

# USING VALUES BASED SAFETY AND ENTERPRISE RISK MANAGEMENT IN THE REALM OF EHS

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*Are you winning the infinite game of safety?*



# QUALITY OF LIFE PERMANENTLY ALTERED

*As I prepared to go home from the lab during the early hours of the morning of the accident, I looked in the bays to see what my co-workers were doing, and then returned to my own bench, removed my safety glasses, and put on my parka.*

*As I was walking to the door, I passed the bench where a first-year graduate student was flame-sealing an NMR tube.*

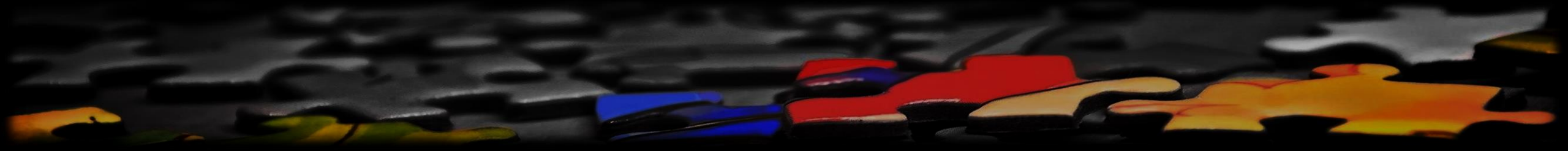
*I picked up the tube from the liquid nitrogen bath, and held it to the light. The tube immediately frosted over, and, as I wiped it to better see the contents, I noticed that the solvent level was exceedingly high then dropped rapidly.*

*It immediately exploded. Glass fragments shredded my cornea, penetrated the iris, and cause the partial collapse of one eye.*



*"I regret to say, had we looked up the procedure, which we subsequently discovered to be incorrect."*

