

Do We Value Safety?

Mindsets for a resilient safety culture

August, 2025





**On a scale of 1 - 5 how much do does
our culture value safety?**







Public Payphone

Public Payphone

Public Payphone

Public Payphone

Public Payphone







I intend to make
ALCOA the safest
company in
America – I intend
to go for zero
incidents.

- Paul O'Neill -





GENE HACKMAN
UNCOMMON
SAFETY



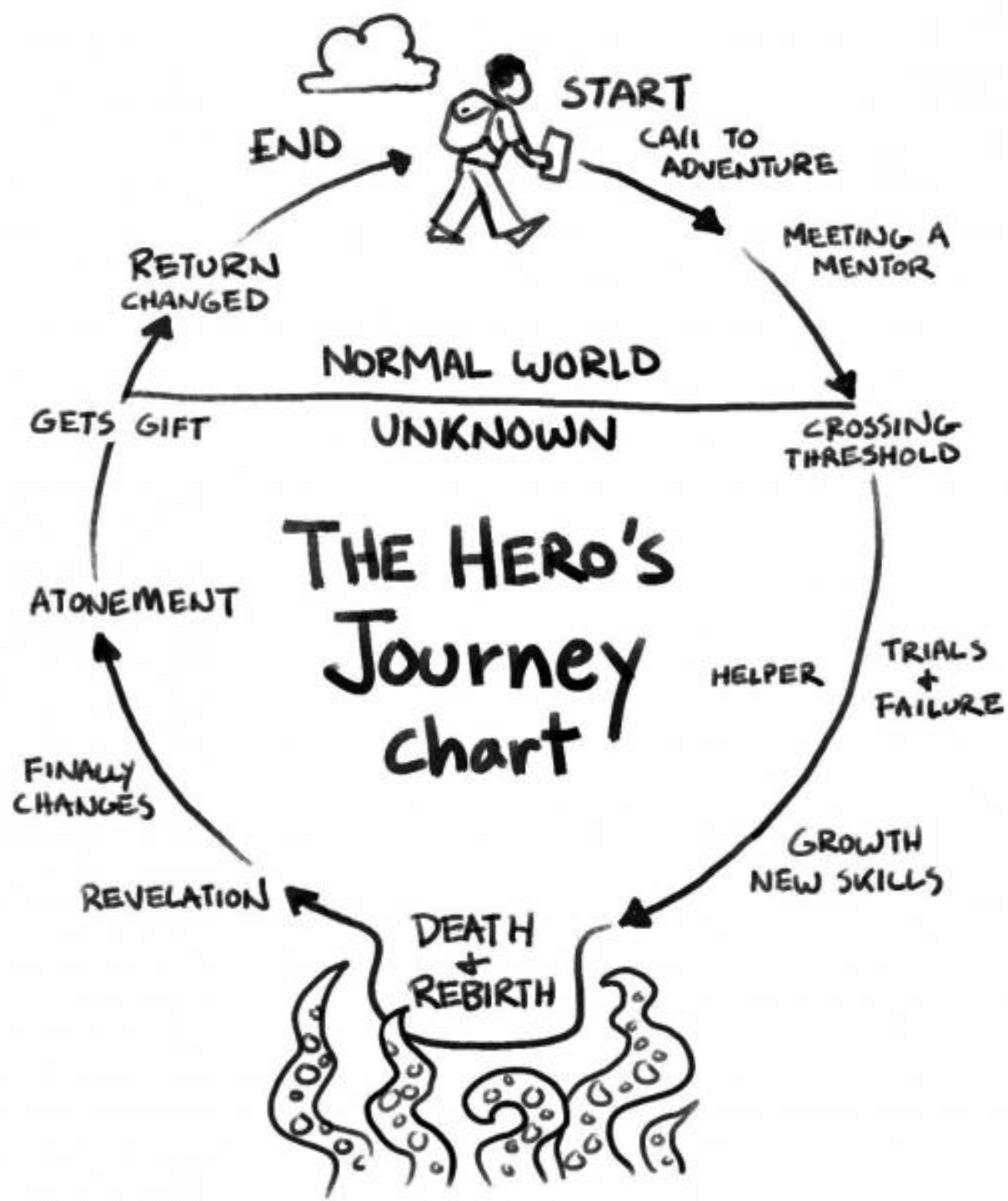
M RECOMMENDED FOR MATURE
15+ AUDIENCES 15 YEARS AND OVER



WIDESCREEN DVD COLLECTION







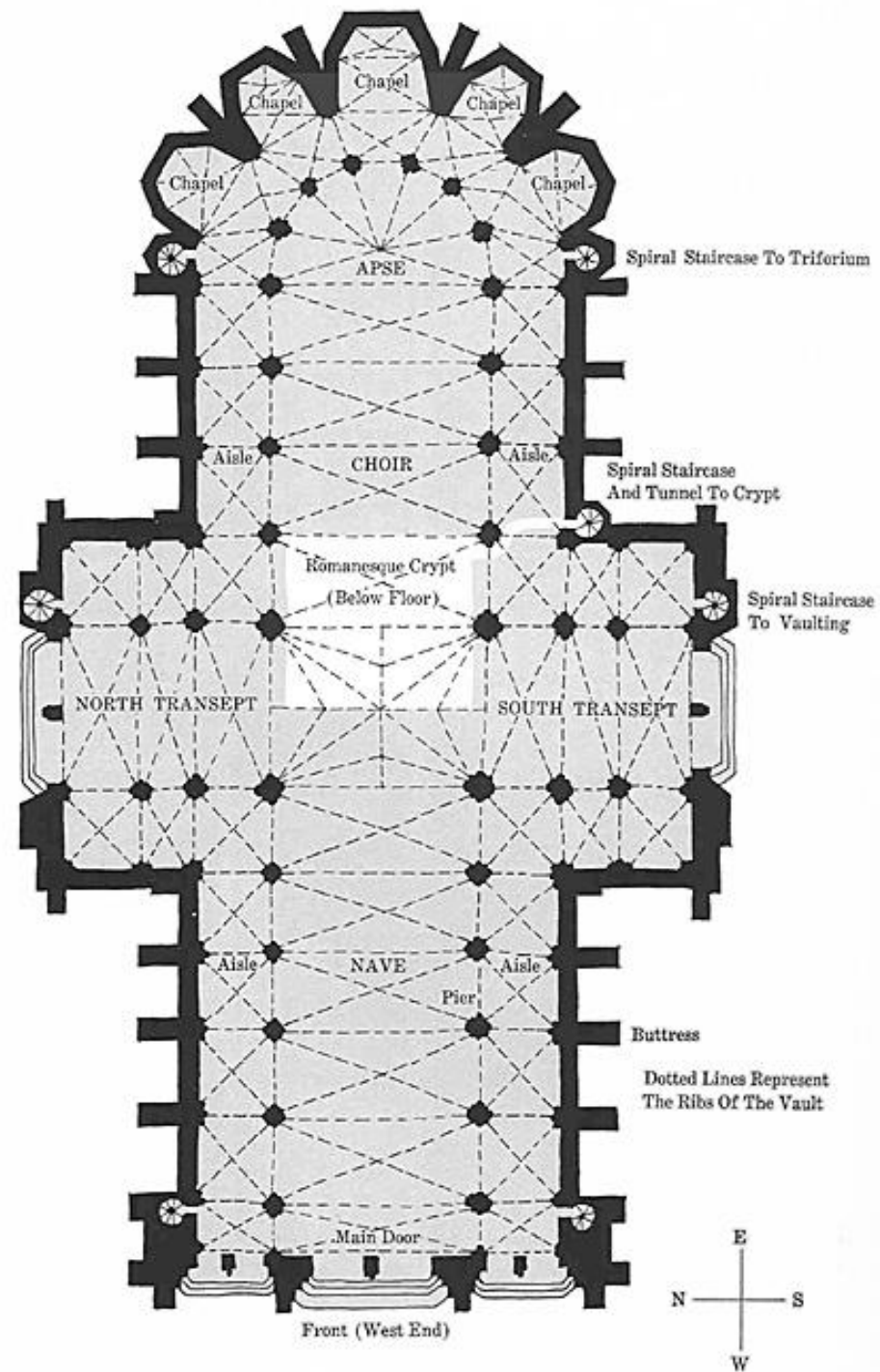




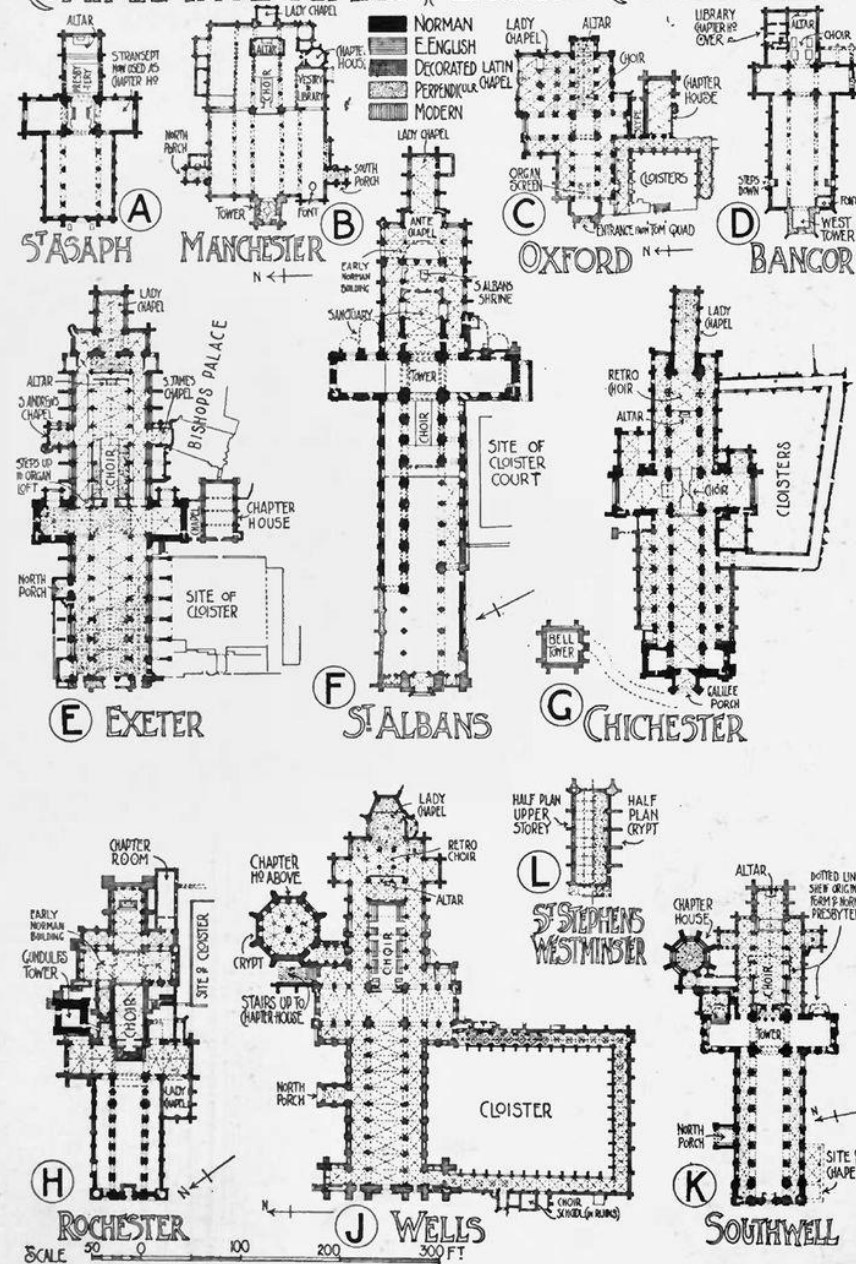




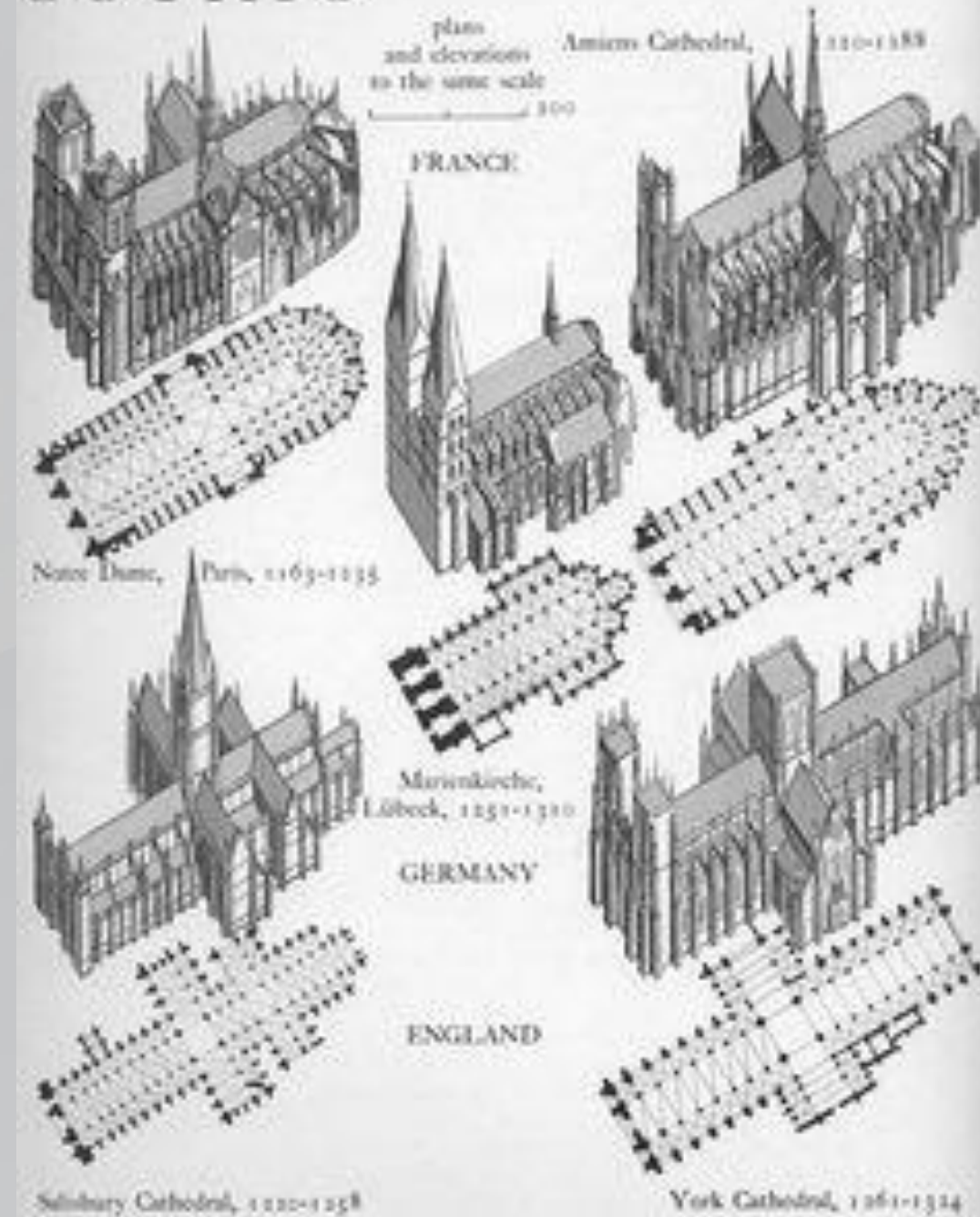




COMPARATIVE PLANS OF ENGLISH CATHEDRALS 3.



GOTHIC







SUMMUM BONUM

(Highest Good)

