit button next to the user's name on the user list. From the edit page you can reset the user's password, mark them as inactive, change their scorecard access, and update their access privileges. For additional details on each of those see the appropriate section of this article.
Delete a User
You cannot delete a user in Results Scorecard since they may be assigned Actions, Tasks, etc. as well as have commentary and other edits throughout the software. Instead to maintain a log of activity and not delete content if you wish to remove a user from your site you can make them inactive. Inactive users will not be able to log in to Results Scorecard and do not count against your licensed users. You can have as many inactive users on your site at any time as you want. To make a user inactive, follow these steps.
1. Edit the user as show above (see Edit a User)
2. Uncheck the Account Active option
3. Save the user.

Reset User Password
There are two ways to reset a user's password. The first way can be done through the administration/users page. And the second is using the “forgot password” button on the login page.

Administrator Method
1. Edit the user as shown (see Edit a User)
2. Select the Reset Password button
3. Confirm that you want to reset the password in the modal box
4. The temporary password will then be emailed to the user and be displayed on the screen so you can copy the password and give it to them if there is a problem with emails being received.

End User Method
1. On the Results Scorecard login page select the "forgot password" button
2. Enter your username
3. An email will then be emailed to the user with a new password

User Privileges
The access control section of a user account has many options for customizing access throughout the Results Scorecard system. By enabling or disabling these user privileges you can control what users can do in the system.

Add Commentary
This permission will allow users to comment on scorecard objects using the comments section. (Feature coming soon)
*Edit Scorecard Object Notes*
This permission will allow a user to edit all the notes on the presentation views of all the scorecard objects that they have access to. This permission also gives the user the ability to use the Turn the Curve wizard on any measure they can view.

*Embed Scorecard*
This permission gives the user the ability to see and use the embed code for scorecard objects. If the user also has the Add/Edit Scorecard Objects role they will be able to turn on and off the embed feature for scorecards. Note – Even with this role the embed code will only be accessible for objects that have embed enabled on a scorecard they belong to.

*Add/Edit Scorecard Objects*
This permission gives a user the ability to edit and create new scorecard objects. This includes Scorecards, Results, Indicators, Programs, Performance Measures, and Tags. This permission also gives the user the ability to run the Population Result Tutorial and Program Performance Measure Tutorial.

*Delete Scorecard Objects*
Users with this permission can delete any scorecard objects that they have access to.

*Add/Edit Actions*
This permission gives a user the ability to edit and create new Actions.

*Delete Actions*
Users with this permission can delete any Actions that they have access to.

*Data Maintainer*
This permission gives the user the ability to access the Add Data Values module through the scorecard by clicking on the Indicator or Performance Measure icon on the left side and selecting "Add Data Values". They are not able to change any details of measures but can enter data values.

*Update Action Status*
If a user has this permission they can add and edit Action statuses on the Action presentation view.

*Add To-Do's*
If a user has this permission they can add and edit To-Do's on the Action presentation view.

*Settings*
This permission grants access to the Settings administration page. On this page the user can change organization name, site time zone, date culture, site logo, RS Network/Shared Practices library settings, and the administration message.

*User Management*
This permission grants access to the Users administration page and the ability to add and edit other users.
**Scorecard Defaults**
This permission grants access to the Scorecard Defaults, Default Note Editor, Action Custom Fields, and Global Color Bands administration pages. Users with this permission can customize how scorecard objects and color bands are configured when they are created to save time when building scorecards.

**Language Editor**
This permission grants access to the Language Editor Administration page.

**Calendar Manager**
This permission grants access to the Calendar Manager administration page.

**Import/Export**
This permission grants access to the Import/Export administration page. Currently this gives the user the ability to import data values from CSV files. Users with this permission can also see additional export options throughout the software for exporting large quantities of data not accessible to other users.

**All Scorecards**
This permission grants the user the ability to see every scorecard and scorecard object in the site regardless of other settings. Users without this permission will only be able to see scorecard objects that are linked to scorecards they have access to. If a scorecard object is not linked to a scorecard then only users with the All Scorecards privilege will be able to see it. If a user does not have the All Scorecards privilege they will need to have scorecards assigned to them on the Scorecards tab of the create/edit user view.

**View Reports**
IMPORTANT - This permission gives this user access to reports which may contain data they would not normally be able to see through Scorecard based security since reports are custom written. This permission grants access to the Reports module page. This gives the user the ability to view reports and adjust the filters on existing reports.

**Add/Edit Reports**
IMPORTANT - This permission gives this user access to reports which may contain data they would not normally be able to see through Scorecard based security since reports are custom written. This role gives the user permission to view, add, edit, and delete custom reports. Custom reports designing requires a technical understanding of databases and table joins to effectively use, it is recommended you ask someone with this expertise in your organization for help.

**Settings**

1. Your client code is used for communicating with other Results Scorecard sites if you collaborate using Results Scorecard Connect and it cannot be changed.
2. Your organization name as it appears in the header and to others if you
have the Shared Practices Library enabled.

3. **The Time Zone for your site**

4. **The culture for your site** controls the date and number formats throughout the application. Changing this setting will also translate Results Scorecard into other languages. Currently Arabic and Latin American Spanish are available translations.

5. **The Results Scorecard network control section** determines whether or not your site shows up on the network map and Shared Practices Library. Enabling this feature will give you access to the Shared Practices Library on the homepage and add a sharing tab to all Indicators and Performance Measures so that they can be contributed to the library. Enter an accurate Zip Code or if you are outside the United States enter an address to place yourself on the Results Scorecard Network Map. The Organization Description is used on your Network Profile page.

