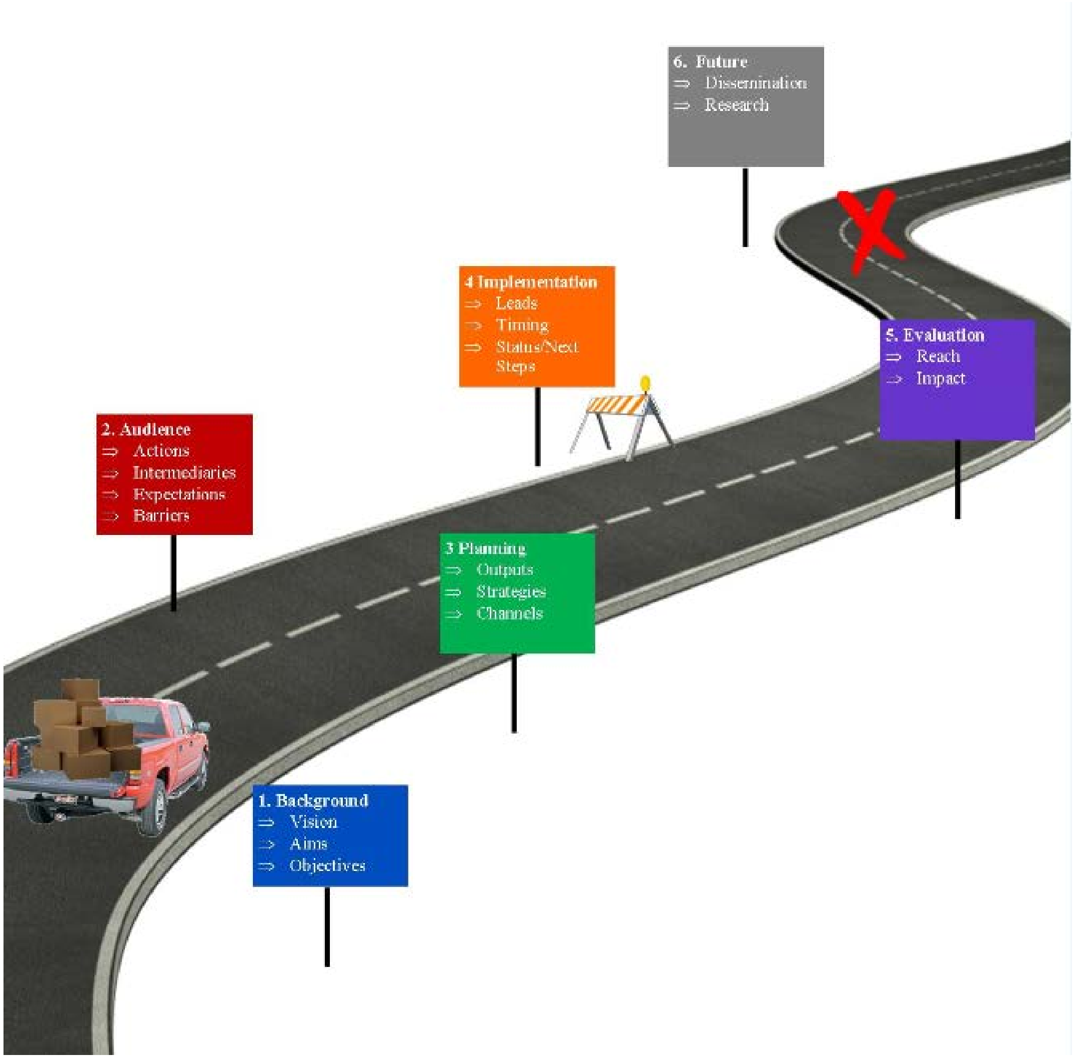
CPWR Research to Practice (r2p) Roadmap Tool: Guide



CPWR
THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

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Introduction

CPWR-The Center for Construction Research and Training's research to practice (r2p) program was established to ensure that construction safety and health research is used by target audiences to prevent injuries and fatalities in the construction industry.