FAITH

HOPE

CHARITY

FORTITUDE

JUSTICE

TEMPERANCE

PRUDENCE

THERE ARE THREE THINGS THAT WILL ENDURE

Faith, Hope, and Love

AND THE GREATEST OF THESE IS

LOVE

1 CORINTHIANS 13:13

**"Greater love hath no man than
this, that a man lay down his life
for his friends."**

— John 15:13, King James Version





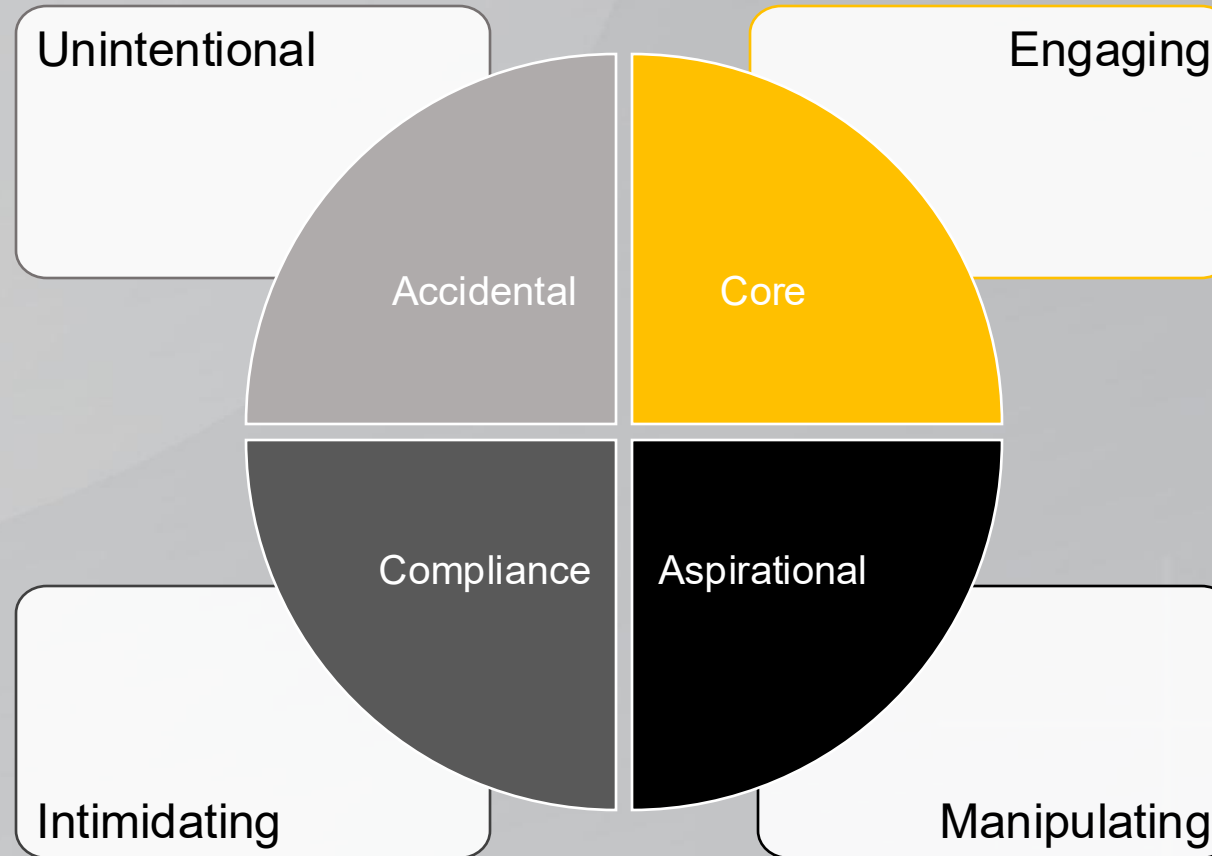
On a scale of 1 - 5 how much does our culture value safety?

A large group of Caterpillar employees, mostly men, are posed in many rows in what appears to be a factory or industrial setting. They are wearing various work clothes, including blue and green jackets with 'CAT' and 'MAX' logos, and hard hats. The image has a semi-transparent dark blue overlay in the center where the text is located.

