



# The 3 Major Qualities of a Successful Task-analysis Approach

How Quality, Safety, and Productivity can help you stand out from the competition.

By **Jim Rogers**

**PROCORE**

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As the complexity of construction projects continues to increase, so does the demand placed on contractors—owners expect more, regulations continue to expand, skilled labor is harder to come by, and risk is harder to allocate.

*How can anyone keep up?*

*It's all about how you plan.*





# I. The Great Balancing Act

To be successful, today's construction professional must balance the management of safety, quality, and productivity on the job site. For decades, studies have shown tangible links between these three elements, yet the industry has only recently begun to embrace the concept that we cannot neglect one of these facets without having a negative impact on the others.

## Deadly choices...

Consider a recent fatality of a concrete worker performing finish patching on a length of cast-in-place concrete wall. The wall was not extremely tall and an extension ladder was selected to provide safe access to the upper areas that needed to be patched.

If the task is further scrutinized, the choice of a ladder seems like a questionable way to perform patch work along the entire length of the wall. When working from a ladder, the safe reach of the worker from side to side is extremely limited, giving him a few options:

- 1 The worker will have to climb up the ladder, climb back down, and move it a few feet over—repeating this process until the entire wall is complete. This can be a very slow (yet safe) method for a simple task.**
- 2 The worker may choose to ignore safe practices and reach just a little farther to finish one more spot before moving the ladder.**
- 3 They may just skip the area all together and hope it can't be seen from below rather than moving the ladder over and over.**

In this case, after working at this task for several days, the worker unfortunately reached too far and fell while positioned less than 10 feet up the ladder.

An analysis of the circumstances in this example begins to reveal the complex relationship between safety, quality, and productivity. As the worker's focus jumps from one element to the other in an attempt to compensate and keep the three elements in balance, he is forced to make constant decisions about which element to favor at any given point in time.

Unfortunately, if a pre-task analysis does not include all three elements in the planning stages, it is very difficult to keep them balanced once you are entrenched in the work. Asking an employee to continuously undertake this decision-making process invites disaster as that employee may not be equipped to make the right decisions nor should he or she be expected to.

The solution calls for rethinking what many of us know as our JHA (Job Hazard Analysis) process.



**II. Would you like  
a side of safety  
with that?**

Over the years, as the importance of safety and health management began to emerge as an element to be considered in the execution of our work, the industry largely responded with an “add-on” approach.

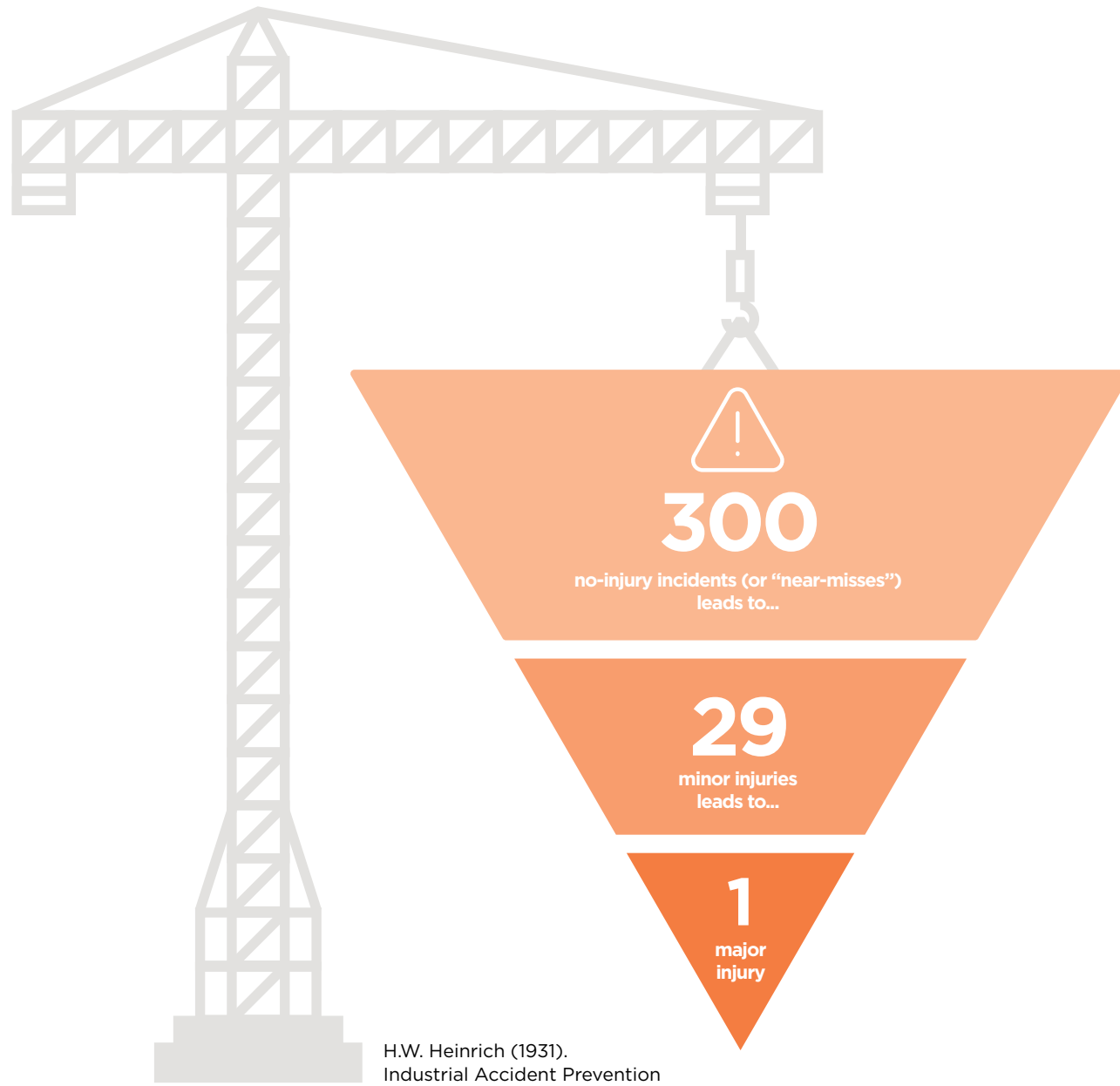
We added the position of “safety manager” to the job site roster. They quickly became known as the “safety cops,” roaming the job site looking for unsafe acts or conditions, their reputation declining. As this approach has progressed, it’s begun to reach its limit and is no longer an effective method.

