CPWR's Research to Practice (r2p) Roadmap Process Evaluation

Does planning for dissemination improve implementation of safety & health research?



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Executive Summary

- CPWR's Research to Practice (r2p) program facilitates the dissemination and adoption of evidence-based interventions by embedding this goal into funded researchers' projects through what we call the "Roadmap Process." The Roadmap Process encourages researchers to identify potential "users" of their research, how to best translate their findings into useful products, and possible dissemination channels.
- To learn more about the impact and implementation of the Roadmap Process, r2p staff interviewed and surveyed research directors from four recent projects.
- Researchers interviewed reported satisfaction with how the Roadmap process helped them plan for dissemination, clarify who their end users were, understand CPWR's dissemination capacities, brainstorm creatively about dissemination channels, have accountability for their goals, and expand researchers' participation in dissemination activities.
- Researchers accomplished most of the dissemination goals they established in their Roadmaps. Accomplishing all goals from the Roadmap did not always translate into documented use of findings in the field.
- Key barriers to dissemination were related to the challenges presented by their issueareas, difficulty measuring adoption, and limitations on available support for dissemination activities. Key facilitators included dissemination support provided by CPWR or organizations other than CPWR, such as connecting researchers with possible dissemination partners, creating dissemination materials, and hosting webinars on study findings.
- To improve the Roadmap process, researchers recommended providing examples of how CPWR could promote dissemination, creating designated formal dissemination structures that could provide more enhanced and consistent support, and clearly communicating the goal of CPWR's Roadmap process to support researchers.

Introduction

Construction workers face high rates of injury and death on the job,¹ and research can provide evidence-based solutions to reduce morbidity and mortality in the industry. However, research conducted without regard for how results could be implemented can create a gap between the discovery of effective solutions and their adoption. CPWR–The Center for Construction Research and Training (CPWR) founded its Research to Practice (r2p) program in 2010. The goal of the r2p program is "to promote the broad-based application of evidence-based interventions to improve health and safety practices in the construction industry."²

The r2p Roadmap is a dissemination and implementation tool³ that helps CPWR-funded researchers develop strategies to maximize the likelihood that their research findings and interventions reach and are adopted by their end users. It helps researchers plan for

¹ Harris, Yohannes, & Trueblood. (2023). Fatal and Nonfatal Focus Four Injuries in Construction. CPWR – The Center for Construction Research and Training. <u>https://www.cpwr.com/wp-</u>content/uploads/DataBulletin-March2023.pdf.

² Baker R, Chang C, Bunting J, Betit E. Triage for action: Systematic assessment and dissemination of construction health and safety research. *Am J Ind Med.* 2015;58(8):838-848. doi:10.1002/ajim.22477 ³ Chang, C. Research to Practice Model. <u>https://www.cpwr.com/wp-content/uploads/CPWR-r2p-Model-Presentation_Chang-Read-Only.pdf</u>

dissemination, which is "the active and deliberate process of packaging and distributing information about [evidence-based health interventions] to a specific audience of potential adopters via predetermined media channels."⁴ After developing their Roadmaps at the beginning of their projects, researchers meet biannually with CPWR staff to discuss both research progress and r2p, including outreach strategies and how CPWR can best support dissemination and implementation.



Figure 1. Diagram of CPWR's r2p Roadmap Process

To better understand the effectiveness of the Roadmap process and which dissemination strategies have worked to advance the implementation of research findings in the construction industry, the r2p program executed a mixed-methods analysis of four completed research projects. Our research questions were:

- What did researchers think about their Roadmap experiences?
- To what extent did researchers complete the activities outlined in their Roadmaps?
- What did researchers think the barriers and facilitators were to completing their dissemination activities?
- To what extent did research findings or products reach and impact end users?

This analysis explores the answers to these questions with the goal of using findings to inform future r2p Roadmap processes. For more information on the r2p program itself, refer to Appendix A.

Methods

We selected four recent CPWR-funded research projects to explore the ways that the Roadmap influenced r2p. We conducted interviews with these projects' research staff and surveys of possible end users of the research. The research plan, interview instrument, and surveys were determined by CPWR's Institutional Review Board (IRB) to be exempt.