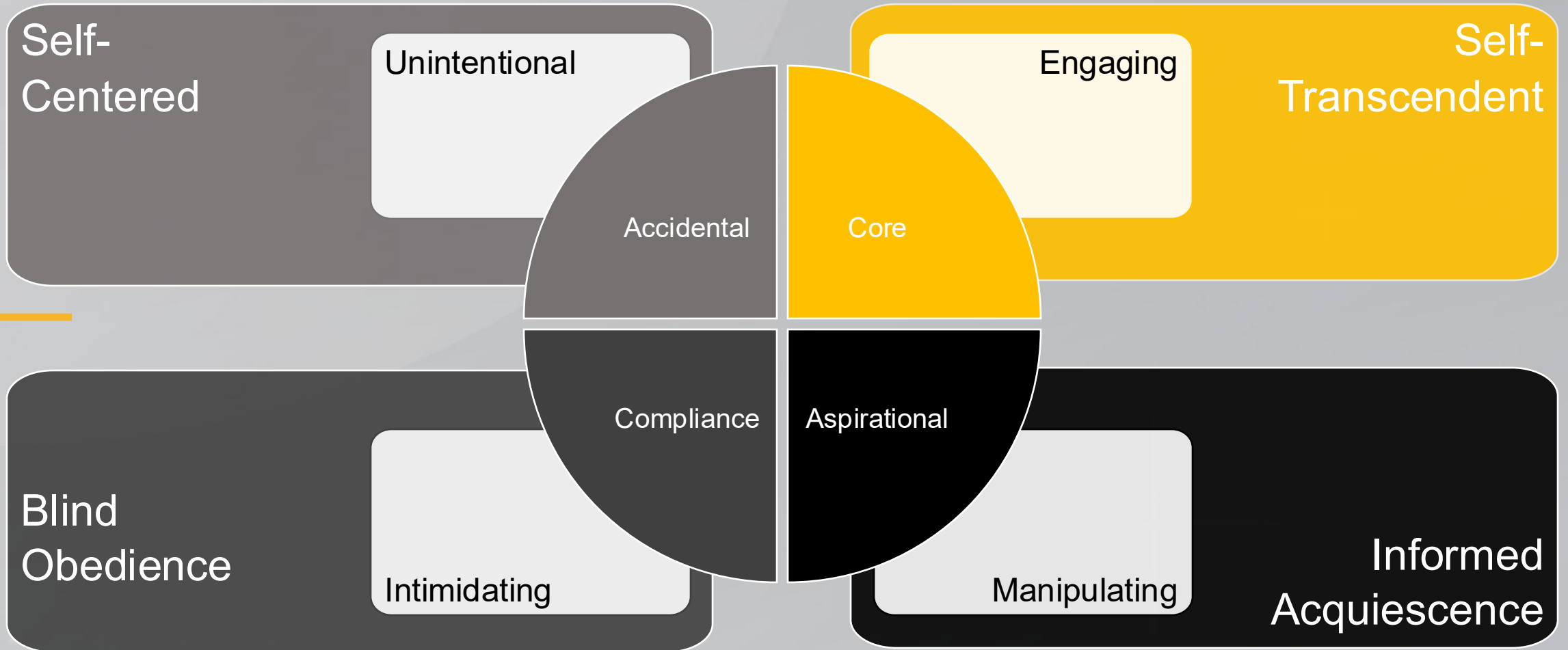
SAFETY FIRST

Values

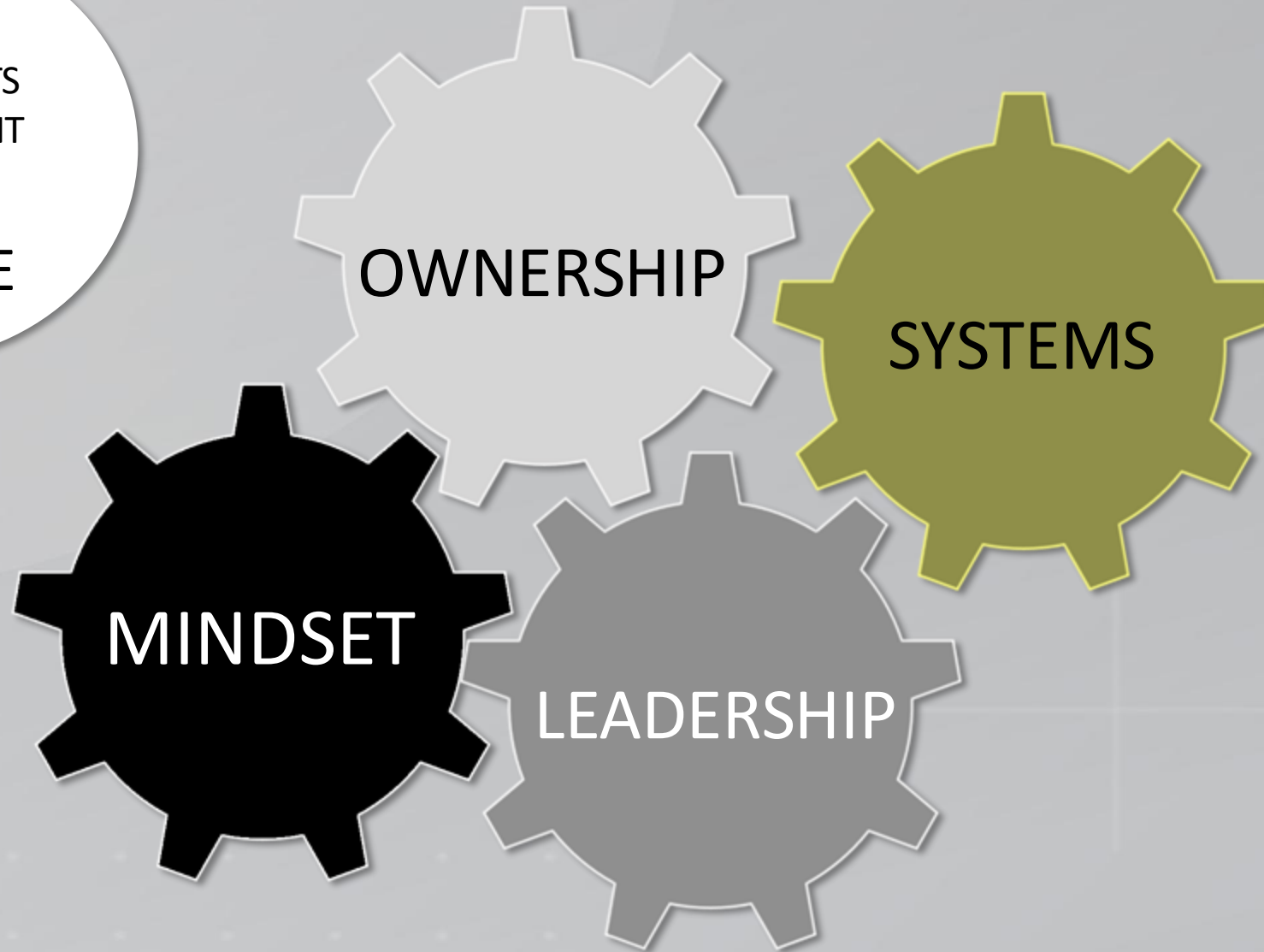
Cultural Characteristic



Cultural Behavior Characteristics



FOUR
COMPONENTS
OF A RESILIENT
SAFETY
CULTURE



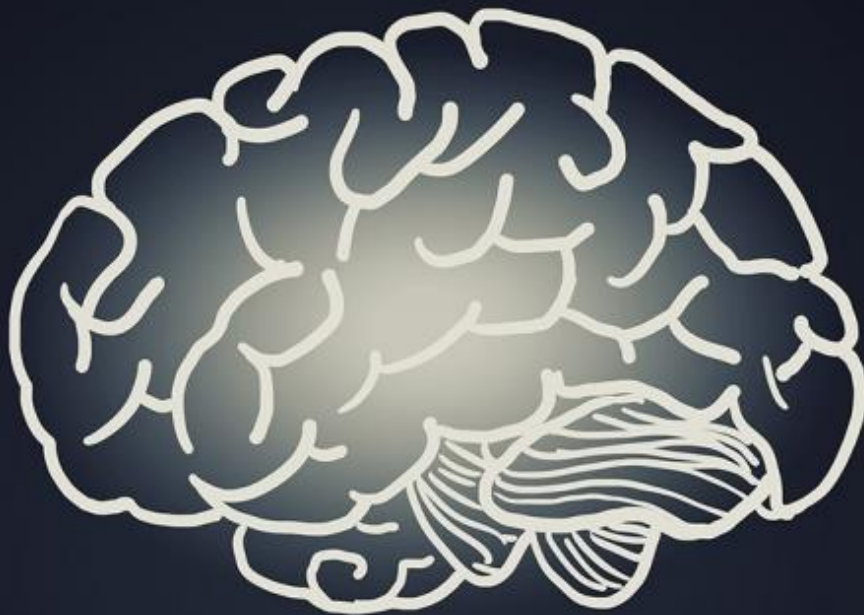
FOUR
COMPONENTS
OF A RESILIENT
**SAFETY
CULTURE**



OWNERSHIP

SYSTEMS

LEADERSHIP



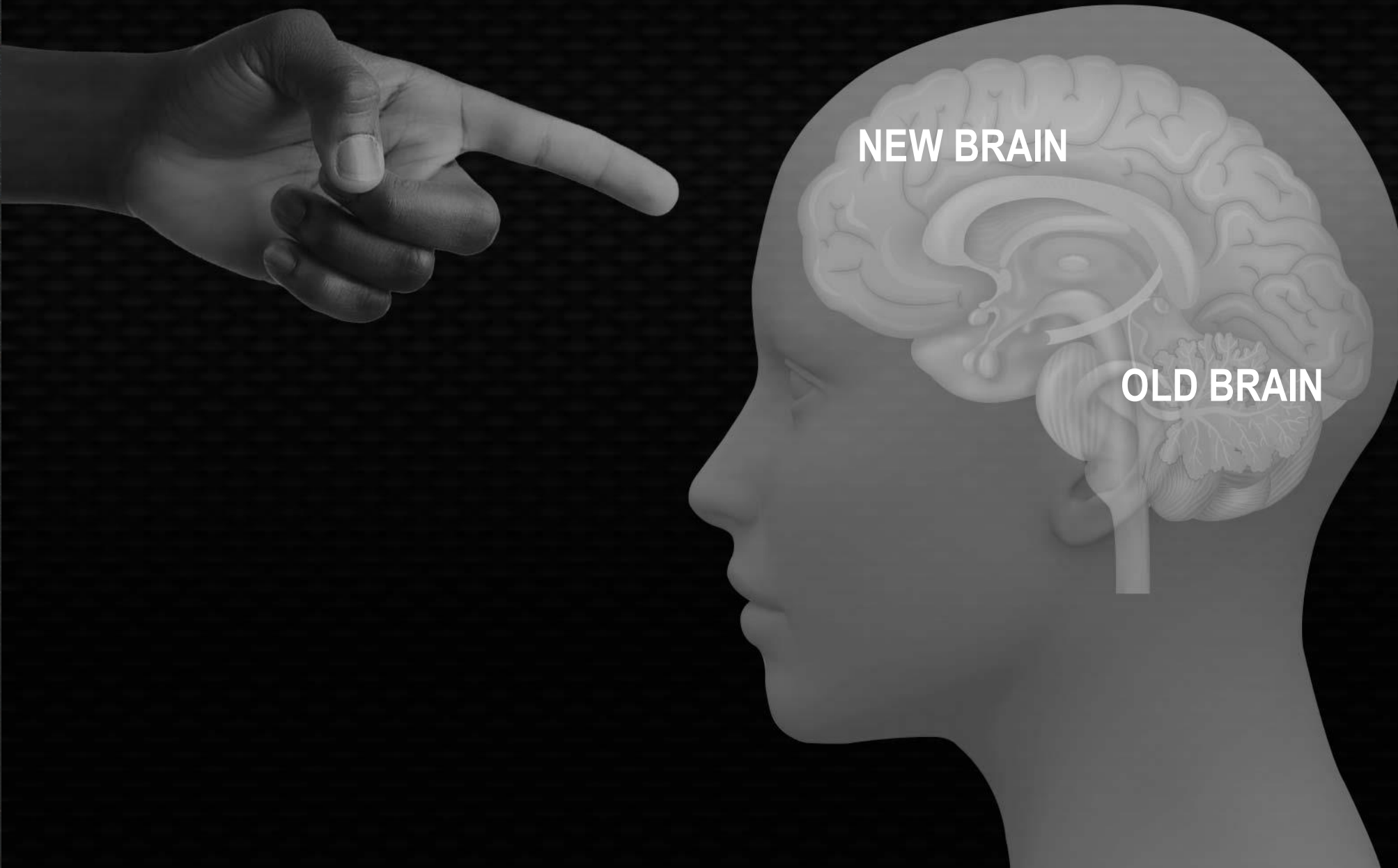
ASSUMPTIONS ABOUT HOW OUR BRAINS WORK...