Research designs typically include plans to notify study participants of the results and publish in peer-reviewed literature. While important, these steps alone do not guarantee that research findings have their intended impact. Unless the construction contractors and workers who could benefit most and those who have an influence over construction safety and health (e.g., safety and health professionals, unions, trade associations) are aware of the findings, they cannot act on them.

The CPWR **Research to Practice (r2p) Roadmap Tool** is designed to help you develop a written strategy for ensuring that your research findings and interventions reach and are used by your target audience(s).

How to Use the r2p Roadmap Tool

The r2p Roadmap Tool consists of two documents:

- The **r2p Roadmap Worksheet** to use to develop a plan for disseminating your research. It is set up as a Word document so that you can easily modify it to meet the needs of your project and research team.
- This **r2p Roadmap Guide,** which contains information and examples to help you complete each section of the **Worksheet.**

This **Worksheet** has six sections that build on each other. Each section includes the page number(s) in the Guide where information can be found to help complete that section.

The following are tips from researchers, including those who are members of CPWR's Research Consortium, who have developed Roadmaps for disseminating and implementing their research findings:

1. **Start your Roadmap early in the research process.** It is never too early to start planning for the successful dissemination and implementation of your research findings. Your research plan should include how your findings and interventions will be used.
2. **Engage your audience and intermediaries early in the research process and in the development of your r2p Roadmap.** Involving those who will ultimately use or influence the use of your research will help to ensure that your plan is realistic and can be implemented.
3. **Involve everyone on your research team when completing the Worksheet.** Consider having the research team, as well as representatives from your target audience(s) and intermediaries, complete the Worksheet together, rather than having a lead individual draft the document and doing rounds of revisions with other team members. Research teams have found that this helps to get everyone

on the same page, leads to creative brainstorming, and often identifies areas that need to be discussed more in-depth.

4. **Treat your Roadmap as a living document.** As a living document, it is meant to be changed and amended as your research progresses, as you learn more about your partners and target audience(s), and as conditions and contexts evolve. Review and update your Roadmap as needed, at least once a year over the project's duration. At the start of your project, there may be questions and sections of the Roadmap that you are not able to answer or complete with the information available. As your research progresses you may need to change your plans based on what you learn; this is fine and to be expected.
5. **Keep track of key changes to your Roadmap.** It is often helpful to be able to track the evolution of your r2p thinking -- changes made and the reasons for making them. Consider entering notes on new information or developments that led to a change in direction in a different text color, using the "Notes" section of each step, or as footnotes or endnotes.

Section 1: Background

Using your project proposal as a starting point, summarize your vision (overarching goal for the project), research aim(s), objectives, and any outreach activities conducted so far

Vision

Your vision is a description of how your research project will improve construction safety and health. It encompasses how things would look if your findings were fully adopted and implemented. You may have already articulated this vision in the background or significance sections of your proposal.

It is important to have a vision since it can influence how you identify your target audiences and set your dissemination priorities. When developing your vision, consider:

- *What* is the problem your research addresses and how big is the problem? If your findings or intervention were fully adopted in the field, what might be the potential impact?
- *Who* ultimately do you hope will benefit from your research? How many workers might be affected?
- *How* will they benefit? If your findings or interventions were fully implemented, how will their work environment change for the better? Does the finding eliminate a hazard? Does it reduce it? By a lot, by a little?

Example 1 – Safety and Health Vision for a New Tool
The tool developed through the research is commercially available and the industry norm.

Example 2 – Safety and Health Vision for "Essential Elements" of Career Technical Education
The "essential elements" of the safety and health training developed through the research have been universally adopted and implemented by community and technical colleges. Graduates of the programs are prepared to identify and address hazards and to communicate about and advocate for changes as new workers.

Research Aims (Goals) & Objectives

List your project's research aims and objectives. An **aim** is what you identified in your project that you want to accomplish. An **objective** is how you plan to accomplish the aim - specific milestones or steps that you will take. They are concrete actions, tend to be short-term, should be measurable and tangible, and have a defined completion date. Each aim can have more than one objective.

