

# Happiness and Continuous Improvement Public

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## How Continuous Improvement Can Increase Happiness (And Improve Reliability!)

A 2011 Harvard Business Review article stated that the level of happiness has a profound impact on workers' creativity, productivity, commitment and collegiality.<sup>1</sup> Further studies have shown that happy employees are up to 20% more productive than unhappy employees.<sup>2</sup>

Let's explore these findings. There are four primary chemicals in the brain that affect happiness: dopamine, oxytocin, serotonin, and endorphins. Additionally, these are also classified as excitatory neurotransmitter chemicals,<sup>3</sup> meaning they stimulate brain activity. Based on this knowledge, the conclusion can be drawn that the happier you are the more dopamine, oxytocin, serotonin, and endorphins are coursing through your brain resulting in greater creativity and productivity among other attributes.

What does this have to do with reliability? Allowing employees to have a direct influence on their work while striving for continuous improvement creates a positive experience for the worker. This, in turn, makes the worker happier and raises their creativity and productivity.

### Let's look at an example.

NERC Standard PRC-004-5, R5 states the following:

Each Transmission Owner, Generator Owner, and Distribution Provider that owns the Protection System component(s) that caused the misoperation shall, within 60 calendar days of first identifying a cause of the misoperation: [Violation Risk Factor: High] [Time Horizon: Operations Planning, Long-Term Planning]

- Develop a Corrective Action Plan (CAP) for the identified Protection System component(s), and an evaluation of the CAP's applicability to the entity's other Protection Systems including other locations; or
- Explain in a declaration why corrective actions are beyond the entity's control or would not improve BES reliability, and that no further corrective actions will be taken.

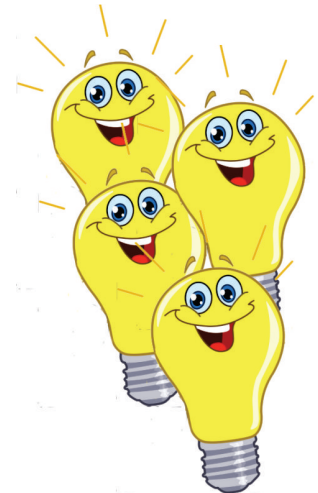
Notice there are no specifics related to the required Corrective Action Plan (CAP), therefore a minimal level of effort could be used to ensure the checkbox has been filled (for example, using a "cookie-cutter" approach of applying existing or prior corrective action plans to subsequent misoperations). Think about that repetitive task and the impact to someone's happiness level? No dopamine, oxytocin, serotonin, or endorphins anywhere to be found!

Conversely, think about the approach with continuous improvement activities woven in to the CAP. An example would be the development of a query that uses the characteristics of the misoperation (i.e., relay make/manufacturer and associated settings) and determines where else on the system this configuration may be in place and require review/remediation.

### Or, consider a process that we have seen being used in our footprint:

When initial analysis revealed relay misoperation issues with commissioning done by a contractor, an entity proactively retested the contractor's work. This identified multiple locations with similar conditions that were remediated before a misoperation occurred.

When continuous improvement activities are woven into the historical "cookie-cutter" approach to compliance based activities, even though they are over and above what is required by the Standard, these activities provide additional meaning, creativity and happiness to an individual's work. Therefore, continuous improvement activities not only increase reliability on their own merits, they can also increase employee happiness (and from that, their productivity, creativity, and commitment). For ideas on how to integrate continuous improvement activities into your compliance program, contact the Entity Development department.



<sup>1</sup> <https://hbr.org/2011/05/the-power-of-small-wins>

<sup>2</sup> <https://www.forbes.com/sites/forbescoachescouncil/2017/12/13/promoting-employee-happiness-benefits-everyone/#53a95272581a>

<sup>3</sup> <https://www.ncbi.nlm.nih.gov/books/NBK21521/>