Sample Population

We conducted three in-depth qualitative interviews with selected researchers about their Roadmap experiences. Two of the four projects were conducted by the same research team, leading to the participation of three CPWR-funded research teams in the interviews. These

⁴ Dugan AG, Punnett L. Dissemination and Implementation Research for Occupational Safety and Health. Occup Health Sci. 2017 Dec;1(1-2):29-45. doi: 10.1007/s41542-017-0006-0. Epub 2017 Oct 16. PMID: 29725613; PMCID: PMC5929143.

three interviews were with five individuals in total: one interview was with the principal investigator (PI) for the project, two interviews were with the PI and a member of their research teams. These projects are identified throughout the report with the following key:

- P1: Completed project resulting in a guidance document/resource as an output
- P2: Completed project resulting in academic publications and further research
- P3 & P4: two completed projects from the same research team. One project resulted in a new device (P3) and the other project resulted in good practice recommendations (P4)

We conducted two surveys with end users of three of the research projects. One research project was not included in the surveys because its findings were not disseminated to end users. Additionally, the two projects conducted by the same research team were combined into one survey as they had the same end user groups. A convenience sample was identified from CPWR's Contact Database of individuals with job categories and employment sectors with the greatest likelihood of possible previous interaction with the research projects. While there was significant overlap between the recipients of both surveys, two separate survey emails (one to 1,275 contacts and one to 3,606 contacts) were sent that targeted potential users based on likely job categories and employment sectors for the targeted research projects.

Interview Instrument and Survey

Interviews were conducted in 2021 over Zoom (Interview guide included as Appendix). Researchers were asked about their experiences with project dissemination, the Roadmap process, and how the process could be improved, including:

- which parts of the Roadmap they were able to carry out and what they knew about how or if their research had been used in the field,
- what kinds of dissemination support they expected from CPWR and organizations other than CPWR,
- whether they felt they received expected support,
- how receiving or not receiving that support affected their ability to carry out their Roadmap,
- barriers and facilitators to success, and
- perspectives on how the process could be improved in the future.

Surveys were distributed to possible end users of the research projects via email in January 2025. They were conducted in Qualtrics. Surveys asked about awareness, use, and impacts of use of the research projects. If participants had not used the findings from the research projects, surveys asked why not.

Analysis Strategies

Qualitative interview data were analyzed iteratively by a sole reviewer. After multiple reviews of the transcribed data, the reviewer developed a codebook of pertinent themes. The same reviewer performed multiple rounds of coding and iterated on the codebook throughout the reviews. The reviewer then created matrices that tracked which dissemination activities were carried out and visualizations that mapped relationships between key constructs. They used these analyses to track project dissemination outcomes, identify themes in how researchers described the Roadmap process, and develop conceptual frameworks.

Quantitative survey data were imported into Excel. Basic descriptive statistics such as frequencies and averages were performed.

Results

I. Interview Findings: The Roadmap Process

Researchers described their satisfaction with how the process strengthened their approaches to dissemination (Figure 2). They explained that it facilitated a long-term planning mindset that encouraged them to clarify their end users at the outset of their projects. This planning enabled clear discussions about how CPWR could provide capacity to reach identified goals and creative brainstorming about possible dissemination channels. By identifying specific achievable goals, this process created a structure for accountability. Cumulatively, the process expanded researchers' participation in dissemination activities.



Figure 2. Conceptual Framework of Strengths of Roadmap Process

The Roadmap process encouraged a **planning mindset for dissemination** at the outset of projects. As one researcher explained: "The benefit of [the Roadmap process] was since the very start of that cycle, we had a framework that would help us...think about dissemination at the very first year of the project" (P2). This meant that, instead of developing dissemination plans at the conclusion of the project, it was a key first action.

Through this planning mindset for dissemination, researchers established **clarity on end users** early in their processes. For researchers, "clarifying those audiences was the number one step" (P2). As another researcher explained, "my memory of using the tool was it was helpful to push us to think through the potential audiences, and the conversations were helpful" (P1).

Researchers described how this clarity on end users helped them plan for dissemination through interrelated constructs: gaining **awareness of CPWR's dissemination capacities** and engaging in **creative brainstorming about channels**. The process facilitated discussions of CPWR's capacities for assisting with dissemination such as facilitating partnerships between researchers and relevant organizations like unions or trade associations, materials development, and connections with industry members. As one researcher explained, "I like how [the Roadmap process] provided opportunities to highlight outreach opportunities for CPWR and how they could assist us" (P3 & P4). At the same time, researchers engaged in creative brainstorming about possible channels for dissemination to reach their end users that both

included and did not include CPWR support. For example, brainstorming with CPWR resulted in one researcher deciding to add a new dissemination strategy in which they provided "very practical, short summary reports" for partner sites on study results throughout their project instead of at its conclusion (P2).