6. **The enhanced security module** improves the security of your Results Scorecard site by implementing stricter password management protocols. These include:
   1. Username and password must not match Temporary passwords must be changed upon first login
   2. Passwords must be a minimum of eight characters Passwords must contain at least one number, special character, and upper/lowercase letter. Passwords cannot contain leading or trailing blanks
   3. Passwords must be changed every 45 days The last 10 used passwords are prohibited from being used

7. **Enable Custom Column** is a setting that turns on an 8th column that is available for entering custom text into. The custom column can be named for each Result or Program. Custom text is entered on the data tab of Indicators and Performance Measures. Once this feature is enabled all the settings on the scorecard objects will appear.

8. **All changes on this page** are saved when the Update button is pressed.

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**Scorecards**

A scorecard is a canvas that other scorecard objects (Results, Indicators, Programs, and Performance Measures) are placed onto. Scorecards allow you to create collections of similar information for reporting and presentations. Only Results and Programs can be directly linked to a Scorecard. Indicators and Performance Measures appear on the Scorecard only through their relationship with the Results and Programs that are linked to the Scorecard.

The available relationships that a Scorecard can have in Results Scorecard are:

- **Result** - The Scorecard/Result relationship causes the Result to be displayed on the related Scorecard. Any Indicators or nested Programs that are related to the Result will also be displayed on the Scorecard. If the Scorecard is shared on RS Connect or has Embed enabled then the Result and its Indicators and nested Programs will also inherit those properties.

- **Program** - The Scorecard/Program relationship causes the Program to be displayed on the related Scorecard. Any Performance Measures that are related to the Program will also be displayed on the Scorecard. If the Scorecard is shared on RS Connect or has Embed enabled then the Program and its Performance Measures will also inherit those properties.
1. The top header bar has a dropdown that allows you to jump between scorecards. You can use this feature from any page and will always be brought to the scorecard you select.
2. The name of the Scorecard appears at the top.
3. The dashboard icon shows that the scorecard you are currently looking at is in Scorecard mode. Clicking on this icon will allow you to view this same set of information in a Strategy Map format or as a Gantt Chart.
4. The Scorecard Slider changes what information is displayed on the scorecard. The default position displays Results, Indicators, Programs, Performance Measures and their data points. Sliding to the right shows more information while sliding to the left shows less information. The slider has 4 positions starting with just Results at the left and going to everything expanded with graphs on the right.
5. The Scorecard description appears below the slider. This description can be used to help users understand why this Scorecard was created and what information is displayed.
6. The button toolbar gives you access to Export this scorecard into various formats, Embed, and Edit the scorecard.
7. In this screenshot the blue divider bar with the text "Population Accountability" is known as a scorecard divider. Dividers are arbitrary items that do not contain any information of their own and can be added to any Result or Program on the Fast Builder. They are often used to separate and categorize Results and Programs but can also be placed between Results/Programs to show groupings of either.
8. Results display on the scorecard and can be identified by the "R" icon. Clicking on the Result name will open the Result Presentation view. Clicking on the R icon will open the Result options menu.
9. Indicators display on the scorecard and can be identified by the "I" icon. Clicking on the Indicator name will open the Indicator Presentation view (Turn the Curve View). Clicking on the "I" icon will open the Indicator options menu. Clicking on the "+" icon next to the Indicator name will open the additional details fly out that displays a graph, attached files, more data values, and links to open the notes.
10. The measure fly out section can be opened for either Indicators or Performance Measures. From the fly out section you can click on the 'Related button to open disaggregated measures for this measure. If file attachments exist they also display in line with the Related' button in the fly out section. Below the graph a button for each note appears, clicking on these buttons will open the note in line on the scorecard.
11. The icon dropdown menu opens for any object on the scorecard when the icon next to it is clicked. This menu gives you quick access to directly edit an object on the scorecard. For Indicators and Performance Measures the Add Data Values and Add to Favorites options also are available. All dropdown menu options are dependent on your user security settings.
12. Nested Programs display indented on the scorecard and can be identified by the "P" icon. Nested Programs always display under the Result that they are related to. Clicking on the Program name will open the Program Presentation view. Clicking on the P icon will open the Program options menu.
13. Nested Performance Measures display on the scorecard indented beneath any Nested Programs and can be identified by the "PM" icon. Clicking on the Performance Measure name will open the Performance Measure Presentation view (Turn the Curve View). Clicking on the PM icon will open the Performance Measure options menu.
14. Programs display on the scorecard and can be identified by the "P" icon. Clicking on the Program name will open the Program Presentation view. Clicking on the P icon will open the Program options menu.
15. Performance Measures display on the scorecard beneath any Programs and can be identified by the "PM" icon. Clicking on the Performance Measure name will open the Performance Measure Presentation view (Turn the Curve View). Clicking on the PM icon will open the Performance Measure options menu.
17. The Time Period column displays the time period for the corresponding Actual Value, Target Value, Current Trend and Baseline % Change. If the time period shown is a quarter then you know that the corresponding columns are for quarterly data and the same goes for months or years.
18. The Actual Value column displays the data value for the measure it is in line with for the indicated time period. If a color band exists for the Actual Value it will display as the background color.
19. The Target Value column displays the target value for the measure it is in line with for the indicated time period.
20. The Current Trend column displays the current trend of the Actual Values for the measure it is in line with. A green arrow indicates a good direction and a red arrow indicates a bad direction. The coloring of these arrows is determined by the polarity of the measure. The number next to the arrow indicates how many periods this trend has been continuing for. If the measure is quarterly then a 2 would mean that for two quarters the trend has been going in that direction. If the measure is annually a 2 would mean that for two years the trend has been going in that direction.
21. The Baseline % Change column displays the % change of the actual value from the baseline period for the measure it is in line with. The baseline period is the first year that an actual value has been entered for. Baseline % Change is defined by the following equation: 
\[
\frac{(Current \ Actual \ Value - First \ Entered \ Actual \ Value)}{First \ Entered \ Actual \ Value}
\]. A green arrow represents a good direction and a red arrow indicates a bad direction.