*-Barry Sharpless, Ph.D.  
2001 Nobel Prize in Chemistry*

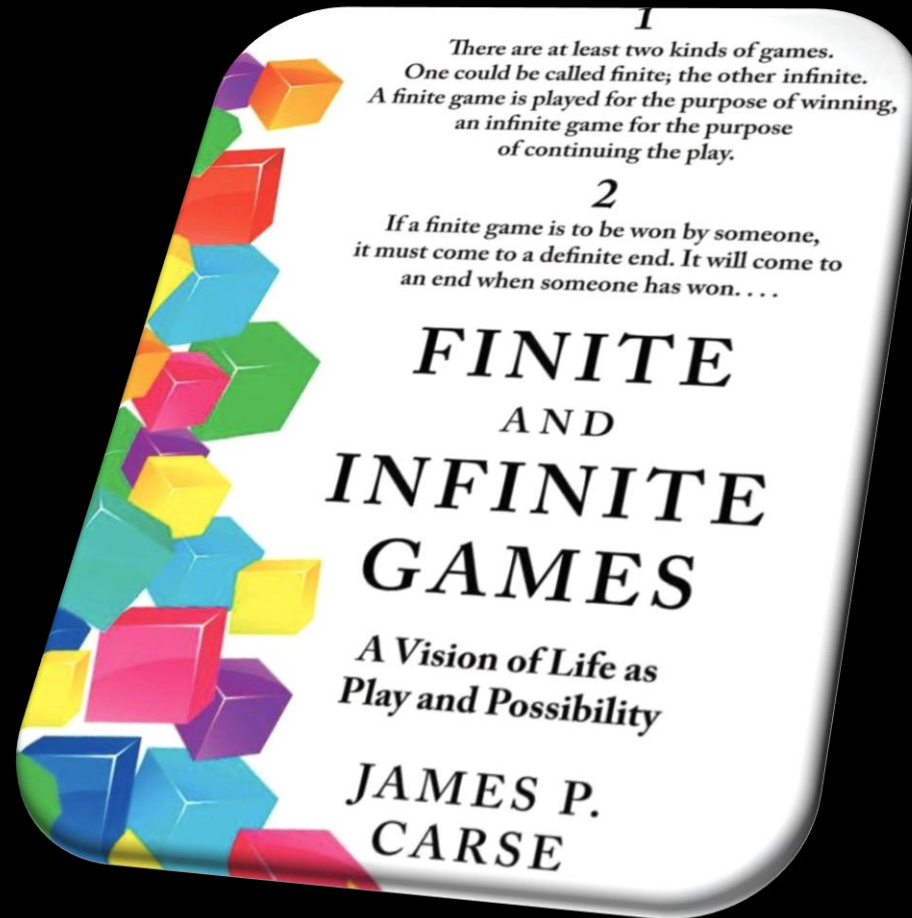




# JAMES P CARSE



Professor Emeritus  
History and Literature of Religion  
New York University

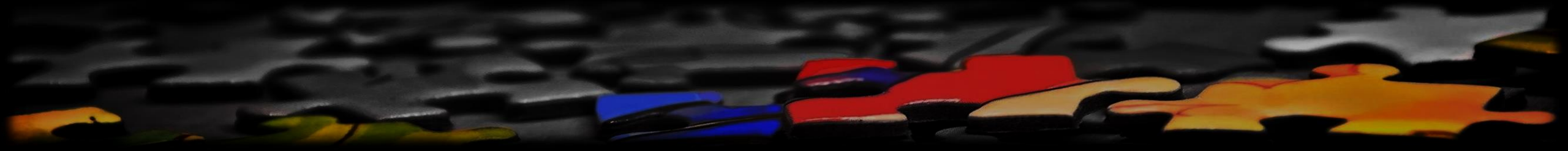


# FINITE AND INFINITE GAMES

A finite game is played for the purpose of winning, an infinite game for the purpose of continuing the play.

Game theory had chiefly to do with winning conflicts, or minimizing losses where winning was impossible.

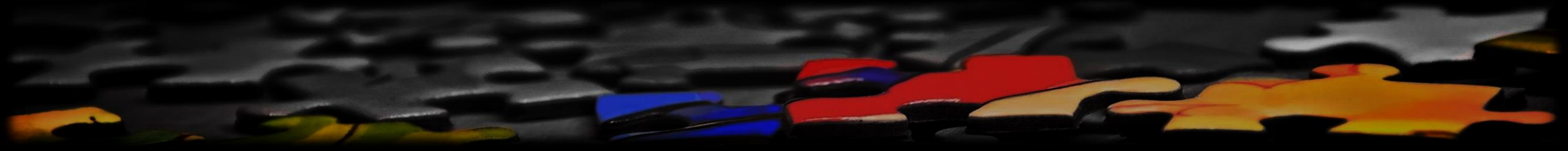
Which one are we playing? How well are playing?



# MASTERING THE FINITE GAME

If the purpose of a finite game is to conclude play as the winner, then play itself acquires distinctly negative quality. Since your opponents seek only to make you a loser, the play actually stands in the way of their desired result.

Winning ends the game. Finite players find themselves in a strange situation: **they are playing against play itself**. The outcome is known, playing the game is merely theatrical.







# The Conflict of the Finite Game with *Values-Based Safety*

- Metrics with an end game, a way to win.
- All participants follow a defined set of rules.
- Once a winner is declared, the game is over.
- To sustain success, a new game is started.
- Strategies are amended to improve chances of winning.