Researchers explained that by creating these targeted plans, the foundation was created for **accountability for dissemination goals**. As one researcher explained: "At the end of those [Roadmap meetings] we have a to-do list, so before we meet next year again, we have to answer those questions or comply with those requirements" (P2). This accountability was strengthened by the structure of regular biannual meetings.

Researchers said that the Roadmap process overall encouraged an **expansion in their participation in dissemination activities**. They explained that, cumulatively, the Roadmap resulted in a "different way for researchers to think about getting their message out…it's a new thing for researchers to do" (P3 & P4). Instead of being focused only on academic papers and presentations as their metrics for dissemination, they were asked to plan for creative dissemination at the outset, broaden their views of what successful dissemination would be, and be accountable for dissemination goals beyond traditional academic channels.

Researchers expressed satisfaction with how these pieces worked together to structure thorough dissemination planning and efforts. As one researcher described: "If it wasn't for [the Roadmap process], I would have left everything until after I published the papers, and we would have figured out a way to deal with dissemination" (P2). Collectively, these steps created a structure for achievable dissemination tailored to researchers' projects.

II. Interview Findings: Dissemination Activities

Researchers described achieving almost all the dissemination activities they planned in their roadmaps. In an analysis of available roadmaps and researchers' descriptions of their activities in the interviews, almost all the dissemination activities identified as goals had been completed.

Researchers described a range of successful dissemination activities. Figure 3 summarizes key areas of dissemination efforts and related activities.

Figure 3. Completed Dissemination Activities		
CPWR-based:	Researcher's Institution:	
Website Webinars Hazard alert cards Toolbox talks YouTube videos Social media Newsletters	Website Webinars Email list servs Social media	
Academic Channels:	Partnerships:	
Peer-reviewed journal articles Academic conference presentations	Creation of an Advisory Board Peer-to-peer outreach from Advisory Board members Collaboration with training centers	

Construction Industry:	Start-Ups:
Industry publications Meetings with industry leaders Data sharing with industry leaders Peer-to-peer industry conversations Presentations and demonstrations at industry conferences	New company to market product created based on research findings Marketing by development engineer
Worker Channels:	General Audience:
Publications in union magazines Presentations at union conferences Reports and presentations for workers at research sites Distribution of CPWR-created resources based on study's findings to workers	Magazine publications News articles

Although researchers overwhelmingly accomplished the dissemination activities they identified in their Roadmaps, some of the goals established in their Roadmaps were eliminated over time or not fully completed. Examples of these uncompleted goals included:

- Outreach to a specific end user that was subsequently deprioritized. Researchers and CPWR assessed that there were not sufficient resources to reach this audience, so while it was listed in original Roadmaps as an initial possible goal, it was not prioritized for dissemination (P1).
- Development of a formal "business case" to encourage uptake of materials by end users (P1).
- Partnerships with specific key partners, in particular unions with worker access, did not come to fruition. Although researchers attempted to form relationships with these end users for partnership and dissemination, they did not ultimately participate (P2). The reasons for this are unclear but may have included things like overloaded schedules or a lack of interest.
- Materials had a goal of being translated into Portuguese and Spanish to match the needs of the worker population for one project. They were translated into Spanish but not Portuguese (P2).
- Onsite presentations to worker research participants about study findings (P2). While researchers were able to share findings with impacted workers through presentations at union-related training events and conferences, it is unclear whether they were able to present the findings directly to the same workers that participated in the study.
- Peer-to-peer marketing and partnering with tool manufacturers at places they targeted (P3). While this goal was partially completed and researchers did connect with tool manufacturers that could help promote their product, more could have been done.
- Petitioning OSHA to modify Table 1 to be inclusive of a new engineering control. (P3).

Researchers' dissemination efforts extended most strongly beyond the end of the research project when they had specific resources to support further dissemination. For example, the research team that created a product and founded a start-up based on their findings continued to disseminate information on their research as they promoted their product (P3). Similarly,

another research team that had received funding from CPWR in the subsequent grant cycle incorporated some dissemination from their previous project into their next cycle's project (P2).

For researchers who did not have extended funding or other structural support for further dissemination, the lack of resources was prohibitive for continuing to focus on dissemination of the specific products from the completed grant cycle. As one researcher explained: "we actually put in for a second round of funding...however, we weren't able to get that funding through CPWR or NIOSH, so we weren't able to take it to the next stage" (P1). Without resources, it was not possible to extend dissemination efforts.