Create New Scorecard

From the Scorecard list page
1. Click on the Scorecard main menu item
2. Click on the Scorecards sub menu item
3. Click the green Add New button
4. Enter the information for the new scorecard
5. Click Save

Edit a Scorecard

While viewing a Scorecard
1. Navigate to the Scorecard you would like to edit and view it
2. In the top right corner of the Scorecard click grey gears icon
3. Enter the information for the Scorecard
4. Click Save

From the Scorecard list page
1. Click on the Scorecard main menu item
2. Click on the Scorecards sub menu item
3. Search for the Scorecard you would like to edit.
4. Click the Edit button next to the Scorecard
5. Enter the information for the Scorecard
6. Click Save

Delete a Scorecard

Note - Deleting a scorecard does not delete the scorecard objects that are linked to it. The relationships with these objects are severed when the scorecard is deleted. You cannot delete a scorecard if it has child scorecards associated to it. You must first delete or remove the child scorecards before continuing. To delete a scorecard follow these steps:

From the Scorecard list page
1. Click on the Scorecard main menu item
2. Click on the Scorecards sub menu item
3. Search for the Scorecard you would like to delete.
4. Click the Delete button next to the Scorecard
5. Click Delete

**Scorecard Defaults**
The Scorecard Defaults page displays the default settings that will be applied whenever a new scorecard is created.

These defaults can be modified by selecting the Edit button in the top right corner. Each setting determines whether or not that scorecard column will be enabled (visible) by default.

**Customize Results Scorecard**
All of the features of Results Scorecard are configured to work out of the box and you do not need to do any additional set up. However, there are a few customizations you can make which can make your experience more tailored to your organization. In order to make changes to these settings you will need to have an administrator account with the proper roles. This documentation will cover the following:

1. Scorecard Language Editor
2. International Language and Date/Number Formats
3. Administrator Message
4. Results Scorecard Network Settings
5. Enhanced Security
6. Measure Reporting Frequencies or Calendars
7. Default Scorecard Object Notes
8. Default Color Bands
9. Action Custom Fields

**Scorecard Language Editor**
Results Scorecard comes pre-configured with language to support the Results-Based Accountability methodology but you can easily adjust it to suit your organization. From the admin menu, select Language Editor. The language editor allows you to adjust the word values for each of the Scorecard objects in the software. Scorecard objects refers to data elements that can be placed on a scorecard, such as a Result, Indicator, Program, Performance Measure, or Action. You can also adjust the letter that appears in each icon for each object. For example, some organizations will change the word Result to Outcome. They will probably also want to adjust the R icon text to be an O instead.
International Language/Formats
The first setting you can configure is the Date and Number formats. By default Results Scorecard uses United States English settings. To update your culture settings, navigate to Admin --> Site Settings and locate the Culture dropdown. Changes to culture are reflected for all users on your Results Scorecard site.
In addition to the various cultures you can select, at this time Results Scorecard comes in two additional languages, Arabic and Latin American Spanish. To translate Results Scorecard simply select one of these Cultures from the dropdown and select Update.

Administrator Message
The administrator message is a rich text box you can edit that displays text on the homepage of the software. This message is seen by all the users on your site when they login so you can use it to include links to training, download documents or other news you would like to distribute. To edit the admin message you need to have the Admin Settings role. If you have that role an edit button will appear on the top right corner of the administrator message and allow you to make and save changes.

Results Scorecard Network Settings
The Results Scorecard Network is a sharing module of Results Scorecard that allows you to publish and read best practices about real turned curves from other organizations. By turning it on you will be able to see the location of many other organizations and your location and name will be visible to everyone else. In addition you will also get access to the Shared Practices Library where you can view examples of measures that other organizations have had success in impacting.
In order to enable this feature you must put in your location and a description of your work.

Enhanced Security
Also from the settings page you can turn on or off enhanced security. Enhanced security is designed with high security corporate and government agencies in mind and meets most strict password management precautions. Enabling enhanced security will require users to change passwords every 45 days, have stricter rules for designing passwords, and force a change of any temporary passwords. To see a
Measure Reporting Frequencies
Results Scorecard includes two types of measures. Indicators and Performance Measures. Both of these measures use the same reporting calendars such as annual, quarterly, and monthly. You can view the available Calendars under the Admin --> Calendar Manager option. By default the system includes several default calendars for monthly, quarterly, half year, and annually. You can add your own and customize the start and end date of these calendars for custom time periods like Fiscal Month or Year.

Start and End dates come in to play with Calendars when doing data imports and dates for data needs to be picked. The maximum number of periods for a calendar is 12 so you cannot report more frequently than monthly using Results Scorecard.

Default Scorecard Object Notes
Next on our initial setup list are Object Notes. Notes are pieces of qualitative information that display on each of the presentation views for the Scorecard objects. Here is an example of an Indicator presentation view with the 4 default notes displaying. By default Results Scorecard notes are configured for Results-Based Accountability and generally improving population results and program performance.

You can change the order that notes appear in, create new notes, and determine what notes get placed on what objects by default. It is important to know that although these settings will change what notes get added by default when a new Indicator for example is created. Once an Indicator (or any object) has been created you can customize what notes display on that specific object on the edit page. Setting up default notes saves you time down the road by getting the right input fields added to all your objects right away. To configure which notes get added to each object select the Edit button next to that object. To create new notes or rearrange them click the Manage Note Types button.

Default Color Bands
On the Admin menu select Global Color Bands. Same as with the notes above these are the thresholds that will get added to any Indicator or Performance measure when they are created but can be customized on a measure by measure basis. The percentages shown here represent a percentage of a target value so 75% of a target value of 50 would be 37.5. For more on color bands check out the Color Bands video under the Data and Graphs section.
**Action Custom Fields**

Finally you can choose to add custom fields to Actions. You can edit custom fields by selecting Admin --> Action Custom Fields. These fields display on the Action Presentation view and can contain values. Some examples that organizations use are Budget, Spent to Date, and PM Code. These fields can be used for tracking additional information about Actions or lining up your efforts in Results Scorecard with another project management or record keeping system.

