

# human factors

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Nearly every accident involves a human response or the lack thereof. Determining how people behaved in the context of a dynamic situation is at the heart of a typical human factors analysis. The conclusions of this analysis can affect the assessment of liability for an injury-producing event.

Human factors experts examine the interaction between humans and their environment. They apply knowledge of human capabilities and limitations to identify potential influences on behavior. An investigation might focus on a driver's ability to spot a darkly-clad pedestrian crossing the road at night or their ability to avoid an impact given the time available. It could involve determining a pedestrian's ability to judge the speed of an oncoming car before deciding to cross, or their ability to see a tripping hazard on the sidewalk. As humans interact with new technologies there are new factors to consider, such as the effect of a driver or pedestrian's cell phone use on their behavior and how it may have affected the outcome of an event.

Often a site visit under similar conditions is important to understand the environment everyone was operating in. When possible, quantitative measurements of key factors will be made. For example, MEA experts have developed a method for estimating the visibility of a pedestrian at night based on a series of lighting measurements taken at the accident site.

Human performance can vary greatly. Therefore, an individual's response must be put into the context of the general population. Is it typical? Is it delayed? Is it perhaps indicative of distraction or fatigue? By comparing a particular individual's response to that expected in a typical population, we can help shed light on the liability an individual might assume.

MEA's scientific approach to generating unbiased conclusions produces human factors opinions that stand up in court. When MEA experts testify as expert witnesses their goal is to help the court understand what the evidence says about how a particular event unfolded.

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