Next, some progressive companies added on the use of a Safety and Health Management System. These programs, also known as Injury and Illness Prevention Programs, (or I2P2), seek to implement a proactive approach to workplace safety. A common component of these programs includes the performance of a JHA.

Many companies assign the duty of Job Hazard Analysis to their safety manger. In some cases, the project manager or super sends the information and plan of attack to the safety manager. In other cases, the plan is established and the crew leader is asked to perform a hazard analysis on that plan, in the field, each morning before starting the work.

As a stand-alone solution to safety and health management on a construction site, this JHA process is still a flawed approach—only addressing safety as an afterthought.

**To be successful, the industry needs to abandon the “add-on” approach and start considering safety and health as a fundamental part of the planning and execution processes.**







### **III. Steps to a Successful Task Analysis**

A successful task analysis approach will examine an activity at the planning stage and take all three elements (safety, productivity, quality) into account to arrive at a well-balanced method for completing the work. This removes the responsibility of the field personnel to continually evaluate their work and choose between these elements.

## Every job is different.

**While some contractors perform very similar types of projects and can reuse many of their task plans, it's important to acknowledge that conditions on projects are variable and ever changing.**

That means we need to continually ask ourselves “Does this previously completed task analysis represent the conditions on this job?”

If a task is typically completed using a scissor lift to reach an elevated work area, for example, but this site does not have a flat or level surface below the work area, work will likely commence with the wrong piece of equipment on site. This leaves the crew leader faced with the task of deciding: “Do I give it a try so we can get it done? Maybe we can create a level surface ourselves. Or do I have everyone wait while we get a different piece of equipment delivered?”

## Team buy-in.

A successful task analysis will also recognize that field personnel often have a more intimate knowledge-base of how conditions will actually present themselves in the field or, at the very least, they may have a different perspective on the activity. These are the people that will be tasked with performing the work and it's important to have their buy-in on the resulting process.

Not only does this increase the chance for success, but it also presents an opportunity to discuss expectations and specific procedures to be followed when things don't go according to plan.

Although this may seem like added work, the process of conducting an initial task analysis pays off in the long run. As crews arrive on site with a workable plan, they're able to focus on the job at hand and get the work done much more efficiently.



**IV. Data that can  
predict (or at  
least influence)  
your future.**

As work progresses, it's also important to collect data and measure actual progress and activity to planned progress and activity. The data gathered from the field should include information on all three elements: safety, quality, productivity.

Remember, things that can have a negative effect on productivity, like trade stacking, unexpected conditions, inadequate staffing, or lack of training, can also affect safety. Reports of poor quality or frequent rework may also be indicators that productivity and safety are being compromised.

**Ideally, data collected from the field should be information that can be utilized as leading indicators, information that tells you how work is trending, rather than collecting only lagging indicators that simply report an impactful event after it has occurred. Field personnel should be trained to leverage technology to enable the timely capture of this type of information.**

If field personnel have an easy way to report information on “near-misses”, for example, this information can be tracked to identify and correct negative trends before they result in a serious injury. Likewise, if rework is tracked and reported in real time, rather than simply collected as punch list items at the end of the project, this information could be used to identify and correct the source of the rework before trades move on to other tasks or projects.

Tracking and reacting to this type of leading indicator data can help correct negative trends now, on the current project, before they result in an event that impacts production. Conversely, if the only data available are lengthy reports written after a major event has occurred, this information will typically be reviewed in order to determine how to prevent these impactful events from occurring again on the next project.



## V. Stand Out From The Competition

As the industry becomes more and more competitive, it's imperative for contractors to take every step they can towards becoming a more efficient and safe workplace. Balancing safety, quality, and productivity during your task-analysis approach, before the project has begun, allows you to have a plan in place so that things run much smoother. Using this task-analysis approach will allow your company to focus on what is happening in the field and how you can improve your business; all within a safe and productive environment.

## Author Bio



Jim Rogers is an experienced construction industry trainer and educator that stresses the importance of integrating safety, quality and productivity into all operations. Jim's experience includes various roles within the construction industry, extensive work with industry trade associations creating training and certification programs, and work as a faculty member at Arizona State University where he taught undergraduate and graduate courses in construction management. Jim also created and ran ASU's OSHA Training Institute Education Center.

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