Once a custom field has been added it will be added on the Custom Fields tab on the Action Edit and Create pages.

**Tags**

In various lists and reports you can use tags as a filter for finding the scorecard objects you want. Tags also help you keep track of scorecard objects that have the same name but belong to different geographical regions, departments, etc. Most scorecard objects will only need one tag but you can have up to 5 tags. The tag that appears first in the list is the primary tag that will display with the scorecard object. The other tags are used for categorization and allow the object to show up when those tags are selected in the tags filter.

When hovering over a tag in the application the description will appear as a tooltip box to provide additional clarity.

**Tag Properties**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the Tag. Maximum 15 characters.</td>
</tr>
<tr>
<td>Description</td>
<td>Maximum length 250 characters. The description of the tag that will be in a pop-up anytime you hover over the tag with your mouse.</td>
</tr>
</tbody>
</table>
Create a Tag

**Using the Tag Control Box**
1. On the **Scorecard Fast Builder** or the **Edit page** for any scorecard object
2. Enter a tag **name** in the Tag Control Box
3. Press the **spacebar**
4. Enter the **Name** and **Description** for the tag
5. Click the **Add Tag** button

**From the list page**
1. Click on the **Scorecard main menu** item
2. Click on the **Tags sub menu** item
3. Click on the green **Add New button**
4. Enter the information for the Tag 5. Click **Save**

Edit/Rename a Tag

**From the list page**
1. Click on the **Scorecard main menu** item
2. Click on the **Tags sub menu** item
3. **Search** for the Tag you would like to edit.
4. Click the **Edit** button next to the Tag
5. **Enter** the information for the Tag
6. Click **Save**

Delete a Tag

Deleting a Tag does not delete any objects that are related to that Tag. Any objects that have the Tag will no longer be able to display the Tag with them throughout the application. **Deleting a Tag is permanent and cannot be undone.**

**From the list page**
1. Click on the **Scorecard main menu** item
2. Click on the **Tag sub menu** item
3. **Search** for the Tag you would like to delete
4. Click the **Delete** button next to the Tag

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**Scorecard Fast Builder**
The Scorecard Fast builder is the edit mode of a scorecard. The Fast Builder is a great tool for getting your scorecards up and running quickly without a lot of repetitive clicks, it gives you the ability to quickly add and make changes to all the scorecard objects that are on that specific scorecard. To open the Fast Builder simply click edit next to any scorecard in the scorecard list or the grey gears edit button while viewing a scorecard. Making changes to objects on the Fast Builder makes those changes to the object itself. For example if you remove an Indicator relationship from a Result on the Fast Builder that Indicator will no longer be linked to that Result on any other Scorecard.
Because the Fast Builder allows you to simultaneously edit every object on a scorecard it is limited to 100 objects since many browsers cannot handle more editable items than that on one page. If you add more than 100 objects to a scorecard the Fast Builder component will no longer load with the scorecard edit page and you will need to make changes to the various scorecard objects using their individual edit views.

1. The user tab is where you can assign users the ability to see this scorecard. If the user has the All Scorecards privilege they will not appear in the users tab since they always have access to every scorecard. This can also be, and often is, set up on the edit user page.
2. The name of the scorecard as it displays in the dropdown list and on the scorecard list page
3. A description of what the scorecard is that will display under the Scorecard name when viewed. Maximum 250 characters.
4. The parent scorecard option allows you to organize your scorecards into a hierarchy by having many levels of parent/child scorecards. Selecting a Parent Scorecard will place this scorecard in an expanded dropdown subset of the parent in any Scorecard lists.
5. This checkbox determines whether or not this Scorecard and all the scorecard objects that are linked to it will be shared through a Results Scorecard connection. For more information check out the RS Connect support page.
6. The Enable Embed checkbox determines whether or not this scorecard and all the scorecard objects that are linked to it can be embedded. For more information about embedding scorecard objects check out the Embed Objects support page.
7. The column toggles determine what columns will display on this scorecard. If the switch says “On”, then the column will display when this scorecard is viewed.
8. The Results section of the Fast Builder is responsible for housing and managing all the Results, Indicators and Nested Programs and Performance Measures. Note Programs and their Performance Measures only display in this section if they are nested under a specific Result. Most Programs will display below in the Programs section of the scorecard.
9. The New Result and Existing Result buttons will add more Results to this section of the Scorecard. Adding an existing Result will also add any existing Indicators that are related to that Result.
10. The X icon will remove a scorecard object from the scorecard. Objects cannot be deleted from the fast builder view and instead the relationship is simply removed from the scorecard. The three dots icon is a drag handle. Use this hand to drag and drop objects around the scorecard to change the order in which they display on the scorecard.
11. The scorecard divider section allows you to add a name and set the color of the scorecard divider that will appear above this Result. If no divider exists there will be an add divider button to allow you to add one.
12. The tag entry box displays for each scorecard object. To add a tag to an object, just start typing the tag in this box. If the tag already exists you will be able to select it from the list that appears. If you need to create a new tag simply press spacebar after you have entered the tag and a pop-up will appear to help you finish the process of creating the new tag. Each object can have a maximum of 5 tags and the first tag (primary tag) is the one that will display with the object on the scorecard. The other 4 tags are used only for categorizing purposes.
13. The Indicator configuration section lets you change the options for many Indicators quickly. Hovering over any of these boxes will open a help tip that tells you what each one is. The Frequency dropdown is grayed out and cannot be changed if Data Values have been entered for that Indicator. For more information about what each of these options does see the corresponding item in the Indicators support page.
14. The New Indicator and Existing Indicator buttons will add more Indicators to this Result. Each Result has its own set of these buttons so make sure you choose the correct one.
15. The Programs section of the Fast Builder is responsible for housing and managing the Programs and Performance Measures that are directly related to this Scorecard.