> ***Tip:*** *Depending on the complexity of your project, you may have several outputs in mind or may need to revisit and update this section as your work progresses. You might find it easier to create separate Roadmaps for different aims or groups of aims if you anticipate several outputs from each aim.*

Dissemination already conducted, including research outputs and audiences

If your project is already underway when you begin using this Roadmap or if this is a continuation of an earlier project, you may have already developed research outputs and engaged in dissemination activities. A **research output** is a product of your research used to share research findings with your target audience(s), such as a tool, work practice, training program, new research method, or translational product (e.g., toolbox talks, hazard alert cards, planning resources). **Dissemination** activities can include, for example, social media posts and presentations. *Only complete this table on the worksheet if you have already engaged in dissemination activities related to your project*.

Notes

Use this space to make note of any changes in your Aims or objectives that may occur as the project develops and you learn more about your audience(s).

Section 2: Audience Profile(s)

In this section you are asked to think about the audience(s) you want to reach with your research findings, what you know about them, and what will be important to consider in your dissemination efforts.

Key Audience(s)

Key audiences for your dissemination efforts should be the *most strategic one(s)* to reach with your findings. Consider who is most likely to benefit from or use your findings. For most research projects, construction workers will benefit most, but it is often the contractor or project owner who makes the decision about what safety and health solutions to adopt on the job site. While you may have more than one target audience, it is best to limit the number to those that are most critical to reach. List them in the space provided, starting a new row for each audience you will target. *(See page 7 for examples of audiences.)*

> ***Tip:*** *Rather than just listing "workers" consider narrowing it to the specific trade(s), segment(s) of the industry, or type(s) of worker. Being as specific as possible can help you successfully implement your plan and evaluate the impact.*

Preferred way to receive information

List what you know about how your audience(s) receives information and their preferences. Do they use social media? Is email a possible channel? Do they regularly receive information from a union or trade association?

As a starting point, the following are selected results from surveys conducted with different potential audiences on ways they receive or find safety and health information:

Workers – ***Best way to provide you (worker) with information on safer tools, equipment and worker practices (CPWR Worker Surveys):***

Methods (in order of most to least frequent - most frequent response highlighted)
Toolbox Talks
Training
Email
Mail
Union publication
Handouts/posters on job site
Websites

Contractors – ***Preferred Sources of Construction Safety and Health Information*** **(*****Dodge Data Analytics Survey, 2018*****):**

Top Five Preferred Sources (in order of most to least frequent - most frequent response highlighted)
Trade publications
Websites
Email
Toolbox Talks
Training Programs

Contractors – ***Top sources of safety and health information (Dodge Data Analytics Survey, 2013):***

