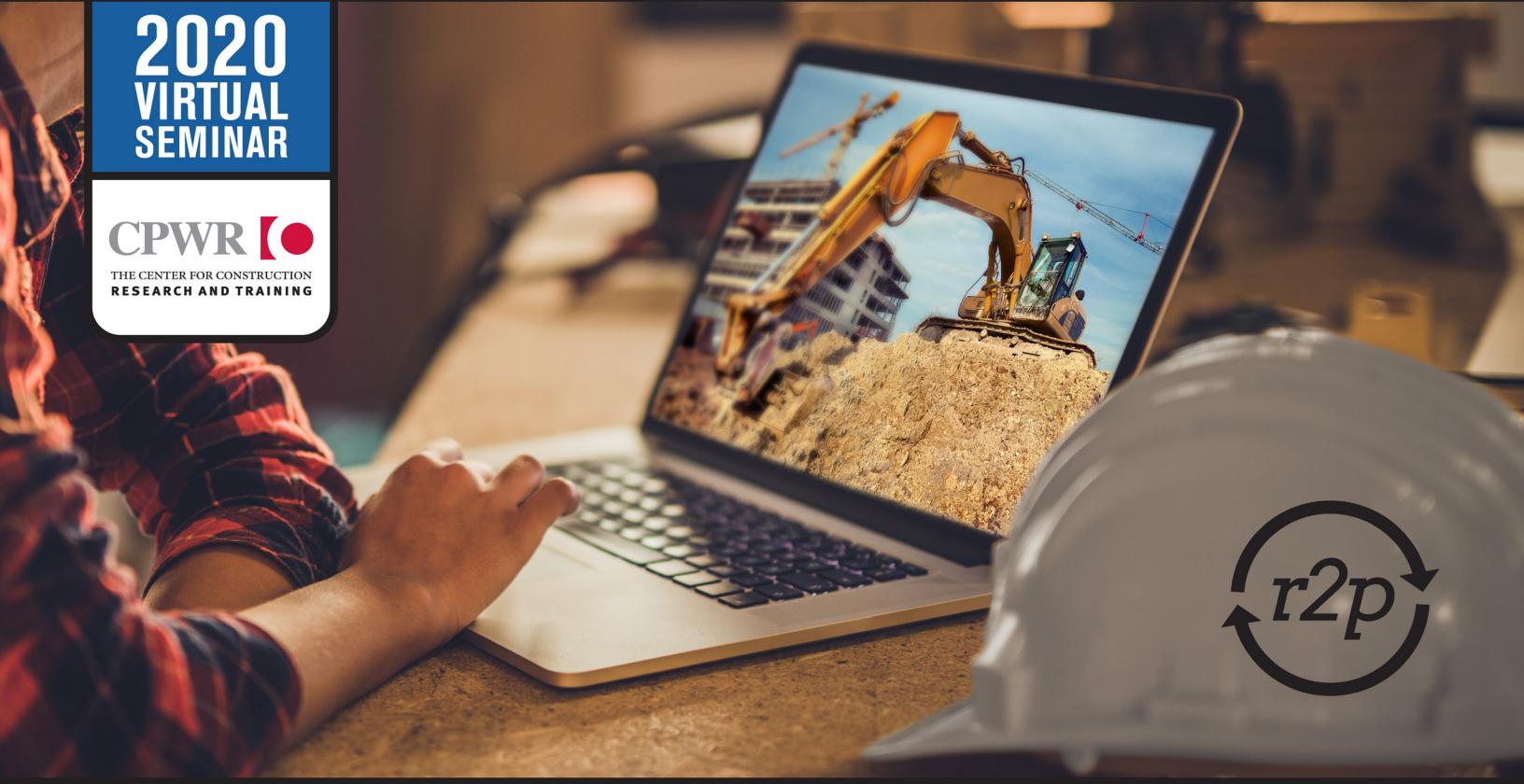




r2p in Construction: New Research and Opportunities

2020
VIRTUAL
SEMINAR

CPWR 
THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING



Summary Report from Partnership Workshop:
Construction Outlook –
Implications for Safety and Health Research
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Dodge Data Analytics Presentation Highlights: Outlook for the Construction Industry in a COVID-19 World (COVID-19 Construction Starts Forecast)