16. The New Program and Existing Program buttons will add more Programs to this section of the Scorecard. Adding an existing Program will also add any existing Performance Measures that are related to that Program.

17. The New Performance Measure and Existing Performance Measure buttons will add more Performance Measure to this Program. Each Program has its own set of these buttons so make sure you choose the correct one.

18. The Performance Measure configuration section lets you change the options for many Indicators quickly. Hovering over any of these boxes will open a help tip that tells you what each one is. The Frequency dropdown is grayed out and cannot be changed if Data Values have been entered for that Performance Measure. For more information about what each of these options does see the corresponding item in the Performance Measure support page.

### Embed Objects

#### Quick Facts

1. The embed pages are designed to make reporting to stakeholders easier by giving them access to your live performance data.
2. The embed pages are non-secured, read-only versions of your data that can be shared on an external website or with a link.
3. Viewers of the embed pages can see and interact with the data but they cannot make changes or download files.
4. Actions related to the embedded object do not display.
5. Indicators and Performance Measures can also have just their graph embedded.
6. The embed pages are NOT designed to replace a login to Results Scorecard and have limited capabilities.

Results Scorecard allows you to embed any Scorecard or scorecard object that you would like to make viewable to the public on your website or as a hosted page. These pages and embed views do not require authentication to view so users do not need to log in to access your Results Scorecard data.

Objects that can be embedded include Scorecards, Strategy Maps, Results, Indicators, Indicator Graphs, Programs, Performance Measures, and Performance Measure graphs. Each of these pages is fully interactive the same way it is in the Results Scorecard application just minus the ability to edit the information contained on the embed views. Users can click on the names of object to open the presentation views for those objects but can only navigate one level in. They will not be able to continue navigating to more and more relationships for security purposes. To enable scorecard objects to be embedded they must be linked to a Scorecard that has embed enabled.

#### Enable Scorecard Embed

1. Navigate to the Scorecard that you would like to enable embed for.
2. Click **Edit** on the scorecard
3. Check the **Enable Embed** checkbox
4. Click **Save**

This scorecard and all objects related to it can now be embedded or shared as hosted pages.

**Get the Embed Code for a Scorecard Object**

1. **Navigate** to view the object you wish to embed
2. Select the **options dropdown menu** from the button toolbar in the top right corner of the page
3. Select the **Embed** option from the dropdown (Note this option only appears if the object you are trying to embed is linked to a scorecard that has embed enabled)
4. Copy the **Embed code** from the modal box that appears

**Embed Code vs. Hosted Page**

When you select the embed option a modal box will appear that will give you two options.

1. The **Embed Code** is an HTML snippet of the code that will embed the object with interactive data on your website. This option requires a web developer with technical knowledge of how HTML works in order to use it.
2. The **Public Hosted Page** is a URL or web address that can be shared with anyone who does not have a Results Scorecard account to view the object. This URL can also be shared on social media or posted on your website as a link.

**Default Note Editor**

*To Access the Default Note Editor select the menu item under the Administration menu.*

Notes are a vital part of the Results Scorecard process. Notes are the rich text boxes that appear on Results, Indicators, Programs, and Performance Measures. These notes include the Story Behind the Curve, Partners, What We Do, Why Is This Important?, and many more. Since many of these terms come from Results-Based Accountability and some organizations may have their own methodologies that they want to follow we make it easy to
customize how Results Scorecard structures these notes.

By changing the default notes for the items in the default note editor you will be changing what notes get created with your scorecard objects. For example, if you want two notes to display on Indicators called Risk Analysis and Six Sigma Analysis you can use the steps below to create a new note, then edit the default Indicator notes and assign just those two notes. From then on any Indicators that are created on your site will ONLY have those two notes instead of the default RBA ones.

Manage Notes
You can control the sort order of the notes on your site using the manage note types page. Changing the sort order here will change the order that the notes display in on the presentation views.

1. The drag handles next to the note type allows you to drag and drop to change the sort order
2. The Add New button allows you to create new notes
3. This button will save the updated sort order

Note - the standard notes that come with Results Scorecard cannot be edited or deleted but they can be reordered.

Create a New Note
1. Select the Manage Note Types button
2. Select the Add New Button
3. Enter the name of the note (This will be the header for the note on the presentation views)
4. Click Save

Edit the Default Notes for a Scorecard Object
This can be done to Results, Indicators, Programs, and Performance Measures.
1. Select the Edit button next to the item you wish to change the default notes for.
2. Select the check box next to each note you want created on each new scorecard object of that kind.
3. Click Save

Note - changes made on this view will not affect any existing objects. If you want to change the notes on an existing scorecard object you will need to edit that object individually and modify the notes tab.

Gantt Chart
The Gantt Chart is an interactive tool for displaying and working with Action (project) timelines. The Gantt chart page displays Actions over time with their start dates and end dates categorized by the Scorecard Objects to which they are attached. The Gantt Chart will
load in an editable view for users that have the Add/Edit Actions role and in a read-only view for users that do not. Both users may export the Gantt Chart.

**Gantt Chart Options**

1. The name of the Scorecard for which you are viewing Actions appears at the top. If you are viewing the Gantt Chart for all Actions it will simply say "Gantt Chart".
2. The filters that are available appear below the title.
3. Actions are organized in rows in the Gantt Chart and categorized by the Scorecard Object (Result, Indicator, etc.) which they are related.
4. The plus icon allows you to create new actions
5. The time range selector options allow you to resize the Gantt Chart to fit the perspective you would like to see.
6. Dragging either side of the Action will change the length of the Action
7. Dragging the middle of the Action will move the timeframe of when the Action occurs (Start and End dates affected)
8. Moving the slider at the bottom of the Action will update the Percent Complete of the Action
9. Double clicking on the Action will open the details modal where you can update the Action name, status, assignee, and date range.
10. The buttons toolbar allows you to export the Gantt Chart.