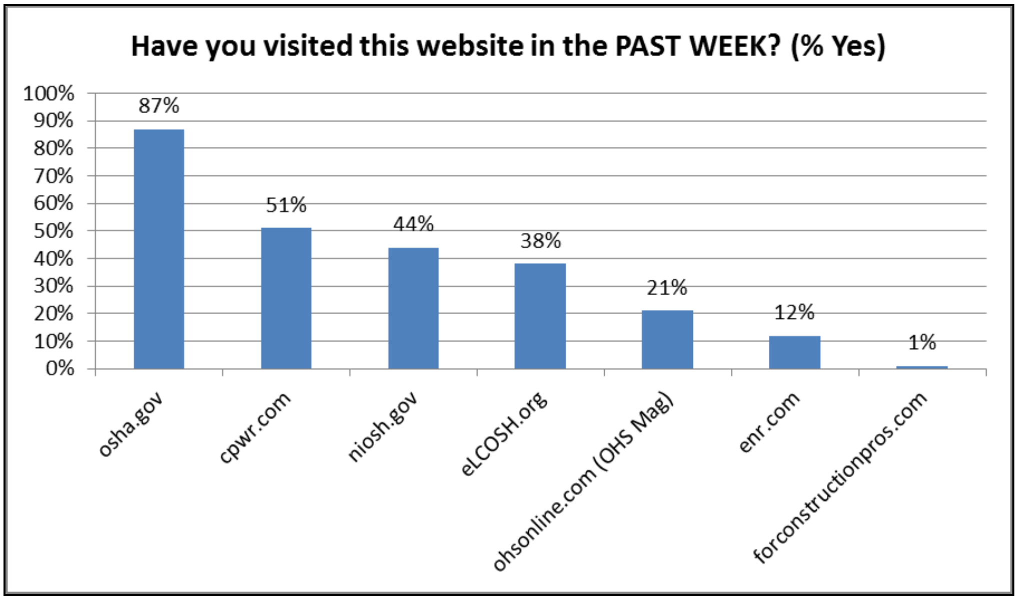
	Methods ranked from most (1) to least (6) frequent response (most frequent response highlighted) by contractor size			
Sources	**500+ employees**	**100-499 employees**	**10-99 employees**	**1-9 employees**
Peers	1	5	5	6
Online	2	1	1/2*	1
Training	3	3/4*	3	5
Regulatory Agencies and Associations	4	2	4	2
Publications	5	6	6	3/4*
Trade or Professional Organizations	6	3/4*	1/2*	3/4*

**Same percentage of responses*

Safety and Health Professionals – ***What are your most important sources of new information on construction safety and health? (CPWR Survey)****:*

Sources (in order of most to least frequent - most frequent response highlighted)
Occupational Safety and Health Administration (OSHA)
Trade Associations and/or Labor Unions
Contractors/Other Contractors
Trade Magazine
Trade Show
Safety Product Sales Representatives
Insurance company
Other publications – journals

Example Question and Response from Survey:



Trainers – ***Top sources for finding safety and health information and training materials (CPWR Trainer Surveys):***

Sources (in order of most to least frequent - most frequent response highlighted)
Occupational Safety and Health Administration (OSHA)
Union's training curriculum
CPWR - The Center for Construction Research and Training (resources and websites)
National Institute for Occupational Safety and Health (NIOSH)
Manufacturers
Internet searches
Other instructors
Professional organizations (e.g., NSC, AIHA, etc.)

Language, literacy concerns, cultural competency

When considering how you will reach your target audience(s) with your findings, it is important to take into consideration potential language barriers, literacy issues, or cultural differences. Is your target audience's native language something other than English? Can they read in their native language? What is their reading level? Are there other cultural issues that should be taken into consideration (e.g., age, gender)? What you learn should be taken into consideration when you develop research outputs and select communication channels and media.

Desired action

Once you have identified your audience(s), it is important to think about what you want them to do, think, or believe as a result of having access to your research findings. Audience actions may include, for example, purchasing new equipment, changing their work practice, reaching out and trying to influence other users, or conducting training. It may be a change in awareness and understanding of their role in controlling a hazard. List the desired actions for your audience(s).

Tips:

- *Be as specific and realistic as possible. If you are including "increased awareness" as a desired action, for example, do you want the audience to be more aware of their risk? Or to be more aware of an effective solution to address the hazard? Or to know about and use appropriate protection equipment?*
- *When thinking about what you would like your audience to do, some ideas from behavior change theories* may help. Consider, for example, the stages of change - is your audience in the* pre-contemplation*,* contemplation*,* preparation*,* action*, or* maintenance *stage? Progress may involve moving them from one stage to another.*
  - ✓ *Does your audience need to:*
    - o *Believe the problem is serious?*
    - o *Believe it will happen to them?*
    - o *See how it will benefit them?*
    - o *See how they can overcome barriers?*
    - o *Feel confident they can accomplish the behavior?*
  - ✓ *Who among members of this target audience tend to be early or late adopters?*
  - ✓ *What aspects of their larger working or social environment will affect your audience's ability to make the desired change? What would it take to change aspects of that environment?*

**For more information, see Theory at a Glance at:*
https://www.sbccimplementationkits.org/demandrmnch/wp-content/uploads/2014/02/Theory-at-a-Glance-A-Guide-For-Health-Promotion-Practice.pdf

Intermediaries and Expectations

It may also be helpful to think about others, such as insurance brokers, unions, and trade associations, who have a connection to and may be able to influence your target audience(s) and help with dissemination. Use this section to list groups or individuals who can help you reach your key audience(s), and what role you would like them to play in promoting and disseminating your findings.