**COOPER HILL CHEESE ROLL**

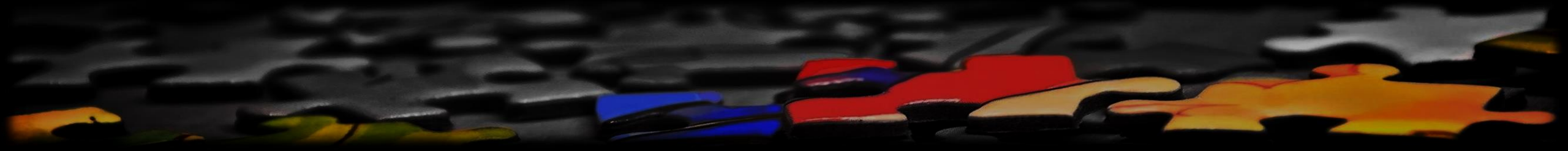
*Gloucestershire, England*

# ARE WE WINNING?

Accidental injury has become the No. 3 cause of death for the first time in U.S. history.

Based on new injury statistics, an American is accidentally injured every second and killed every three minutes by a preventable event.

↳ A drug overdose, vehicle crash, a fall, drowning or other preventable incident.



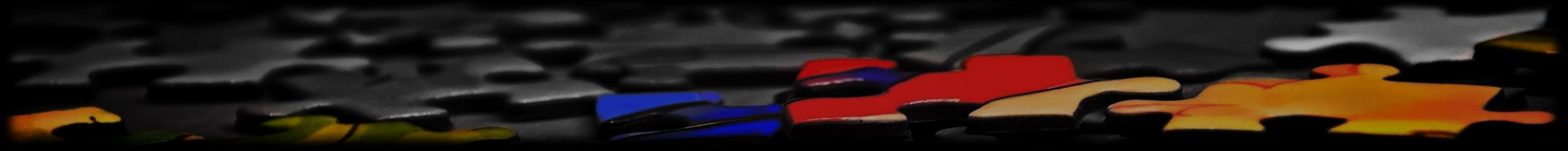


# SAFETY CULTURE SURVEY

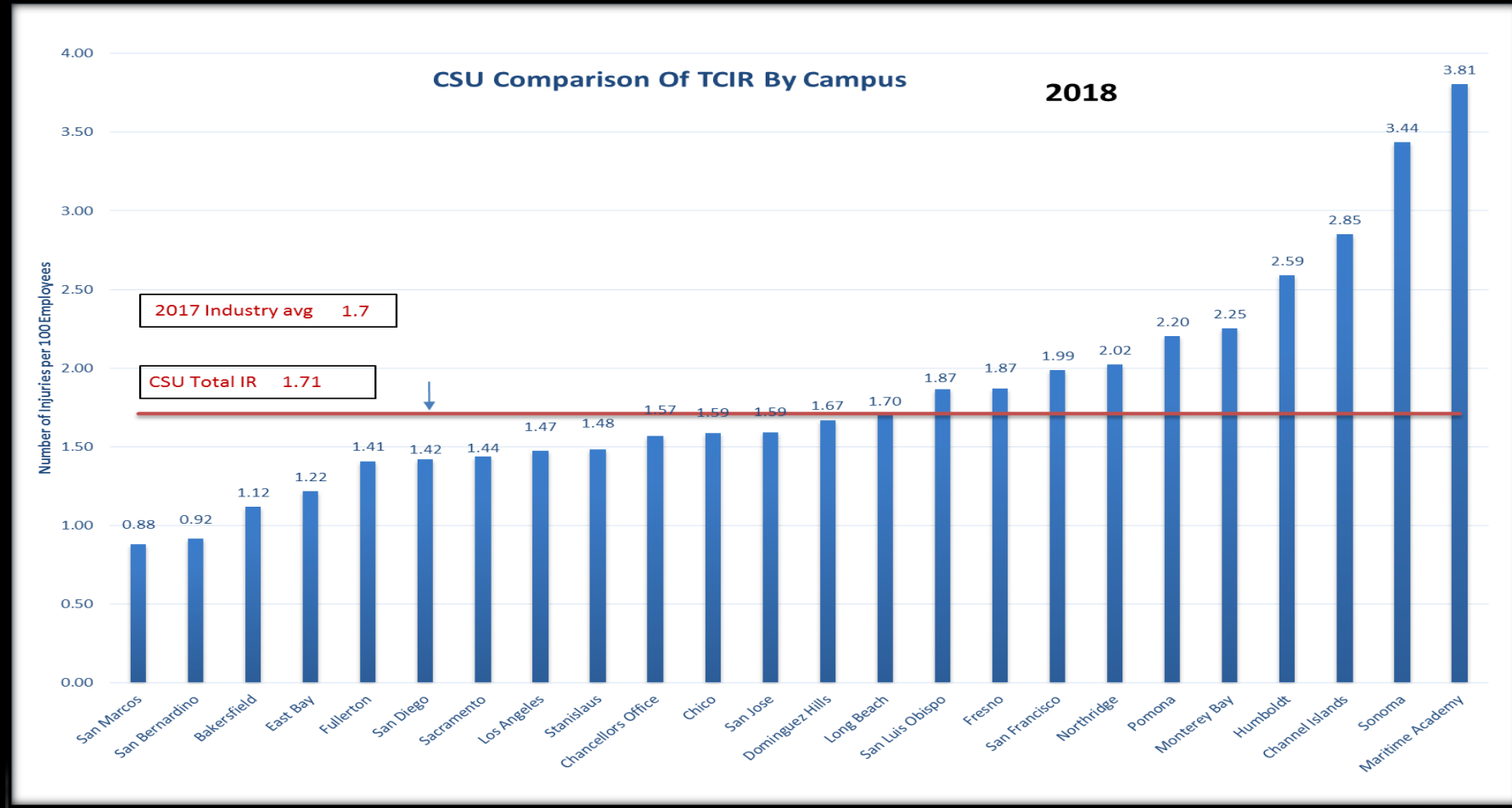
## Sample size:

- ✓ >1000 respondents
- ✓ 38 questions
- ✓ 4 US Research institutions
- ↳ 95% speak openly with EHS about safety concerns
- ↳ 51% of trainees/staff do not consistently wear eye protection when required
- ↳ 51% of PI respondents would not speak to Dept chair about safety concerns involving other colleagues

SOURCE: Chemistry World April 2019

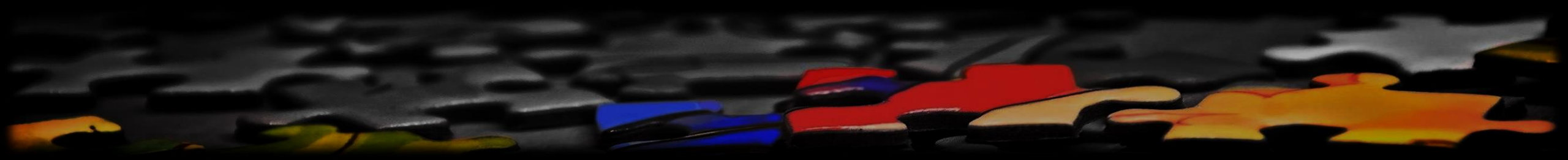


# THE CSU TWENTY-THREE



# Finite and Infinite Game of EHS

**TAKE THE SURVEY**



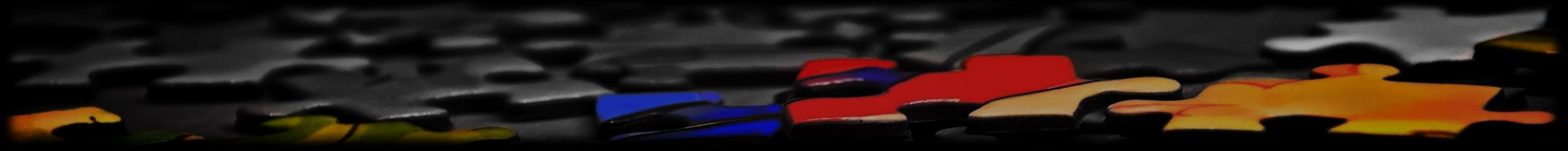


# PLAYING THE INFINITE GAME

The worthy rival that reveals your weaknesses allows you to become better at your job.