**Scorecard Based Gantt Chart**

You can view a Gantt Chart in one of two ways, the first is by scorecard. Clicking on the Icon to the left of the Scorecard name in Strategy Map mode or Scorecard mode will display an option for Action view.

When the Gantt Chart opens in this format you will see only the Actions that are connected to a specific scorecard. This is useful when determining what the next steps are for improving performance on an individual scorecard.

**All Actions Gantt Chart**

The second way to view a Gantt Chart is for all Actions in your Results Scorecard site. To open a generic Gantt Chart of all Actions, select the Action Manager menu item from the main menu and then select Gantt Chart. This view is useful for using the filters such as showing an Action plan for a specific person or a specific period in time.
Strategy Maps

A strategy map is a diagram that is used to document the primary strategic goals being pursued by an organization, collaborative, or team. Most Strategy Maps, and therefore scorecards, will have less than 20 Results and Programs. While a map can hold more than 20 objects, doing so cause it to be less coherent; reducing its value. In the Results Scorecard, the Strategy Map module is used to display and organize Results and Programs from a Scorecard. If you would like to add additional objects to a Strategy Map, you will need to add them to the Scorecard for that Strategy Map. Clicking on the Results or Programs while the Strategy Map is not in edit mode will open the presentation view for that object. This makes the Strategy Map a simple and easy way to navigate through your strategy.

The first time that you open a Strategy Map for a scorecard, the Results and Programs will be stacked on top of each other, ready to be organized. You may add additional boxes, arrows, and images to the Strategy Map to customize it to fit your needs.

Security

All users that have access to a Scorecard may view the Strategy Map for that Scorecard. To edit a Strategy Map, a user will need the Add/Edit Scorecard Objects role.

Strategy Map Interface

1. The Strategy Map icon indicates whether the Scorecard you are currently viewing is in Strategy Map mode. Clicking on this icon will allow you to view this same set of information in a Scorecard format or as a Gantt Chart.
2. The name of the Scorecard you are currently viewing as a Strategy Map.
3. The Download button allows you to export the Strategy Map into various formats, including: PDF, Jpeg, PNG, and more.
4. The Options menu allows you to access the embed option for this Strategy Map. Note - this option only appears if Embed is enabled for this Scorecard.
5. The Edit button switches the Strategy Map into Edit mode. For details on Edit mode, see below. This option only appears for users with the Add/Edit Scorecard Objects role.
6. Results display in the Strategy Map as a Green box by default. Clicking on the Result will open the Result presentation view in another browser tab.
7. Arrow connecters may be added between objects while in Edit mode. These connecters are arbitrary and do not represent actual relationships in the Results Scorecard software. They are intended only for showcasing linkages between Results and Programs.
8. Programs display in the Strategy Map as a Blue box by default. Clicking on the Program will open its presentation view in another browser tab.

Strategy Map Edit Mode

1. The Strategy Map icon indicates whether the Scorecard you are
Currently viewing is in Strategy Map mode. Clicking on this icon will allow you to view this same set of information in a Scorecard format or as a Gantt Chart.

2. The name of the Scorecard you are currently viewing as a Strategy Map.
3. The Cancel button will close the Strategy Map edit mode and discard any changes you have made.
4. The Refresh button will scan your Strategy Map and add any missing Results or Programs that were removed or added to the Scorecard. This option will not change the arrangement of your existing Results or Programs.
5. The Save button will save your map while allowing you to continue to work. The Save and Exit button will save all of your changes and exit the Edit mode.
6. The Strategy Map menu provides you access to additional options related to the objects on the canvas. In these menus, you can flip object orientations, open/close the format panel (right side, see #8), arrange what layer objects are on, and much more.
7. The objects pane on the left side gives you access to additional shapes and arrows that you may add to your Strategy Map. To add an object just click and drag it onto the canvas.
8. The Format pane is closed by default. It may be accessed from the View menu, and gives you access to change text, background, and other size and color formatting options.
9. The canvas appears in the middle of the page. Objects that display on this canvas become part of the Strategy Map itself. Drag items around and resize them to change the Strategy Maps.

Methodology Based Advice
The Strategy Map module is a free-form drag and drop editor that can be easily adapted to fit many different methodologies, including Logic Models and Balanced Scorecard.

Tips for creating a Balanced Scorecard Strategy Map
1. Balanced Scorecard Strategy Maps utilize perspectives. While Results Scorecard does not have built-in perspectives, you can easily add them visually by dragging rectangles onto the canvas, making them large, and giving them titles.
2. BSC Strategy Maps should have Results at the top and Programs at the bottom as a rule of thumb.

Tips for creating a Logic Model using the Strategy Map module
1. If your organization exclusively refers to strategy maps as logic models you will likely want to change the language in the language editor to be clearer.
2. A logic model is usually read left to right, so arranging the Programs to the left side and Results to the right side will provide an input-output design.
3. You can add additional boxes to the Strategy Map to categorize the Programs and Results into Inputs, Outputs, and Outcomes/Impact.

Results Scorecard Connect
The Results Scorecard connect module allows you to connect your Results Scorecard site data with other organizations that are also using Results Scorecard. Only the Site Owner can access the RS Connect page and set up RS Connections.

Overview
Results Scorecard Connect is a two way street of information sharing that can be controlled at either end and is managed at a per scorecard level. That means that you can just share your content with other organizations, they can just share their content with you or you can both share back and forth. This means that grant makers can be collecting information from
many grantee organizations without being required to share the grant maker’s information back with those grantees. You control who you connect with, what you share, and they control what you can see from them.

Sharing
None of your content is shared through RS Connect by default; you must first enable what content you want to share at a scorecard level. Results Scorecard Connect allows you to share access to Scorecards, Results, Indicators, Programs, and Performance Measures. With RS Connect you choose what scorecards to share and then any sites you are connected with can access those scorecards as well as all Results, Indicators, Programs, and Performance Measures that display on those scorecards. This makes it easy to share large amounts of data without having to change a setting on each individual items. If you don’t want to share any of your existing scorecards you can also set up a scorecard just for sharing and place all your public or shared content on that scorecard.