The following list may help you identify possible audiences and intermediaries for your research**.** Note that some audiences can be both end users and intermediaries. For example, owners would be the target audience if you wanted them to adopt an intervention, but if you want owners to disseminate information to their contractors then they would be an intermediary.

- Contractors/employers
- Foremen/site supervisors
- Trade associations
- Workers
- Labor unions
- Joint labor-management apprenticeship programs
- Community colleges/other training providers
- Non-profit community organizations (national, regional, or local community-based organizations)
- Equipment manufacturers
- Material suppliers
- Tool and equipment rental firms
- Building project owner organizations (public or private sector)
- Insurance associations/companies
- State-based insurance providers
- Construction professional associations (e.g., architects, engineers)
- Safety and health professional associations/ individuals
- Consensus Standard Groups
- Federal or state OSHA
- Other federal government agency (e.g., NIOSH, EPA)
- Local government agency (e.g., local building inspectors, licensing and permitting offices)
- Academic institutions/researchers
- Policymakers (e.g., elected officials)
- Public Interest Groups

Tips:

- *Be specific and realistic. Instead of just writing "unions" for example, list the specific union and if you have a contact, list that person.*
- *When considering what you would like intermediaries to do, remember that assisting researchers is not their primary focus. Be clear up front about expectations and be willing to adjust your expectations to accommodate their available time and resources.*

Potential barriers to reaching an audience and ideas for overcoming barriers

In addition to understanding audience preferences and identifying intermediaries that can help, it is important to consider potential barriers (other than language and literacy) that might affect your ability to reach your audience(s) and influence their use of your research finding. List possible barriers and ideas to address them for each audience in the space provided.

Examples:

Barrier *– The audience is resistant to accepting information from someone they do not have a working relationship with.*

Idea for overcoming this barrier *– Involve an intermediary that your audience trusts to help promote the research finding and encourage its use.*

Barrier *– The audience believes adopting the finding will reduce productivity and negatively impact their profitability.*

Idea for overcoming this barrier *– As you are conducting the research, gather information that will address this concern such as productivity improvements, potential savings from preventing an injury, or the point when they could break even if they adopt the intervention.*

Notes

There may be other factors that did not fit in the earlier spaces – values, beliefs, capacities, cultures, relationships – that could affect dissemination and audience adoption of the finding. Before you complete this section, take a few minutes to brainstorm and list any relevant thoughts in the space provided. You can also use this space to make note of any changes to your expectations, barriers, or ideas for overcoming barriers that may occur as the project develops and you learn more about your audience(s).

More detailed information on the challenges to and ideas for reaching and working with target audiences and intermediaries can be found in the *"Summary Report: Research to Practice (r2p) In Construction: Science, Strategies & Partnerships to Advance Safety & Health – June 2015-June 2019" and the "Construction Research to Practice Partnership Toolkit."*

Section 3: Dissemination Planning

Once you understand your audience, you are ready to begin developing your dissemination plan. For each audience and research finding, list the most promising **dissemination strategy** (or strategies) and **communication channel(s)**.

Research Outputs

List the research outputs to be disseminated. As a reminder, your research output may be in the form of, for example, a report, training program, article, tool, toolbox talk, hazard alert card, online resource (app, planning or assessment tool), and/or a new work practice. If you had already developed a research output and begun dissemination activities (refer to Section 1), but had not completed those activities, then you should include the output in this section along with next steps for completing the activities.

Audience(s)

For each research output, list which audience(s) (identified in **Section 2**) it will be disseminated to.