Prior to the onset of the COVID-19 pandemic, the U.S. was projected to grow by 2% in 2020. In the first quarter, the economy moved from "cruise control to full stop" as described by Dodge Data & Analytics (Dodge). On June 8th, the National Bureau of Economic Research officially announced that the U.S. entered a recession in February 2020. At the time of the seminar, the economy was expected to decline by 3.5% in 2020 and to return to growth in 2021.¹

In October 2019, Dodge projected that total U.S. Construction starts would "slip to \$776 billion in 2020, a decline of 4% from the 2019 estimated level of activity." By the time of the r2p Seminar, Dodge was projecting that starts would be down 15%, with double-digit losses in each major sector, as shown in Table 1:

Table 1: 2020 and 2021 Building Starts Projections by Sector

Sector – Building Starts	2020	2021
Commercial	-18%	9%
Residential	-13%	3%
Manufacturing	-33%	9%
Institutional	-10%	7%
Transportation	-20%	6%
Non-Building (highways, etc.)	-16%	13%
Total (all sectors)	-15%	8%

**See attached presentation*

Partnership Workshop Discussion: Construction Outlook ± Implications for Safety and Health Research

The partnership workshop portion of this year's r2p Seminar provided an opportunity for researchers and stakeholders to discuss COVID-19's impact on their work. Ten small workshop discussion groups were given two questions to address:

1. If the outlook presented by Dodge plays out, what will it mean for your research or the segment of the industry you represent?
2. What steps can researchers and stakeholders take to ensure that the safety and health research underway and the NORA goals continue to be met?

¹The annual percentage change in the real gross domestic product. Since the Seminar, projections for the year have been revised downward.

The following is a summary of these discussions.

Reaction to Industry Forecast

Although Dodge is projecting a significant drop-in construction activity for 2020, industry participants noted that work in several sectors and geographic areas had continued with minimal interruption and the outlook is not as bad as the last recession:

“[Compared to 2008] these...stats are “peanuts.”

“Not as bad as I thought it going to be—hope the Dodge scenarios play out.”

“I was afraid it would be like 2008-2009 when training...numbers went from several thousand to a few hundred in a year and a half.”

Participants acknowledged, however, that there is a high level of uncertainty because of the pandemic, noting that “we do not have anything to compare it to,” and a second wave of COVID-19 could “throw everything off again.” Several factors were raised that could negatively impact construction activity moving forward, including:

- Interruptions in the construction supply chain if materials and equipment manufactured and/or shipped from hot spots are delayed.
- Funding issues at the state and local levels that slow down the permitting process and job site inspections, which are critical to moving projects forward. As one attendee noted: “Funding in some states and regions is a huge issue – the state is “broke” [and] there are no inspectors because they have been laid off.”
- Reduced need for certain types of construction resulting in less build out.
- Customers not paying their bills.
- COVID-19 outbreaks that force projects to shut down while workers are in quarantine.

On this final item, participants provided examples of ways contractors and unions are actively working together to prevent COVID-19 related project shut-downs, such as:

- Sharing paperwork electronically using iPads or cell phones to avoid the need to handle paper.
- Establishing independent tracking for each person who has symptoms.
- Contracting with a third party to do temperature testing and implementing a policy that if a worker has a high temperature the supervisor is notified, and the worker is not allowed on the job until they are cleared by their doctor.
- Limiting the time individuals can work within 6 feet of each other.
- Using videos for toolbox talks.
- Using smaller work groups.
- Adjusting work schedules, such as working 4 days/10 hours instead 5 days/8 hours.
- Keeping the same work team members together.
- Requiring a 14-day quarantine for positive cases and conducting a deep clean of work areas.

However, they also noted that these positive steps are creating their own challenges and concerns, such as:

- Longer lead times to prepare to do a task.
- New hazards introduced by trying to prevent exposure to COVID-19. One participant talked about the hazard created "when you have to move your hand off of controls [to adjust] your mask."
- Inability to contact trace since contractors are not equipped to take this on and public health departments are not doing an adequate job: "Contact tracing by public health departments is not working, so the burden of contact tracing is being placed on contractors..." and "Most health departments are not collecting industry data... nationally we have a patchwork for case reporting."
- Confusion over when symptoms reflect working conditions or infection: "We are entering the time of year when we worry about heat stress. If workers' temperatures are elevated, is it COVID-19 or heat related?"
- The effect on work teams of limiting interactions: "How will [distancing] effect closeness between team members (i.e., buddy system)."

The two most common concerns raised by the discussion groups were that 1) COVID-19 has shifted the focus too far away from other critical safety and health issues, such as falls and musculoskeletal disorders, and 2) that reductions in some types of injuries may go up once more workers are back on the job:

"COVID may have heightened safety awareness, but what about the known safety issues, are resources being pulled from them..."