Viewing
Viewing shared content is just as easy and intuitive as viewing your own content. You do everything the same exact way except that when you are on a list or index view for any of the scorecard objects you will now see a new dropdown filter. This filter will allow you to select any content from sites that you are connected with. When building scorecards and forming relationships you will also see this filter on the “add existing” fly-out screen so you can include shared content on your scorecards.

When viewing any shared content you can always differentiate it from your own by the dark gray client code that appears in front of the item. In the screenshot below you can see the RLG-CHS client code denoting that the Result and its Indicators are from another site. Hovering over this box will display the complete organization name the same way hovering over a tag will display the tag description for inline clarity. This same styling appears throughout the application anywhere shared content is displayed. This screenshot also shows how shared content can be included on your scorecards.

Editing
RS Connect is a read-only sharing tool. Shared objects cannot be edited on the connected sites meaning that only users on your site are capable of maintaining, editing, creating, and deleting your content. Connected sites can use your Indicators and Performance Measures as part of calculations though since on the relationships tab for these items your shared Indicators and Performance Measures will be selectable to include in aggregations.
The RS Connect Management Page

1. The client code entry box is where you enter the client code of the organization you would like to connect with. You can find your client code in the top right corner of the Results Scorecard application in parenthesis after your organization name.

2. The request connection button will process the client code and send an email to the site owner of the site letting them know they have a new Results Scorecard Connection request. A request is processed to both share content with the other organization as well as receive their shared content. If you only want to set up “the connect” one way, just revoke the other access once they accept the connection. If the client code is not valid you will receive a message letting you know. If the request is successful you will see the organization show up in boxes 3 and 6.

3. The box of “Organizations Sharing Content With You” displays a list of organizations that you have access to their shared content as well as the status of those connections.

4. The status column displays the status of your Results Scorecard Connections. They are either Awaiting Approval or Active. Awaiting Approval means that a connection request has been processed and the receiving site owner still needs to approve the connection. Active means the connection is complete and any shared content is being displayed across the two sites properly.

5. The Action column allows you to Approve, Deny, Edit and Revoke RS Connections. Clicking one of these actions will immediately take the chosen action.

6. The Organizations With Access to Your Shared Content box displays a list of organizations that you are sharing your shared content with as well as the status of those connections.

7. The edit scorecards option only appears for the Organizations with Access to Your Shared Content section so that you can control what scorecards you are sharing.

8. The Scorecards You are Currently Sharing section shows you what scorecard content you are sharing with other organizations. Each client code will display with the scorecards you have shared to that specific client site. You can share different scorecards with different organizations.

Create a New Connection
1. Ask the organization that you want to share content with what their client code is
2. Enter the client code in the Client Code Entry Box (see above screenshot)
3. Click the Request Connection button
4. An email will be sent to the site owner of the requested site and when they approve it your connection will be active.

Manage What Content is Shared
As mentioned above in the sharing section you can control what scorecards of yours other organizations can see so you don't have to share everything. Use the "Scorecards You are Currently Sharing" section of the RS Connect management page shown above to
audit what you are sharing and make sure other organizations can't access your private scorecards. To share a new scorecard or remove a shared scorecard from this list you can do the following:

1. Click on the **Scorecard main menu** item
2. Click on the **Scorecards** sub menu item (brings up a list of scorecards)
3. Search for the Scorecard you wish to edit and select the **Edit** button
4. Check or uncheck the **Share on RS Connect** box
5. Click **Save**. This scorecard will now be updated with your sharing preference.

**Revoke Access to an Existing Connection**

To revoke a connection, simply click on the revoke button next to the organization on the RS Connect management page. This will immediately remove the connect and all relationships will be removed. The removal of relationships cannot be reversed so make sure you want to proceed before clicking this button.

You can restore the connection by sending a new request to the client code.

Note - Clicking revoke only works on one sharing direction at a time. If you are sharing content with an organization and receiving their shared content you will need to revoke both connections since it is a two way street.

**API: Overview**

The Results Scorecard API allows you to interact with our system programmatically from your own application. Using the API you interact with Scorecard Objects such as:

- Scorecards
- Results
- Indicators
- Programs
- Performance Measures
- Actions
- Tags
- Data Values

The API is grouped into several modules that each implement add, update, insert, delete, details and list operations for a particular section of the Results Scorecard data.

For security reasons, all API handlers are decorated with **[HttpPost]** attribute, forcing the API user to invoke the API using HTTP POST method.

All data submitted by the API client is sent as a XML or JSON payload of the POST request. This payload consists of some common data, such as the site code and API key, and some API specific data, for example an id of a database object.
You'll likely need access to a web developer or programmer (if you're not one) to get the most use out of the API.

**Authentication**
Authentication is implemented using an API Key included in each JSON or XML payload over SSL (https), as described in API Authentication.

**URL**
The URL for API requests includes the resource URI: https://api.resultsscorecard.com/<resource URI>

**Response Data**
Response data is sent as either XML or JSON, depending on the type of data requested (HTTP Content-Type header) or the type specified as being accepted (HTTP Accept header).
Response codes are sent via the normal HTTP Response Code, and are documented separately for each resource.

**Request Data**
POST request data may be formatted as either XML or JSON. For best results, you should set your HTTP ContentType request header accordingly, although you may also specify your format by appending .xml or .json extensions on to the resource URI.

Note that Results Scorecard does not accept POST data sent as query params or form encoded data – data must be sent as either XML or JSON. If you fail to set your Content-Type to either application/xml or application/json, your request may fail due to triggering of forgery protection mechanisms.

