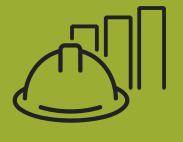# The SCIENCE of **Safety Culture**

Having a good safety culture is a goal for many organizations. Phrases like: 'culture eats strategy for breakfast' reinforce this ambition.

But safety culture is **not** like other safety operations and initiatives.

FUNDAMENTALS

- **There is no agreed scientific definition of 'safety culture'**

- **There is no agreed scientific way to measure 'safety culture' as a holistic concept**

- **Measuring different safety activities in various ways, and then adding them together is, scientifically, a fallacy of logic.**

Safety Culture Measurement, Metrics, and Benchmarking

Although we often shouldn't, we do measure safety with numbers. For example, TRIR is a common safety metric used to measure and compare companies' safety performance. But it has been demonstrated to be statistically invalid. Scientifically, TRIR cannot tell you how safe you actually are or will be.

And culture cannot be measured with numbers either!

In fact, to measure culture scientifically, researchers would need to spend months, if not years, at an organization undertaking immersive research to reveal the safety culture. But that's just not practical.

So instead, we grab some safety things we can easily measure using numbers – e.g.: the presence of safety policies, numbers of leadership safety engagements, safety training records – add them all together, and call that 'safety culture'.

But everyone picks different safety things and measures them in different ways. As an industry, we can't benchmark from that.

And we can't scientifically 'measure' safety culture in this way either – it's a fallacy of logic and as scientifically invalid as TRIR.

Keeping Safety Scientific

There are things we can scientifically measure to monitor safety – but we need to use scientifically optimal methods to ensure validity.

For example:

Leadership engagements should be measured in terms of their **quality** as well as their quantity, to ensure positive workforce interactions are being achieved.

Safety **capacity** should be measured through High Energy Control Assessments (HECA) instead of focusing on invalid lagging metrics like TRIR.

Worker **perspectives** should be measured through a validated safety climate survey, which is predictive of performance and can reveal areas for attention and improvement.

A variety of different methods will be needed and will result in a patchwork of data – and scientifically speaking, that's as it should be.

How is safety culture different?

Culture itself is a social science concept. It tries to capture the 'feels' of something. To explain what it's like to experience a country or a society. Or what it's like to work in a company.

Culture is how your company does what it does, and safety culture is just the part of your organizational culture that relates to safety.

Culture cannot be scientifically measured by numbers. It's just not that easy to grab hold of!

Culture is messy, nuanced and multi-faceted. In your organization there will be different sub-cultures on different jobsites and amongst different work crews. You can't change that.

KEY TAKEAWAYS

- You can't measure something you can't define – and there is no scientific definition for safety culture.

- Don't try to put a number on safety culture – scientifically it can't ever be a percentage or ranking.

- Use scientifically validated tools to measure safety in your organization. The safety toolkit contains many **different** tools to best measure the different things we do for safety.

Don't waste the time, resources and energy of your safety professionals trying to measure safety culture in one go – it's not scientifically or practically possible.

You can find the academic peer-reviewed work that underpins this guidance and the tools needed to measure safety in scientific ways on the **CSRA website**.