III. Researcher Interviews and End User Surveys: Use of Findings

CPWR's two surveys of end users attempted to provide some insight into the use of research findings. However, only 22 surveys were received. Surveys were distributed 6 to 11 years after the projects were completed and asked participants to recall events over an up to an 11-year period. Among participants across the two surveys that asked questions about three research projects, four respondents (18%) were aware of one of the projects. None of those four respondents had used the products; three reported that the findings were not applicable to their work, and one reported both that they were satisfied with their current practices and did not know enough about the topic.

Researcher interviews provided more details about the use of findings. In the interviews, successful completion of planned dissemination activities translated into documented application of findings in the field to a limited extent for some projects. Although examples of documented use were not always clear, researchers described reasons to believe that findings have been used.

One of the research projects examined resulted in the development of a new device. After the completion of the study, the research team created a start-up based on findings and marketed the product within the construction industry (P3). They conducted outreach based on their findings, presented on their project, and promoted their product to a range of audiences such as tool manufacturers, buyers in the construction industry, and others. The product has been sold domestically and internationally and has been used in large infrastructure projects in the Bay Area.

In other cases, the use of findings was less clear. Researchers reported that other major tool companies introduced products that shared similarities with their findings, but that they could not officially confirm whether these companies had been influenced by their research (P4). As they explained: "[Major companies] developed some kind of [technology] that was linked to what we did, but I'm not sure if what we did directly influenced it but there was certainly a relationship" (P4). In addition, researchers for a project that identified concepts and best practices for safety and health education reported that the lack of continued funding and resources made it challenging for them to track use of findings. Moreover, the research team has used their findings about construction for other industries and integrated these findings into subsequent initiatives (P1). Finally, researchers for a project that explored exposures did not have clear examples of how their findings were being used in the field. As they explained: "We cannot go and follow up because this is not an implementation study where you introduced something and then you go back and see how effective it is" (P2).

IV. Researcher Interviews: Barriers to Dissemination and Implementation

In their interviews, researchers described barriers to dissemination and implementation. These challenges fit into three main categories: safety and health subject-area challenges, difficulty measuring adoption, and limitations on available support.

Safety and health subject-area challenges:

- Lack of regulatory compliance incentives for subject-area focus Multiple researchers explained that lack of regulatory compliance incentives for their end users made dissemination and implementation for their projects difficult. As one stated: "We see less enthusiasm [for this project] by workers and contractors because they cannot relate [the project] directly to some type of occupational standard which, in their mindset, [with which] they have to be in compliance" (P2). Similarly, another researcher said that the lack of binding national standards on their research topic made it more challenging to promote dissemination and implementation because "the standards themselves are recommendations and the language on health and safety is not clear" (P1). The lack of regulatory penalties made it more challenging for these researchers to successfully promote their findings.
- Findings that required site-specific interpretation For one researcher, it was "hard to have a one-size-fits-all" approach to dissemination because their findings were conceptual safety and health ideas that required site-specific interpretation for implementation (P1). This made broad dissemination and implementation challenging.
- Inherent challenges for messaging on safety and health One researcher discussed how messaging on safety and health always presents challenges: "I think messaging around health and safety is always challenging. Like how to have that feeling that it's interesting and important enough to make it into the newsletters for features. I've been doing this all my life, and it's still challenging to have people really understand the importance of the issue in the face of billions of other things that are also important" (P1).

Difficulty measuring adoption:

 Norms of private industry – One researcher explained that, while they saw elements of their research tool design findings adopted by tool manufacturers, since private industry actors rarely publicly state their inspiration for new products, the researchers cannot conclusively state that their dissemination activities were the inspiration for this design implementation (P3 & P4). Establishing causal connections between the researcher's findings and this type of implementation is inherently challenging.

Limitations on available support for dissemination activities:

- Construction audience end users that fell outside of CPWR's typical networks One researcher said that their end users extended outside of CPWR's networks. They explained: "I think we were a little bit of an outlier in the CPWR world." As such, CPWR was not able to provide partnership support for this project in ways it was able to for other projects (P1).
- Resource and time limitations Multiple researchers described the ways in which limitations on their time and resources made dissemination challenging. Researchers described themselves as "strained" (P1) and "overwhelmed with the amount of work" (P2). Moreover, for one project that did not receive funding after its initial cycle, the lack of continued funding meant no resources were available to support further collaborative dissemination and implementation efforts.
- Lack of support from possible key non-CPWR partners One researcher described that lack of willingness to collaborate from potential key partners created challenges for their project (P2). Although they had initial meetings via CPWR-facilitated introductions, the

research team was not able to secure long-term collaboration for both the research project and further dissemination of findings with these targeted end users which made both steps more difficult.