Dissemination and Communication

Distinguishing between dissemination and communication can be confusing because they often overlap. For the purposes of this Roadmap, we are defining **dissemination strategies** as the broad approaches that will be employed, and the **communications channels** as the distinct mechanisms and activities being used within those overarching approaches. Having said this, when completing this portion of the worksheet, ***the most important thing is not which column you list your strategy in, but making sure that your research team understands what will be done to make your research findings and related outputs available to the audience and how you are going to do it***.

Dissemination Strategies

As you build out your dissemination strategy, think about the best ways to reach and influence your intended audiences (e.g., their attitudes, literacy level, preferences, affiliations). For each output and audience, describe the dissemination strategy you plan to employ. The following are examples of different types of dissemination strategies:

Dissemination Strategy	Description
Education/Training	Integration of finding into apprenticeship or upgrade training, professional training, tailgate/toolbox training, supervisor training, educational materials, peer training, etc.
Communications Outreach/Marketing	Health & safety communications program, social marketing program, etc.
Policy Development	Regulations, voluntary standards, building codes, collective bargaining agreements, licensing exam changes, etc.
Technology Transfer	Licensing, manufacturing, etc.
Coalition-building	Multi-partner effort to promote findings at the industry or trade level; building alliances with other constituencies

Each dissemination strategy has its strengths and weaknesses. A strategy that works well for one type of output or audience, might not work for others. It is important to consider which strategies are likely to be the most practical and effective for achieving the outcomes you are seeking with each target audience.

Think about the desired actions you want your audience(s) to take (see **Section 2**) and the types of support or incentives they will need to make that change. Consider the following:

- Do they need a new tool?
- Will they need training?

- Do they need to feel the pressure of policies or a standard?
- Do they need to build skills?
- Do they need more information?

In addition, consider what you can do to package or frame your findings or interventions so that they are accessible and appealing to target audiences.

Communication Channels

Once you have decided on a dissemination strategy, it is important to decide on the channels that you will use to get the word out. Remember to consider your audience's communication preferences ("preferred way to receive information" identified in **Section 2**). Examples of communications channels include – press releases, articles in trade press and other media, social media posts, posts on websites, webinars, emails, blog posts, and presentations at meetings and events. Consider the following questions:

- Are there trusted sources your target population goes to for information?
- Are there additional outputs that you will need to develop for communication or promotion purposes? For example:

o Videos	o Published reports
o Podcasts	o Posters
o Presentation materials	o Brochures, flyers, fact sheets
o Infographics	o Impact cards
o Data visualizations	o Web pages
o Checklists	o Direct emails
o Social media posts	o Blogs
o Newsletters	o Email newsletters
o Press releases	
o Print or electronic written materials	

- Do you need to know more about your target audience?
- Which partners might be able to help you identify the best communication channels and messages to use with the audience?

Be as specific as possible for when identifying the channels. If you are using mass media, for example, decide if you will use news stories or paid advertising, broadcast or print, and local or national outlets. If you are relying on events or meetings, decide which ones are best to reach your target audience(s).

Tips:

- *Agreeing on specific actions will allow you to anticipate the effort and resources that will need to be directed to r2p-related activities throughout your project.*
- *As you think about your message for communicating a research finding make sure you cover the attributes that make it more likely to be adopted and diffused:*
  <u>Relative advantage</u>: Is the innovation better than what was there before?

Compatibility: Does the innovation fit with the intended audience?
Complexity: Is the innovation easy to use?
Trialability: Can the innovation be tried before a decision is made to adopt?
Observability: Are the results of the innovation visible and easily measurable?
(From Oldenburg and Glanz, 2008. Diffusion of Innovations. In Health Behavior and Health Education.)

Resources needed to implement strategy

List the resources that will be needed to implement your dissemination strategies and use the communications channels, along with how or where they will be obtained and any related concerns you have. Things to consider include, for example:

- Do you have the money, materials, expertise, etc. already available? If not, are there other outside resources that may be available?
- What types of assistance might CPWR provide (e.g., help with developing translational products or activities, access to partners, hosting a webinar, identifying additional expertise needed)?
- Who else is addressing the same problem and how might their efforts "intersect" with or join your own? What supplemental funding sources might be available?