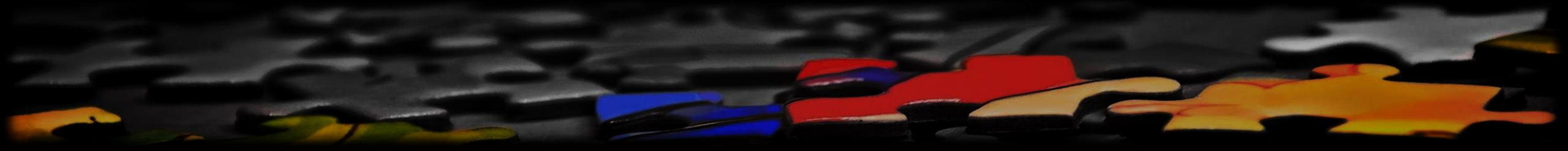
The worthy rival in safety is sharing experiences so that others will learn from that experience without having to experience the same misfortune.

Flexibility will allow for transition away from a service or product when it is no longer relevant or a shift towards a new model to survive. The ability to make a major shift to advance the cause.



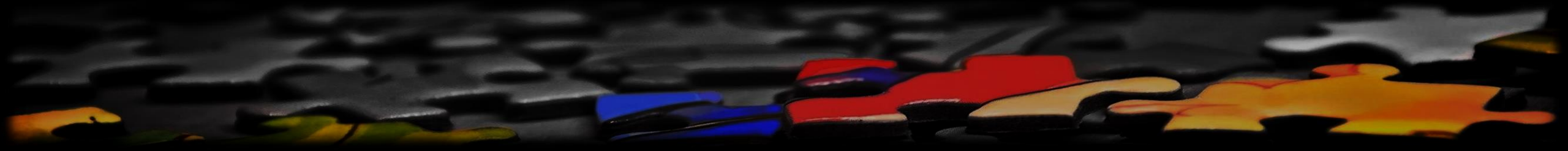
# REFRAMING SUCCESS

*To successfully influence the choices each employee makes every day that can abruptly change the quality of their life will require a shift in the current EHS paradigm by reframing existing strategies around more powerful goals.*



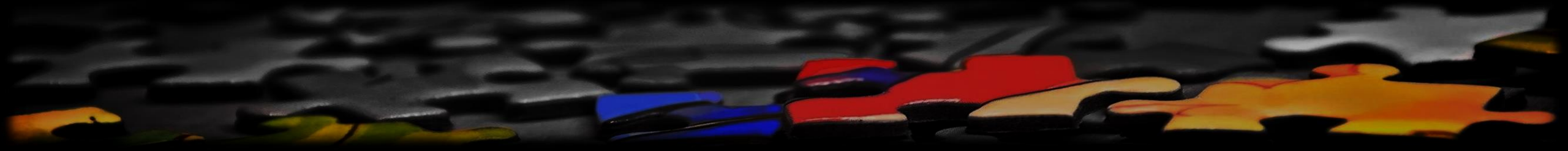
# How is winning measured when there is no precedence or regulatory standard?

- It's easy to metric training attendance, injury rates, number of written program reviews, etc.
- It's not easy to metric trust, love, friendship or other forms of engagements that are not intended for one person or one team to be declared the winner.





WHAT SPEED ARE YOU NOT WILLING TO EXCEED?



# ACCEPTABLE RISK

In its absence of a procedure, the individual's level of discipline, technical acumen and experience will determine what acceptable risk is for them.

Safety will be defined by the choice a person makes in that moment.

So what is the level of risk you are willing to take for the experience you are willing to have?



# WHICH GAME ARE YOU PLAYING?

How many decisions will you make today that will place the quality of your life at risk...

...in 5 SECONDS [or less]