V. Researcher Interviews: Facilitators of Dissemination and Implementation

Researchers also described a range of facilitators that helped them overcome challenges related to dissemination and implementation. These facilitators included support received from CPWR as well as support received from outside of CPWR.

Support from CPWR:

- CPWR Research to Practice Support Researchers stated that CPWR-provided r2p support helped them overcome challenges, including resources for dissemination, brainstorming dissemination channels, identifying end users, and facilitating helpful personal connections. Moreover, CPWR support meant that they could have dissemination support when needed (e.g., towards the second half of the project) without maintaining a dedicated graduate student or other staff for the entire project duration (P2).
- Ongoing Funding For researchers who received additional funding from CPWR in a subsequent cycle, some dissemination activities were continued into future cycles (P2, P3). This allowed them to continue to disseminate their findings with financial support from CPWR.

Support from Outside of CPWR:

- Committed Champions Multiple researchers described the importance of building relationships with champions. As one researcher described, "A lot of [overcoming challenges] is about having those champions inside those specific worlds who understand how it needs to be framed for their audience and who also care about the issue..." (P1). These champions pushed forward dissemination and implementation for projects.
- Project Advisory Board One researcher described how forming a supportive advisory board was important for their ability to overcome challenges (P1). Their Advisory Board provided expert input, facilitated peer-to-peer outreach, and filled critical gaps for trying to reach end users.

VI. Researcher Interviews: Recommended Improvements for Roadmap Process

Although researchers reported overall satisfaction with the Roadmap process, they also provided input on how the process could be strengthened. These recommendations included:

- 1. Provide pre-populated examples of dissemination products and outreach
 - **strategies**. Researchers said that they did not know what type of support they could expect from CPWR when they initially began their Roadmap processes (P1, P3). One researcher recommended providing examples of dissemination products and outreach strategies to help researchers understand what support CPWR could provide and inspire creative and comprehensive outreach. They said that having these types of examples at the outset of their project would have helped them understand the resources available from CPWR. They explained it would have been helpful to see, "examples of products or ways to do outreach. Whether it's short videos on YouTube, or conferences that we're not thinking about, or journals like industry magazines that are popular to go to. Those are things that as researchers we don't know, but you might. Those are things that you

could pre-populate on another sheet for example of different kinds of products or outreach" (P3 & P4).

- 2. Create designated formal dissemination structures that could provide more enhanced and consistent support. Instead of depending on the "the tenuous nature of [individual] connections" (P3 & P4), researchers recommended expanding and formalizing dissemination structures. They explained that, while relationships brokered by CPWR had been valuable, it would be helpful to explore other structures like a national advisory board (P2) or a national dissemination department (P3 & P4). They said that a national advisory board could create a structure for personal connections and relationship-building with partners for recruitment or other support during studies. Similarly, they stated that a national dissemination department with marketing expertise could hold close relationships with the construction industry and trade journals, attend meetings with contractors and union leaders, and be a central source of dissemination for all CPWR-funded studies.
- 3. Help researchers feel like they're on a "two-way street" instead of "under the microscope." There was a contrast between how one first-time CPWR-funded researcher and another long-term researcher described their experiences of the Roadmap process that illustrated the importance of clearly communicating support to all researchers. The first-time CPWR-funded researcher said that they sometimes felt "under the microscope during meetings and that there was this weight. I know it wasn't the intent; I know it was to support me. And I always tried to remind myself of that" (P1). In contrast, another researcher described the meetings as a "two-way street" that felt "very collaborative" (P3 & P4). The difference in how researchers described their experiences illustrates the importance of clearly communicating to all researchers, and especially new CPWR-funded researchers, the supportive and collaborative goals of the Roadmap process.

Some of this feedback has since been incorporated into an updated Roadmap process for the 2024-2029 grant cycle. To clarify the role of CPWR and the CPWR r2p team in supporting researchers' dissemination and outreach efforts, CPWR held a virtual meeting for the full Research Consortium at the beginning of the current grant cycle. During this meeting, CPWR reviewed the Roadmap process, expectations for researchers, the structure of the biannual meetings between each research team and CPWR, and the types of research and r2p support the organization can provide.