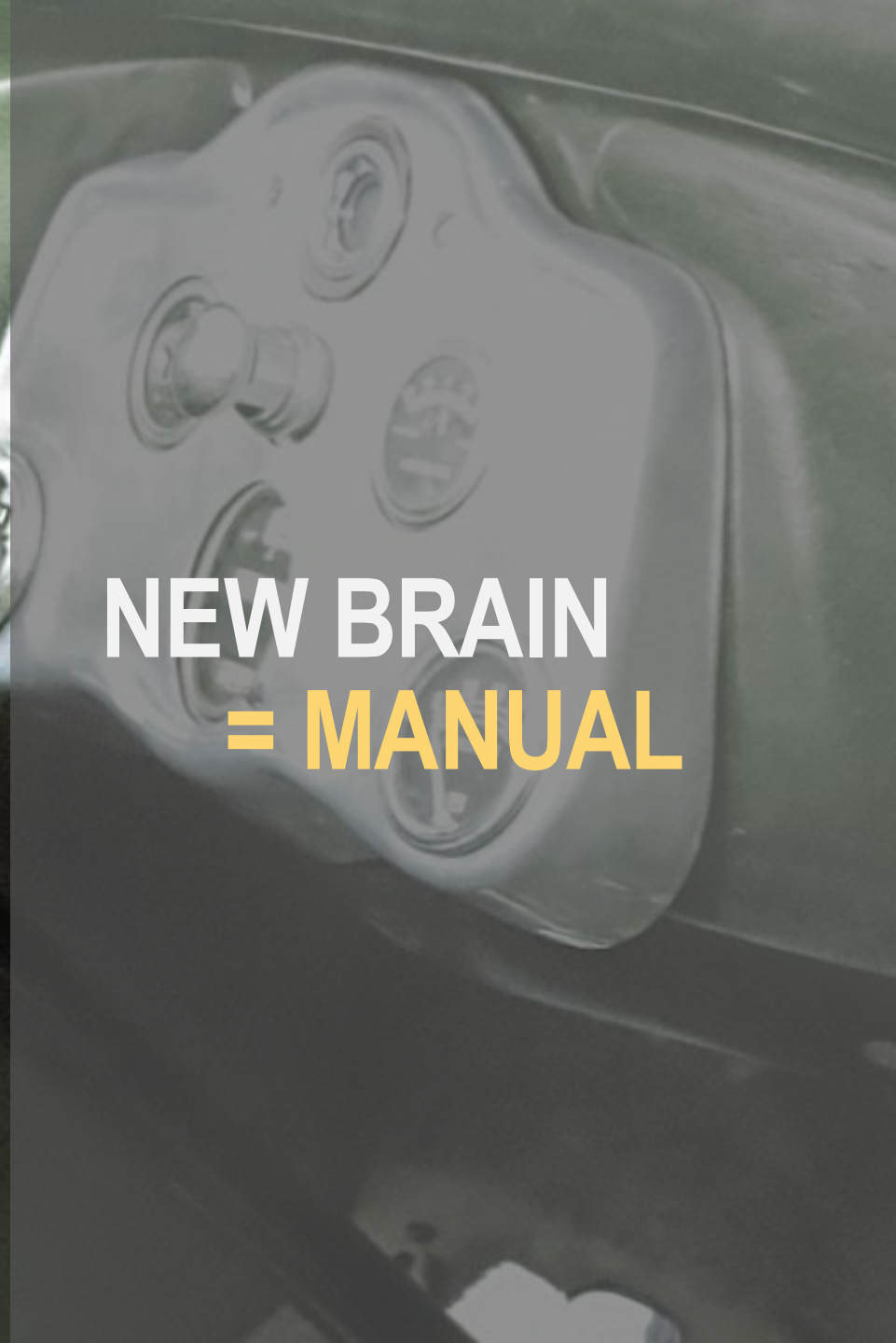
**RATIONAL
CONSCIOUS
OBJECTIVE
REASONABLE**

**ALL
OF THE TIME**





OLD BRAIN
= AUTOMATIC



**NEW BRAIN
= MANUAL**



5%

NEW BRAIN

OLD BRAIN

95%

Boring but Important: A Self-Transcendent Purpose for Learning Fosters Academic Self-Regulation

Many important learning tasks feel uninteresting and tedious to learners. This research promotes a prosocial, self-transcendent purpose could improve academic self-regulation on such tasks. This proposal was supported in 4 studies with over 2,000 adolescents and young adults. Study 1 documented a correlation between a self-transcendent purpose for learning and self-reported trait measures of academic self-regulation. Those with more of a purpose for learning also persisted longer on a boring task rather than giving in to a tempting alternative and, many months later, were less likely to drop out of college. Study 2 addressed causality. It showed that a brief, one-time psychological intervention promoting a self-transcendent purpose for learning could improve high school science and math grade point average (GPA) over several months. Studies 3 and 4 were short-term experiments that explored possible mechanisms. They showed that the self-transcendent purpose manipulation could increase deeper learning behavior on tedious test review materials (Study 3), and sustain self-regulation over the course of an increasingly boring task (Study 4). More self-oriented motives for learning—such as the desire to have an interesting or enjoyable career—did not, on their own, consistently produce these benefits (Studies 1 and 4).

Keywords: self-regulation, motivation, purpose, meaning, psychological intervention

Supplemental materials: <http://dx.doi.org/10.1037/a0037637.supp>

It's only when you hitch your wagon to something larger than yourself that you realize your true potential and discover the role that you'll play in writing the next great chapter in the American story.
—President Barack Obama, Wesleyan University Commencement Speech, 2008

Many of the tasks that contribute most to the development of valuable skills are also, unfortunately, commonly experienced as

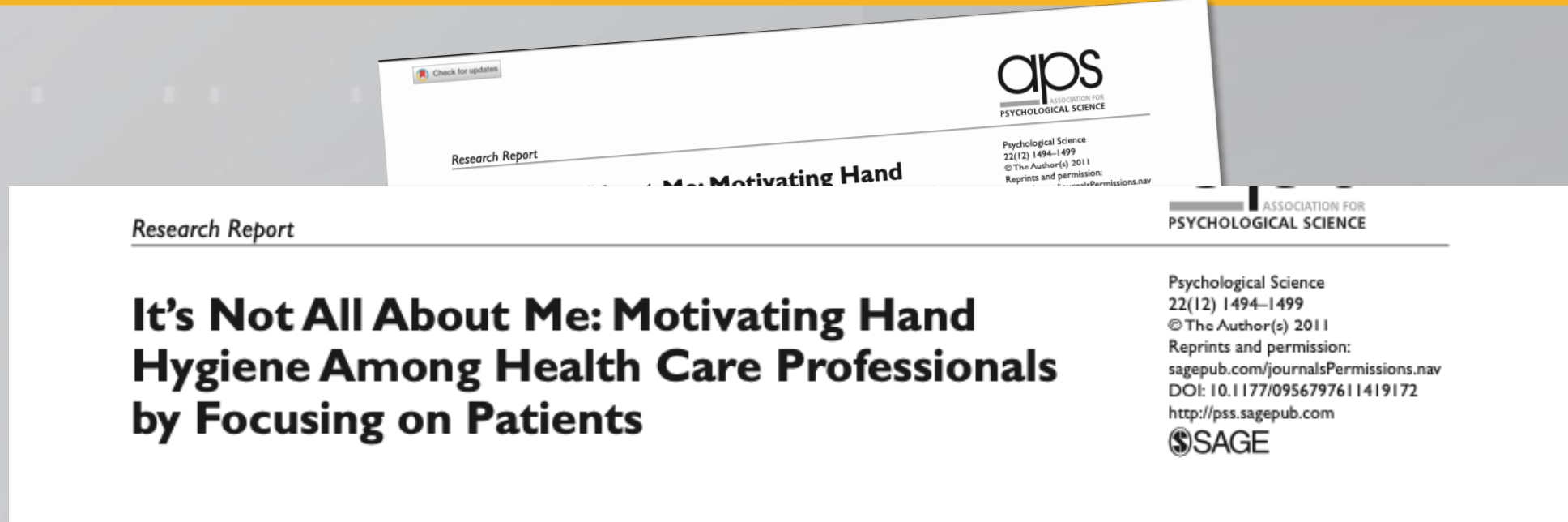
tedious and unpleasant (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011; also see Ericsson, 2006, 2007, 2009; Ericsson & Ward, 2007; Ericsson, Krampe, & Tesch-Romer, 1993). For example, skills in science, technology, engineering, and mathematics (STEM) are in high demand, and, according to some estimates, jobs in the STEM sector will grow by more than 20% in the next few decades (U.S. Congress Joint Economic Committee, 2012). Yet in a