**Debugging**
For development purposes we also have a publicly available API test application that will allow you to send test requests to verify your call is correct. You can access the API test tool here: https://api.resultsscorecard.com/test

Another handy tool is RequestBin. You could create a RequestBin and send your request to them instead of us to see visually what it is you're sending, if you're not sure.

For more development information check out our Development Tips page.
APPENDIX B

CAUSE AND EFFECT DIAGRAM
PROCESS MAPPING
What is a cause and effect diagram?

A cause and effect diagram, also known as an Ishikawa diagram (after its developer Dr. Kaoru Ishikawa) or “fishbone” (after its shape) diagram, is a graphic tool used to explore and display the possible causes of a certain effect. It will help you to identify potential changes to test for your quality improvement project.

Why it is such a valuable tool to you and your team?

1. It helps teams understand that there are many causes that contribute to an effect.
2. It graphically displays the relationship of the causes to the effect and to each other.
3. It helps identify areas of improvement within your project.

What is a cause?

Causes are parts of a system and forces outside a system that directly influence the outcome, or aim, of your project. For example, one cause of a low hand hygiene compliance rate is provider behavior. In other words, getting providers to change their behavior (and wash their hands) directly influences the compliance level within the unit or hospital.

There are lots of causes that contribute to a certain effect. Take poor hand hygiene, for example. What are the contributing factors? Sometimes clinicians are too busy. Sometimes they wash their hands, but they don’t use proper hand washing technique. Sometimes the gel dispenser is broken. Sometimes the gel dispenser is working, but it is empty.

Consider these six categories of causes:

- **Materials**: Supply, design, availability, and maintenance
- **Methods and Process**: Steps in care process and steps in supply chain
- **Environment**: Staffing levels and skills, workload and shift patterns, administrative and managerial support, and physical plant, policies, and regulations
- **Equipment**: Any equipment/tools needed to get the job done
- **People**: Staff knowledge and skills/training, competence, patient behavior, and supervision
- **Measurement**: Data collection, definition of measures, and sampling issues
What are the steps required to construct a cause and effect diagram?

1. Write the effect (in other words, the thing you’re trying to change) in a box on the right-hand side of the page.

2. Draw a long horizontal line to the left of the effect.

3. Decide on the categories of causes for the effect. As mentioned above, useful categories of causes in a classic fishbone diagram include Materials, Methods and Process, Environment, Equipment, People, and Measurement. Another way to think of categories is in terms of causes at each major step in the process. (Note: These categories can vary depending on your project. Manufacturing sometimes follows the “5 M’s”: man, machines, materials, methods, and measurement. Nonmanufacturing systems sometimes use the “5 P’s”: patrons, people, provisions, places, and procedures. Just make sure the categories you chose fit your project.)

4. Draw diagonal lines above and below the horizontal line (these are the “fishbones”), and label with the categories you have chosen.

5. Brainstorm and collect a list of cause for each category.

6. List the cause on each fishbone. If a cause has a secondary cause, draw a branch bone to show relationships among the causes.

7. Develop the causes by asking, “Why?” until you have reached a useful level of detail – that is, when the cause is specific enough to be able to test a change and measure its effect.

Modified from the IHI tools at www.ihi.org, 2013.
**Process Mapping/Flowchart**

**What is a process map diagram / flowchart?**

A process map diagram/flowchart is a representation of the distinct steps of a process in sequential order.

**How can a process flow mapping exercise be helpful?**

The development of the process flow map is a team effort and it will educate everyone on the reality of the process. It will not be perfect the first time through. It is recommended to add more detail as it evolves. Create the real flow on paper and post it publicly for others to offer input and critique. It is very important to catch the rework loops, communication issues, decision delays, stops, starts, pick-ups, drop-offs, and other waste so the team fully understands the opportunities. These "what-if" and "sometimes" paths are important for everyone to document and understand. This knowledge will create better subjective decisions when assigning weights to the inputs using the subjective root cause analysis tool in subsequent phases.

**When to Use a Flowchart?**

- To develop understanding of how a process is done.
- To study a process for improvement.
- To communicate to others how a process is done.
- When better communication is needed between people involved with the same process.
- To document a process.
- When planning a project.

**Tools you could use to develop a process flow diagram?**

- Brain storm with stakeholders using post- its/ white board / chalk board / flip chart drawing
- *draw io, MS visio, lucid chart* are some online tools that are available and help you draw the flow diagram. The example shared here was developed on *draw io*

**Key steps in process flow mapping**

1. **Determine the boundaries**
   a. Define a starting point
   b. Define an end point
   c. Spend time to clarify the process and involve various teams to get the details on processes and issues. Get the team consensus.
2. List the steps

3. Sequencing the steps and draw the flowchart
   a. While doing so, it may be helpful to identify how much time does it take to complete a step, how much manpower is required per step, what sub-activities are carried out while completing a step.
   b. This will potentially be a process where obvious points for process improvement are recognized or become evident.

4. Test for completeness

**Helpful hints for drawing a flow chart**

- To represent a starting or ending point draw an Oval
- Task/ action and execution steps are typically represented in a square or rectangle
- A yes / no type decision point is written in a Diamond box
- Link to another page or flow chart/ continuation uses the circle as a symbol
- Document
- Arrows help in representing the direction of flow from one step to another

The development of the process flow map is a team effort and it will educate everyone on the reality of the process. It will not be perfect the first time through. It is recommended to add more detail as it evolves. Create the real flow on paper and post it publicly for others to offer input and critique. It is very important to catch the rework loops, communication issues, decision delays, stops, starts, pick-ups, drop-offs, and other waste so the team fully understands the opportunities. These "what-if" and "sometimes" paths are important for everyone to document and understand. This knowledge will create better subjective decisions when assigning weights to the inputs using the subjective root cause analysis tool in subsequent phases.
Example Flowchart / Process Map for IRB Process in a Research Organization

Reference links:
http://www.six-sigma-material.com/Process-Maps.html
trialsjournal.biomedcentral.com