As you advance in your dissemination planning, use this resource assessment as an opportunity to consider which activities will be most strategic and get you the most "bang for your buck." Try not to immediately go to what seems "affordable" or accessible. For example, creating and distributing a fact sheet may be very doable, but may not have the greatest potential for impact. It may be better to use the time that would have been spent developing the fact sheet to cultivate critical partners for a larger more impactful campaign or policy effort.

Notes

Use this space for other information that you may find helpful to track, such as the rational underlying your strategy, and changes in your research that could impact your strategies or resource needs as your project develops and you learn more about your audience(s).

Section 4: Implementation – Timing, Status, and Next Steps

This section provides space to list the timing of your dissemination activities, who will be responsible for ensuring they happen, and the status or next steps.

Research Outputs, Audiences, Dissemination Strategy, & Communications Channels

Copy the information entered in Section 3.

Timing, Lead, Status/Next Steps

For each Audience and entry, list when you plan to undertake the activity and who will take the lead to ensure it is carried out as intended. Will this be a member of the research team, a partner, or an intermediary?

You will also use this space to keep track of next steps that will need to be taken to complete an activity and the status. This Section will likely be one of the sections updated most often as you change the status and add other actions that may need to be taken to implement the strategy and communications activity. The more detail you provide the better, so you may need to add more rows or expand the space beyond 8.5 by 11. You can adapt this section to help track your efforts.

Notes

Use this space for other information that you may find helpful to track.

Section 5: Evaluation

In this section, you will identify how you plan to assess your progress and measure the reach and impact of your r2p efforts. This is another section that you likely update most often as your project progresses.

Audiences & Research Outputs

Fill in this information from Section 4.

Reach of Outputs

For each audience and output, list the measures or indicators that you plan to use to gauge audience reach. As you implement your dissemination plan, you will need to update this section to include actual numbers. The list below provides some ideas on ways to measure reach:

- Number of stakeholders participating in meetings/presentations
- Number of orders for products
- Number of responses/conversations generated through new media use
- Number of requests for additional information, web hits, downloads
- Number of articles and estimated reach
- Social media metrics (posts, likes, shares, impressions)

Impact Measures

For each audience and output, list measures or indicators that you plan to use to gauge impact – audience behavior change or use of outputs. The list below provides some ideas for measuring the impact:

- Number of times your finding is referenced by other researchers
- Commercialization of a tool
- Number of times your output/information is used by the target audience
- Change in policy (e.g., creation of a voluntary or binding standard)
- Change in awareness, attitudes, or behaviors
- Documented adoption of a practice/tool (# or % of employers who adopt)
- Change in exposures
- Change in injury/illness rates

Notes

Use this space for other information that you may find helpful to track, such as the rational for selecting the qualitative or quantitative approaches selected.

Section 6: Future Dissemination & Research Questions

This final section should be completed in the final year of the project. It is important because the information provided can help the funding organization continue to move your research findings into practice after a project's completion.

Dissemination Recap

Describe the activities that you were not able to complete and explain why. Include factors that helped or hindered your efforts, as well as any changes in plans or helpful context.

Future dissemination steps *(to be undertaken outside of this project)* & who might take them on

Use this space to describe further dissemination that should be undertaken but could not be accomplished within the scope of the current project, and list who might take on those efforts**.** For the dissemination activities that you were not able to complete, consider who you could approach that might have the resources or interest to carry them out. These may be people or groups who can play a role in institutionalizing your intervention or findings, or who are positioned to sustain the efforts you've already undertaken, such as another research team, an intermediary, an advocacy organization, or a manufacturer. You may want to refer to the potential partners you identified as intermediaries in **Section 2**.

Future research questions

Often one research project will raise other questions or issues worth exploring through a new research project. List future research questions that have resulted or been generated as a result of this project and its dissemination activities.