

What is Cognitive Ergonomics From the Inside Out[®], known as Cog-Erg?

The best way to understand Cog-Erg is with a metaphor.

Engineering is a field of study around problem-solving. It is the process of identifying an issue, accurately defining the problem, revealing the root cause, and solving the problem systematically. To engineer anything, it must be tangible. Tangibility means you must know what to look for or what you are seeing and have the means to see it.

Before the 1800s, we could see the effects of electricity—lightning, sparks, shocks—but had no idea what it was. At that time, it was unpredictable, immeasurable, and intangible.

Then, in the mid-1800s, there was a sequence of events that defined electricity as current. A current is the steady movement of an invisible charge through a path driven by voltage and limited by resistance.

Then, James Maxwell unified electricity and magnetism through what became known as Maxwell's Equations. These equations served as a lens to explain how current behaves, how it moves through space, and how it interacts with fields.

By defining “current,” we know what to look for. Maxwell's Equations gave us the means to see current as defined. Suddenly what was invisible was made tangible, giving us the means to engineer (problem-solve) objectively around electricity. Thus, electrical engineering was born.

In the past, we could see the effects of ADHD, focus issues, impulsivity, and struggles with planning, organizing, and managing time, but we had no idea what was happening. Those with ADHD sometimes performed and sometimes they didn't. Performance was unpredictable. Executive functions were invisible and intangible.

Then, around 2010, Dr. Russell Barkley initiated and successfully established a clear definition of executive functions—describing them as a collection of mind tools used to sustain effort and to guide behavior over time towards a goal.

Later, Jeff Copper developed AttentionScope[®], a collection of simulated experiences and metaphors used to enable us to experience what Dr. Barkley defined and to witness them as a process.

By defining executive functions and having a lens to recognize what Dr. Barkley defined, suddenly what was invisible was made tangible, providing an objective means to engineer (problem-solve) accommodations to mitigate or eliminate executive function impairment. Thus, Cognitive Ergonomics From the Inside Out[®] was born.

Cog-Erg provides the means to look past skills and behavioral training to engineer accommodations and relieve the impairment, thereby replacing existing accommodations designed to give individuals more time to manage the impairment.