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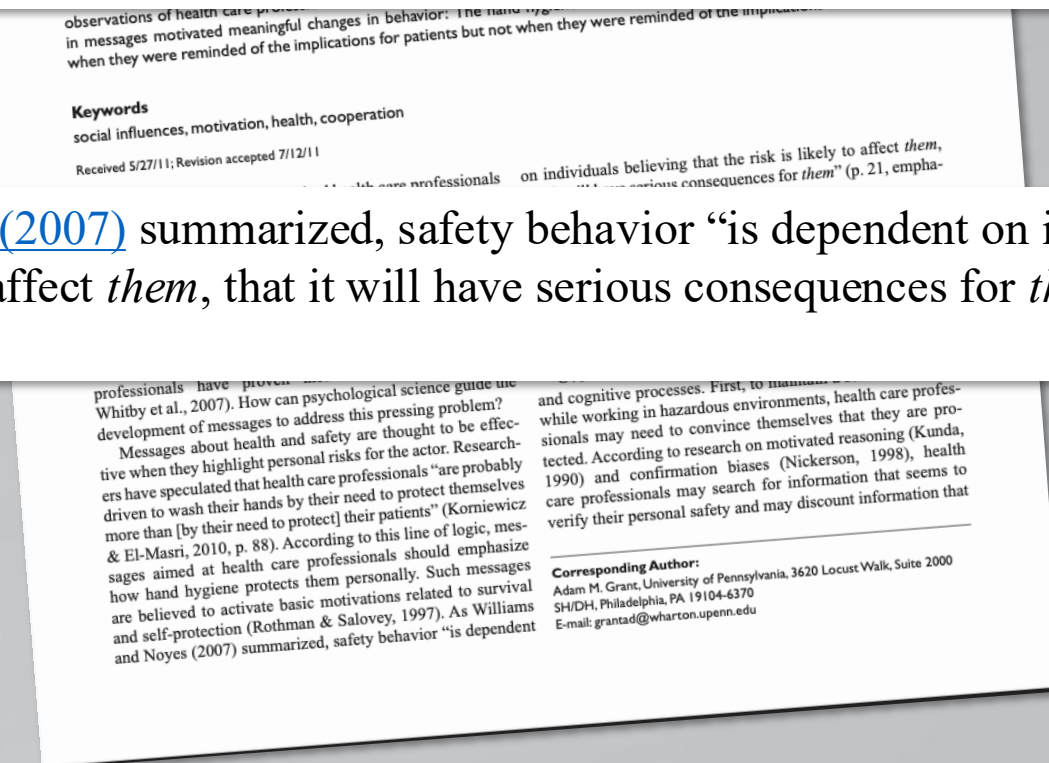
This research was supported by funding from the Bill and Melinda Gates Foundation, the Raikes Foundation, the National Science Foundation (HCC 0834847, DRL 1235958, to Sidney D'Mello), the National Institutes of Health (5-K01-AG033182-02, to Angela Lee Duckworth), the New Paths to Purpose project at the Booth Center for Decision Research, and a

University of Texas Summer Research Assignment grant. Any opinions, findings and conclusions, or recommendations expressed in this article are those of the authors and do not necessarily reflect the views of the funding agencies. The ideas in this research benefitted from discussions with Matthew Andrews and Matthew Bundick. The authors are grateful to this students, teachers, and school administrators who participated in this research. We are also grateful to Bill Swann, Christopher Hulleman, Judy Harackiewicz, Robin Vallacher, Geoffrey Cohen, and Carol Dweck for their helpful feedback. Any remaining errors are the authors'.

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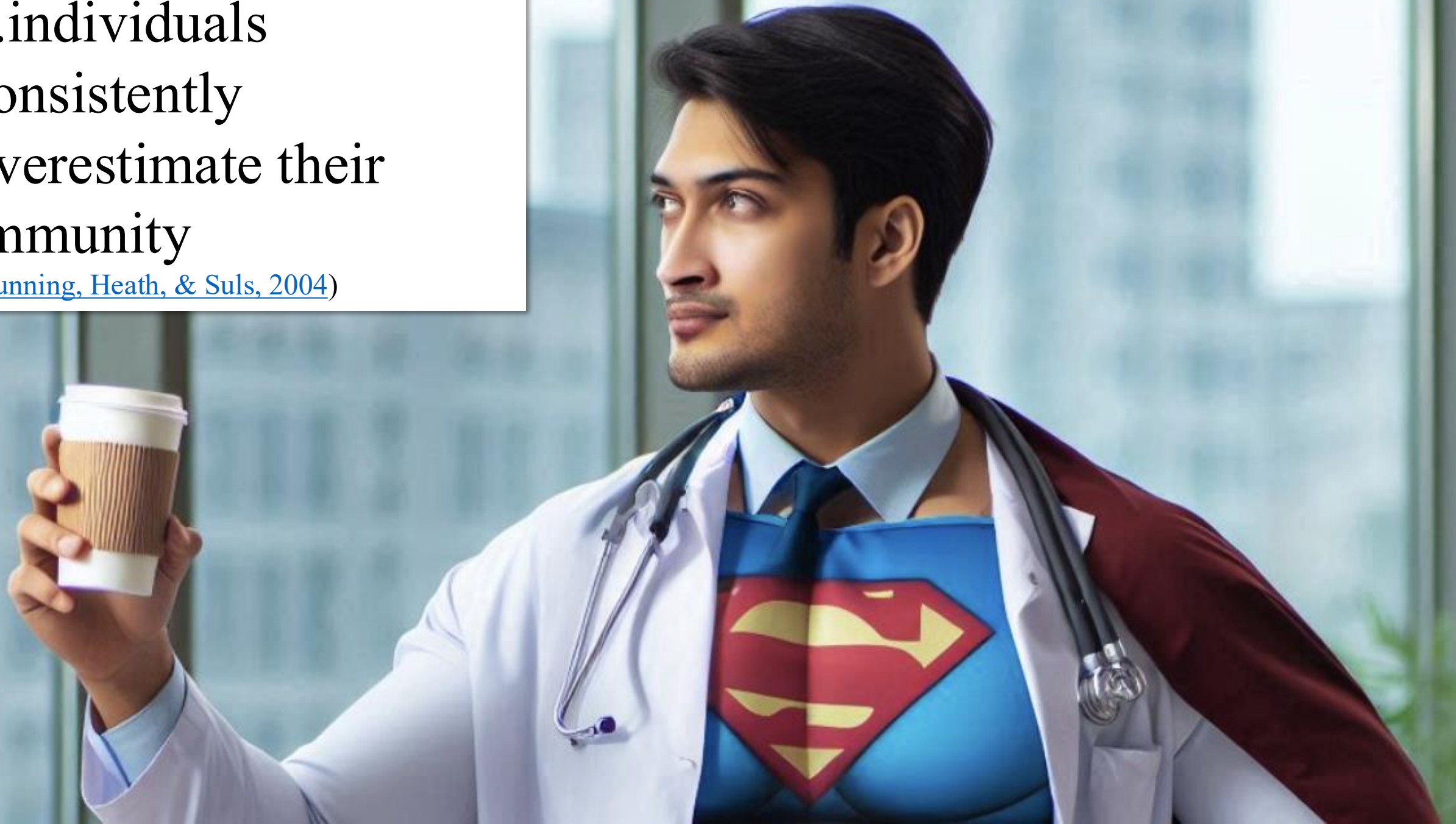


As [Williams and Noyes \(2007\)](#) summarized, safety behavior “is dependent on individuals **believing** that the risk is likely to affect *them*, that it will have serious consequences for *them*” (p. 21, emphasis in original).



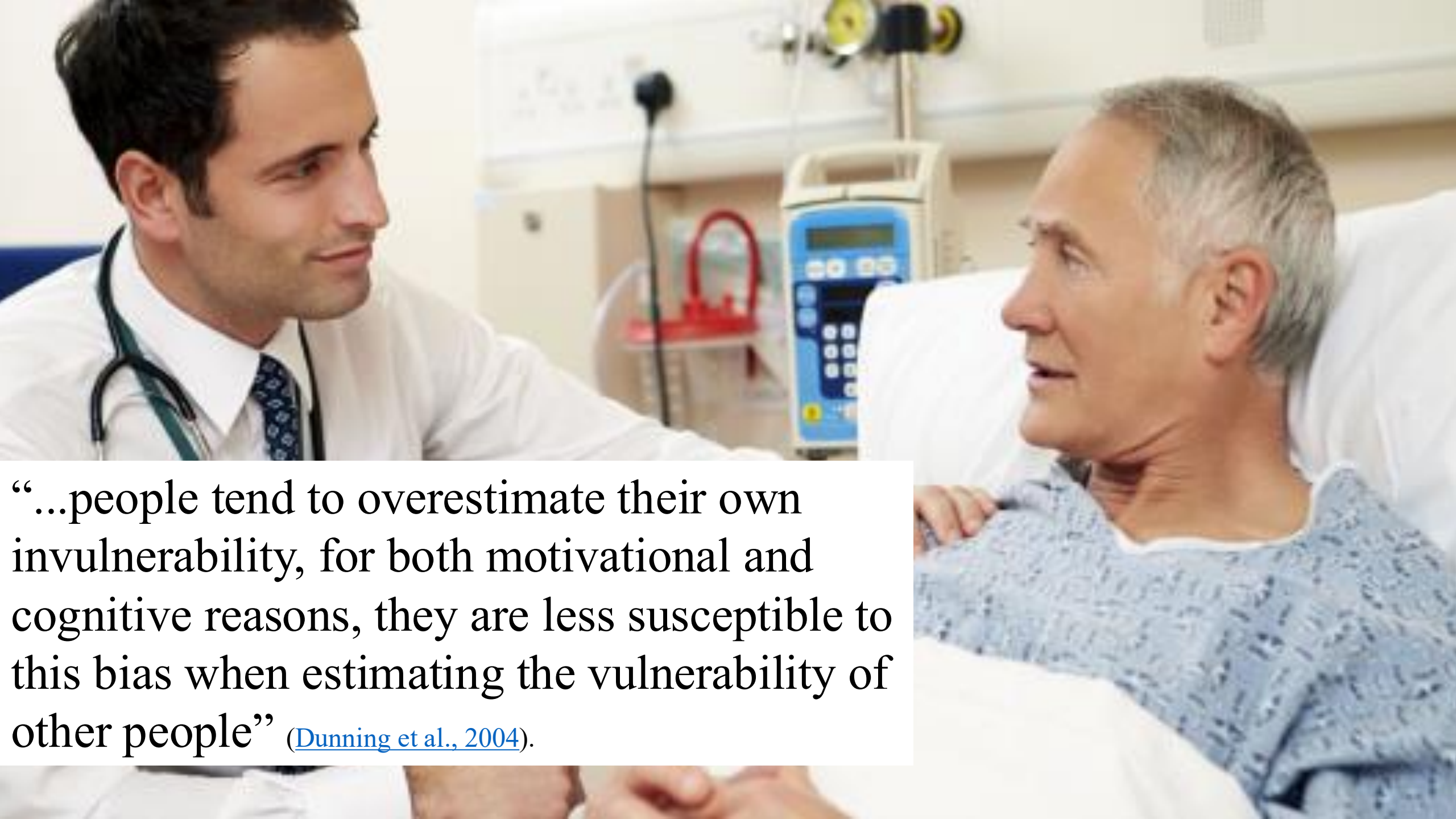
...individuals
consistently
overestimate their
immunity