The form that accompanies the Roadmap process has also been streamlined to better coordinate with other planning and reporting requirements that must be met by the research teams. In addition to saving researchers' time on reporting to CPWR, the streamlined form and current Roadmap process are aimed at reinforcing the spirit of collaboration between CPWR and its researchers. As we continue to engage in the Roadmap process, we will also continue to check in with each research team to ensure that the process works for them without feeling onerous and that they are receiving the support they need to be successful in both their research and dissemination efforts.

Conclusion

Dissemination is critical to successful implementation of construction safety research findings. Strengths of the evaluation and lessons learned of the r2p Roadmap include detailed and actionable information from researchers about their experiences. Researchers reported satisfaction with how the Roadmap process helped them plan for dissemination from the

beginning of their research projects. Overwhelmingly, they completed the established dissemination goals in their roadmaps. It was easier to track implementation for applied projects that created specific products than for other studies with broader and more diffuse outputs, such as conceptual advances. While researchers felt the Roadmap was a very helpful tool and process, they recommended providing examples of successful dissemination, building an r2p advisory board to support dissemination, and making the goal of support to all researchers clear in Roadmap meetings.

A limitation of this evaluation and lessons learned of the r2p Roadmap was the low response rate to the end-user surveys. Surveys were distributed six to 11 years after the conclusion of research projects, and lack of participation suggests the need to perform follow-up surveys closer to the conclusion of projects in the future. Moreover, a more targeted sampling frame that surveyed a more tailored group of end-users may also increase participation in future efforts.

For more information on CPWR's r2p program, visit: <u>https://www.cpwr.com/research/research-to-practice-r2p/</u>

Appendix: Interview Guide

According to your Roadmap, your project [insert brief description of project, expected finding/intervention, target audiences, and intended use - goal for reducing injuries/illnesses].

1. Did using the Roadmap tool help you plan more effectively for dissemination and implementation?

Probe:

- o In what ways was completing the Roadmap beneficial?
- To what extent do you feel the current Roadmap process helped advance the use of your research findings/interventions?
- 2. What parts of your Roadmap were you able to carry out? [Review participant's Roadmap and probe on each component]

Probe:

- Were you able to achieve [X component] before your project ended?
- Were you able to finish [X component] after your project ended?
- What, if any, other components did you put into effect after your project ended?
- Did going through the Roadmap process make it easier to disseminate findings or solutions before the project/funding ended? If yes, how so?
- Based on your best guess, did going through the Roadmap process increase the amount and/or speed of uptake and implementation of your recommended solution(s) by the target audience(s)?
- 3. What kinds of support did you expect from CPWR in the components you outlined in your Roadmap?

Probe:

- What kinds of dissemination support did you expect?
- o What kinds of implementation support did you expect?
- 4. To what extent do you feel you received the support you expected from CPWR? **Probe:**
 - What kinds of dissemination support did you receive?
 - o What kinds of implementation support did you receive?
 - Has r2p provided any ongoing support? If yes, in what ways?
- 5. How did receiving or not receiving that support from CPWR impact your ability to implement your Roadmap?

Probe:

- How did support from CPWR affect dissemination?
- How did support from CPWR affect implementation?
- 6. Are there any types of additional support you would like to have received from CPWR? **Probe:**

- How would that support have been beneficial?
- 7. Did you receive support from others? If yes, from what individuals/organizations and what types of support?

Probe:

- What, if any, help did you receive from your target audience(s)?
- Is there any type of additional support you would like to have received from other organizations?
- 8. What, if anything, do you know about how your research finding/intervention is being used? **Probe:**
 - o If they know:
 - Can you provide some examples of how/where it is being used?
 - To what extent is your research finding/intervention having the intended impact on construction safety and health?
 - o If they do not know:
 - How would you go about finding out if your research finding/intervention is being used? Who would you reach out to?
- 9. What were the main challenges or barriers to implementing your Roadmap? **Probe:**
 - To what extent were you able to overcome the challenges or barriers? How did you do so?
 - How did the challenges or barriers impact use of your research findings/intervention by the target audience(s)?
- 10. Can you walk us through how, if at all, you used your Roadmap outside of your check-in meetings with CPWR?

Probe:

- When, if at all, did you refer to your Roadmap?
- Which members of your team used your Roadmap?
- How often, if at all, did you revise your Roadmap?
- 11. How can we improve the existing Roadmap process to ensure that research findings/interventions have their intended impact?

Probe:

- What recommendations do you have for future researchers on how to use the Roadmap most effectively?
- o How can CPWR best support researchers through the Roadmap process?