"People are forgetting to do daily talks about fall protection or other issues."

***[The effect of COVID-19 on workers' mental health – including suicides and substance use]
"Those problems have been shoved off the table and haven't gone away."***

"Many contractors are experiencing an improvement in worker injury rates... due to limited exposure from less personnel..."

"There may be a shift in trends after people return to work. Will there be a reduction or even an increase in certain injuries?"

Several participants expressed hope that the industry learns from these challenging times and begins to fully recognize the value of engaging in safer practices not just during this pandemic but moving forward:

"My thought is, let's learn from this... COVID might go away, but there's going to be something else in the future, so let's put this into a program. What's wrong with having wash stations, etc. on job sites?"

"My hope is there is a greater respect for things out there that are bigger than you. For example, it's important to have wash stations and respiratory protection on hand and ready to use. I hope these things become part of the culture and have a positive impact on safety and health. The lesson is: we can't control everything, and we need to prepare for things."

“Can we use this crisis to our advantage to increase safety? Instead of safety being the unwanted stepchild, is there a way for COVID-19 to bring safety to the table and make it a more visible part of the industry...especially for segments where safety has not been a major concern? Is there a way to exploit the pandemic to increase the focus on safety and health?”

“The pandemic has raised awareness on the public health situation...Hoping that what we have gone through helps us be more prepared if we face something similar in the future... [and not] more complacency with time.”

Impact on Training

Construction trends and the pandemic are also impacting training. Participants noted that in some markets training of new hires or inexperienced workers has been put on hold while contractors work to keep their “A” team workers. As work reopens, some areas have started training again, but the delivery has changed with more of the courses taking place online using Zoom and other online platforms.

Several participants raised questions about the lasting effects of the move to online training, including whether or not it is as effective as in-person training, and whether COVID-19 is being used as an excuse by some to cut safety and training. One trainer noted that while the training provided online seems to be working well, “it is best to limit training to 4-5 hours and 10 or less participants.”

To restart in-person training, participants described current steps to redesign training centers and the in-person delivery of training to comply with CDC guidelines, such as reducing class sizes, installing plexiglass dividers in training labs, limiting touch points, adding hand washing stations and requirements, and screening trainees, including doing regular temperature checks. Several participants also mentioned that they have seen increased interest in and use of virtual reality (VR) during this period.

Impact on Research

The amount, type, and location of construction work, number of construction workers employed, actions taken on job sites to prevent the spread of COVID-19, and changes in the number of trainees and how the training is delivered are important issues for safety and health researchers since many research projects depend on having access to trainees and job sites.

At the time of the r2p Seminar, the researchers who participated in the discussions were categorized into three groups:

Researchers who are too early in the process to know if job site access will become an issue.

These researchers indicated they are still in a phase where they do not need in-person interaction, noting that they are conducting focus groups, surveys and other work that can be done with video and online platforms.

Researchers restricted by their universities from visiting job sites. While these researchers said they are finding ways to virtually collect data, they cautioned that there is a risk of losing something in the process.

Researchers facing challenges gaining needed access to job sites. As one researcher noted, "The success of our work depends on access to the workplace." Reactions were mixed from the industry stakeholders present, with some saying that contractors are still willing to have researchers on job sites provided they follow "proper guidelines such as getting a temperature check, wearing a mask, and maintaining social distancing," and others agreeing that it has gotten more difficult because now permission is needed from both the contractor and the workers ahead of time, and contractors do not want to have to deal with extra people on the job site.

Several participants pointed out that while the current environment creates challenges for some research projects, there are also new opportunities:

"When we built the [NORA] research agenda, we included that whole emerging issues area or goal...and we put that in for things like [COVID-19], climate change, and things that may be unforeseen...it's just a matter of being able to make the [shift in focus] if it works for your study or if there is a new study."

"[The current situation] definitely will help us focus on the health side. Historically in construction we look at the engineering side, and now we can focus on the health side...Safety and health professionals will have to...be able to learn and communicate about that, and...impart to workers the route of chemicals, flashpoint and what is on [the] SDS...and hidden illnesses, like exposure, hearing loss and musculoskeletal disorders..."

"The current crisis has raised awareness of CPWR and safety and health research...People [who] had not heard about CPWR before COVID...now they know about CPWR and are also interested in non-COVID safety topics. This gives us a larger pool to draw from and build new connections that we can pull from to support research and r2p."