([Dunning, Heath, & Suls, 2004](#))



“Indeed, research has shown that people tend to respond defensively to information that poses a threat to their personal health or safety: People are likely to scrutinize such messages for flaws rather than accept the information they contain” ([Liberman & Chaiken, 1992](#)).

80%
OPTIMISM BIAS



“...people tend to overestimate their own invulnerability, for both motivational and cognitive reasons, they are less susceptible to this bias when estimating the vulnerability of other people” ([Dunning et al., 2004](#)).

HEALTHCARE PROVIDERS
MY CLEAN HANDS COUNT FOR
MY PATIENTS

Your patients count on you to clean your hands. Many potentially deadly germs are spread from patient to patient on the hands of healthcare providers. Consider whether your actions put you or your patients at risk of infection.

CLEAN HANDS
COUNT

CLEAN YOUR HANDS TO PROTECT YOUR
PATIENTS AND PROTECT YOURSELF



Developed by CDC. The Clean Hands Count Campaign is made possible by a partnership between the CDC Foundation and GHD.



FOUR
COMPONENTS
OF A RESILIENT
**SAFETY
CULTURE**



5 PRINCIPLES OF HUMAN & ORGANIZATIONAL PERFORMANCE





HOW DO LEADERS RESPOND TO MISTAKES?

**“You can blame and punish
or
you can learn and improve,
but you can’t do both!”** *[at the same time]*

- Todd Conklin, Ph.D. Organizational Behavior
The 5 Principles of Human Performance

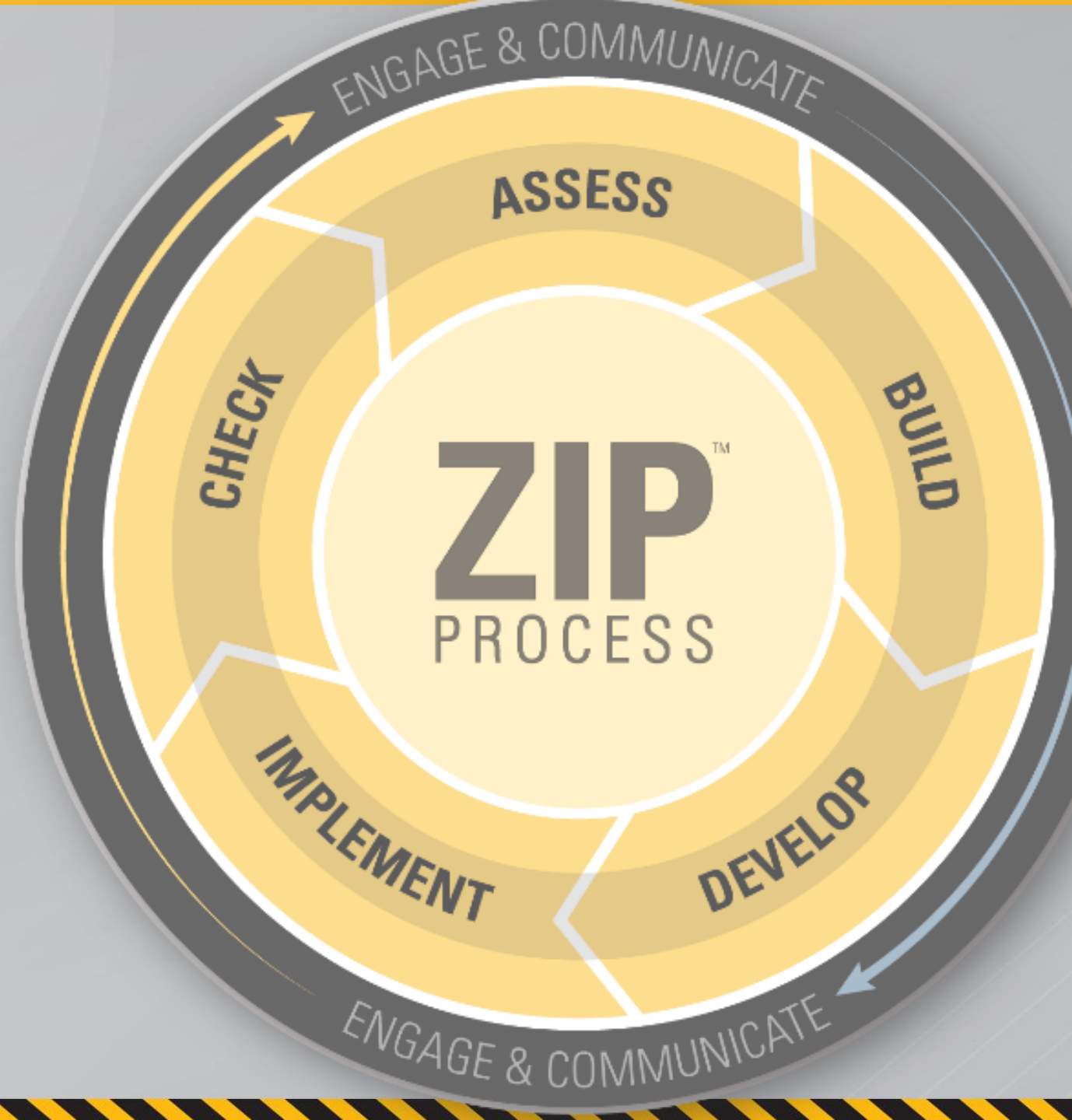
FOUR
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**SAFETY
CULTURE**



ESTABLISHING EMPLOYEE OWNERSHIP

Cross-functional teams embed positive, proactive accountability

- Assess current state & how the technology functions,
- Build governance for how data is used,
- Develop processes for responding to and learning from issues,
- Implement the solutions together as one team, and
- Check to measure progress



**WE MUST CREATE A WORKZONE WHERE PEOPLE ARE SAFE
BOTH PHYSICALLY & PSYCHOLOGICALLY - THAT
SUPPLEMENTS HUMAN FACTORS, MITIGATES RISK AND
GENERATES DATA TO INFORM CONTINUOUS IMPROVEMENT
AND DRIVE BEHAVIOR CHANGE.**