Researchers acknowledged the need to be flexible and able to react to changing conditions given the uncertainty surrounding the pandemic:

"As researchers, we need to be able to adapt, when unexpected things happen. Learn how to move resources around, while still moving forward."

"Researchers need to be able to rapidly adapt and be able to have some research to practice results in a short amount of time."

"My gut reaction from a research perspective is we need to be nimble, turn on a dime and follow what issues arise, some we may be able to predict and some not..."

However, some of the researchers noted that with shelter in place mandates and research projects still in the early stages, it is not yet clear how this situation might impact their work and how flexible they will need to be. Others notes that multi-year research projects have limited flexibility and are not able to deviate from their current plans. These researchers need to find ways immediately to address those aspects of their projects that are being delayed.

Recommendations to Ensure Research Projects Receive Stakeholder Support

Participants offered several recommendations to help researchers get the access to job sites, workers, and other stakeholders needed to support their projects. There was a general consensus that maintaining an open line of communication with the stakeholders who the researchers will need help from is critical and that the researchers should be proactive in providing specific information on what, when, and where the help will be needed. Among the recommendations:

- Put in writing the expectations for the help needed, including: 1) when the research team will need access to the job site (recognizing that the timing may need to be adjusted to meet the contractor's schedule); 2) what information they will need from the contractor prior to coming on site (e.g., job site safety rules that must be followed, signed consent forms); 3) a detailed description of what the contractor and workers will be expected to do once the research team is on the site; 4) the number and the types of workers that will be needed, under what conditions, and for how long; and 5) the steps that the research team will take to ensure the contractor's safety protocols are followed.
- Create a handout that shows the contractor how their participation will benefit their company and/or segment of the industry, including, if possible, how past research has been beneficial.
- Create a handout for workers on the site to let them "know exactly why [the researchers] are there."
- Provide regular reports on the research progress and findings to participating contractors so they "get to see concrete results."
- Take advantage of networks of contractors and others willing to help researchers gain access to job sites. [Note: the online Construction Safety and Health Network (<https://safeconstructionnetwork.org/>), is designed to connect researchers and industry stakeholders. This existing network could be used to help researchers find industry stakeholders that may be able to support their research projects.]

Next Steps

Participants acknowledged the value of these discussions, particularly in such uncertain times. As next steps, they suggested:

- Identifying listservs that bring together a range of stakeholders needed for research.
- Conducting "mini meetings like this to have more engagement throughout the next year between the research consortium and stakeholders...could be more trade specific depending on the project."

- Surveying unions, contractors, and workers on how COVID-19 has impacted their work and home life.
- Holding townhalls to answer questions and address concerns around COVID-19. (Note: CPWR is now conducting a COVID-19 webinar series in partnership with NIOSH and OSHA. To view past ones on-demand or to register for upcoming topics, visit <https://www.cpwr.com/news-events/cpwr-informational-webinar-series>. In addition, as part of a new podcast series (www.cpwr.com/podcast) developed as an r2p initiative, selected webinars have been reconfigured into podcasts.)

For more ideas on ways researchers and stakeholders can effectively work together, see:

- Summary Report: Research to Practice (r2p) In Construction: Science, Strategies & Partnerships to Advance Safety & Health June 2015 – June 2019; pages 4 – 6 (<https://www.cpwr.com/sites/default/files/research/2015-2019-r2p-Seminar-Partnership-Workshop-Summary-Report-2019-Final.pdf>)
- Construction Research to Practice Partnership Toolkit (<https://www.cpwr.com/research/partnership-toolkit>)

Partnership Workshop Moderators:

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- Carl Heinlein, Sr. Safety Consultant, American Contractors Insurance Group
- Gene Sabitoni, Training Manager, LIUNA Training & Education Fund
- Ken Seal, Apprenticeship Training Representative, International Union of Painters and Allied Trades/International Finishing Trades Institute
- Bernard Silkowski, CSP, Superintendent, Division of Safety & Hygiene, Ohio Bureau of Workers' Compensation
- Chuck Stribling, CSP, ASP, OSH Federal-State Coordinator, Department of Workplace Standards
- Michael McCullion, CSP, ARM, Director, Market Sectors and Safety, SMACNA
- Kevin Cannon, Sr. Director, Safety & Health Services, AGC CDR Elizabeth Garza, MPH, USPHS, Public Health Analyst, NIOSH

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