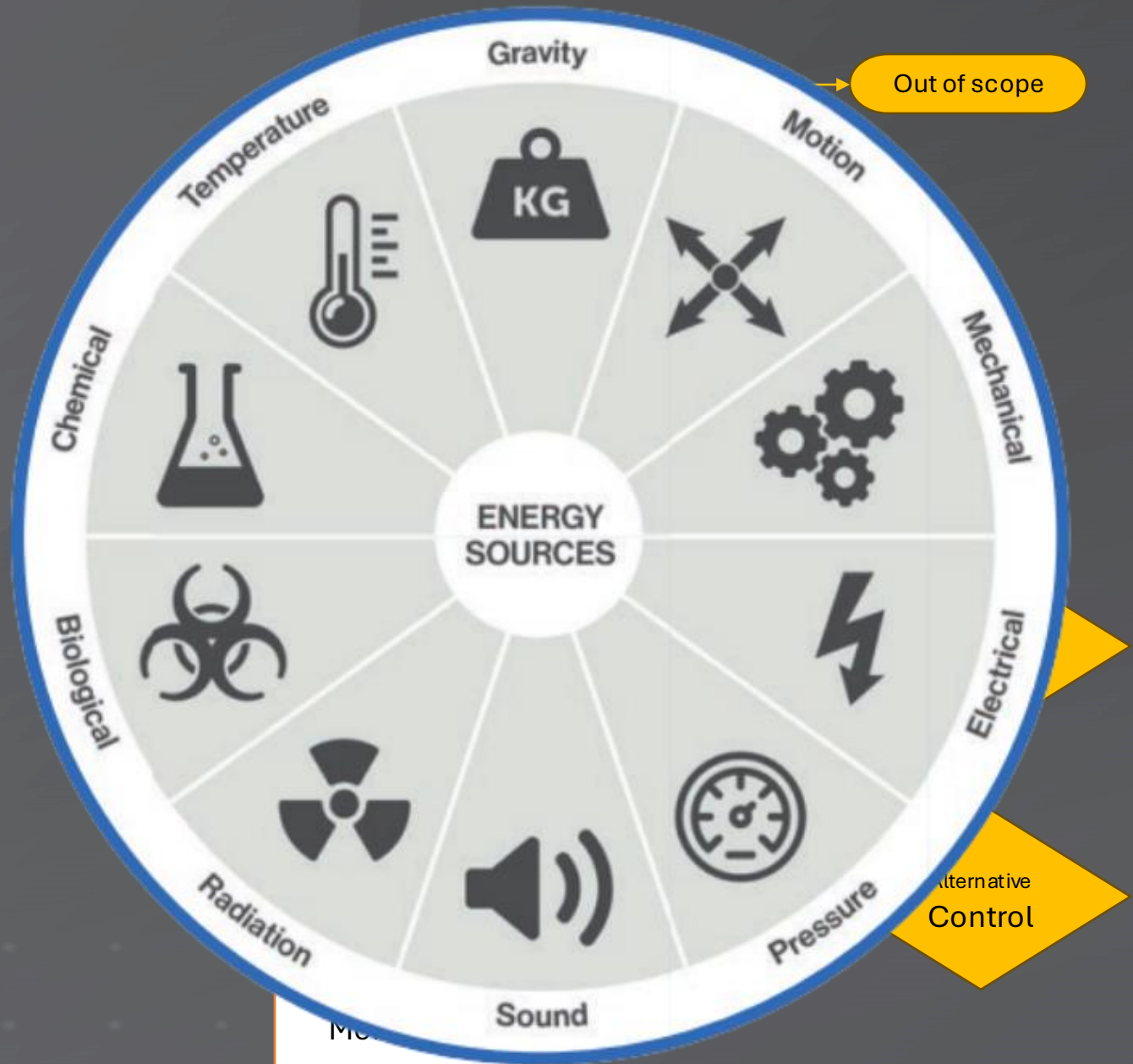
FOUR
COMPONENTS
OF A RESILIENT
**SAFETY
CULTURE**



\$TKY

**STUFF
THAT
KILLS
YOU**

HIGH ENERGY CONTROLS ASSESSMENT



- Visual Reminder

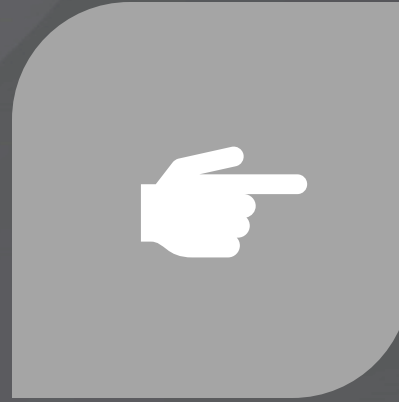
CONTROLS ARE...

TIMELY



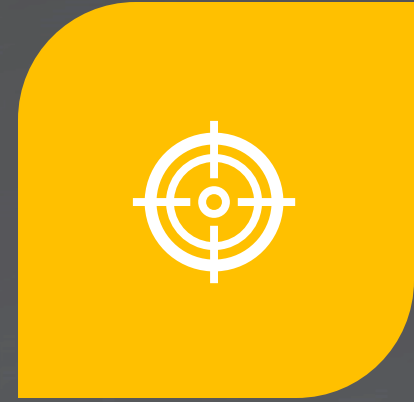
IN PLACE DURING ACTIVE WORK
WHEN HIGH ENERGY HAZARD IS
PRESENT

TANGIBLE



PHYSICALLY PRESENT ON
WORKSITE DURING WORK

TARGETED



INSTALLED SPECIFICALLY TO
ADDRESS HIGH ENERGY HAZARD

DIRECT CONTROLS - DEFINITION

- Specifically targeted to the High Energy source
- Effectively mitigates exposure to High Energy when installed, verified and used properly
- Effective even when someone makes a mistake

ALTERNATIVE CONTROL - DEFINITION

Physical Obstacle

- An obstruction that blocks the path or hinders progress toward a High Energy hazard
 - Example: Jersey barriers, fencing ...

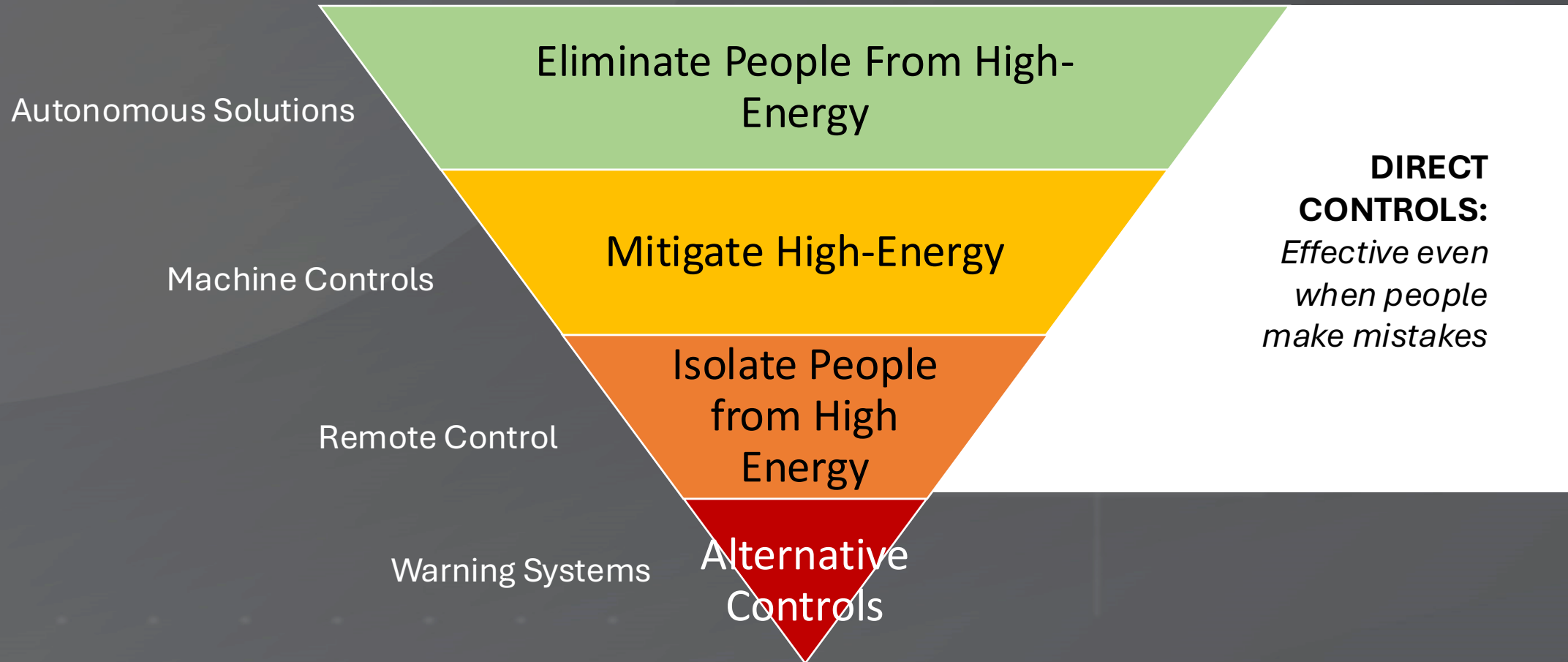
Dedicated Monitoring

- Devoted and continuous attention to the High Energy hazard
 - Example: Spotters, or technological sensors that monitor for collision potentials

Visual (& Audible) Reminder

- A visible (& audible) warning of presence of the High Energy hazard
- Example: Cones, signs, warning tape, or electronic alerts and alarms...

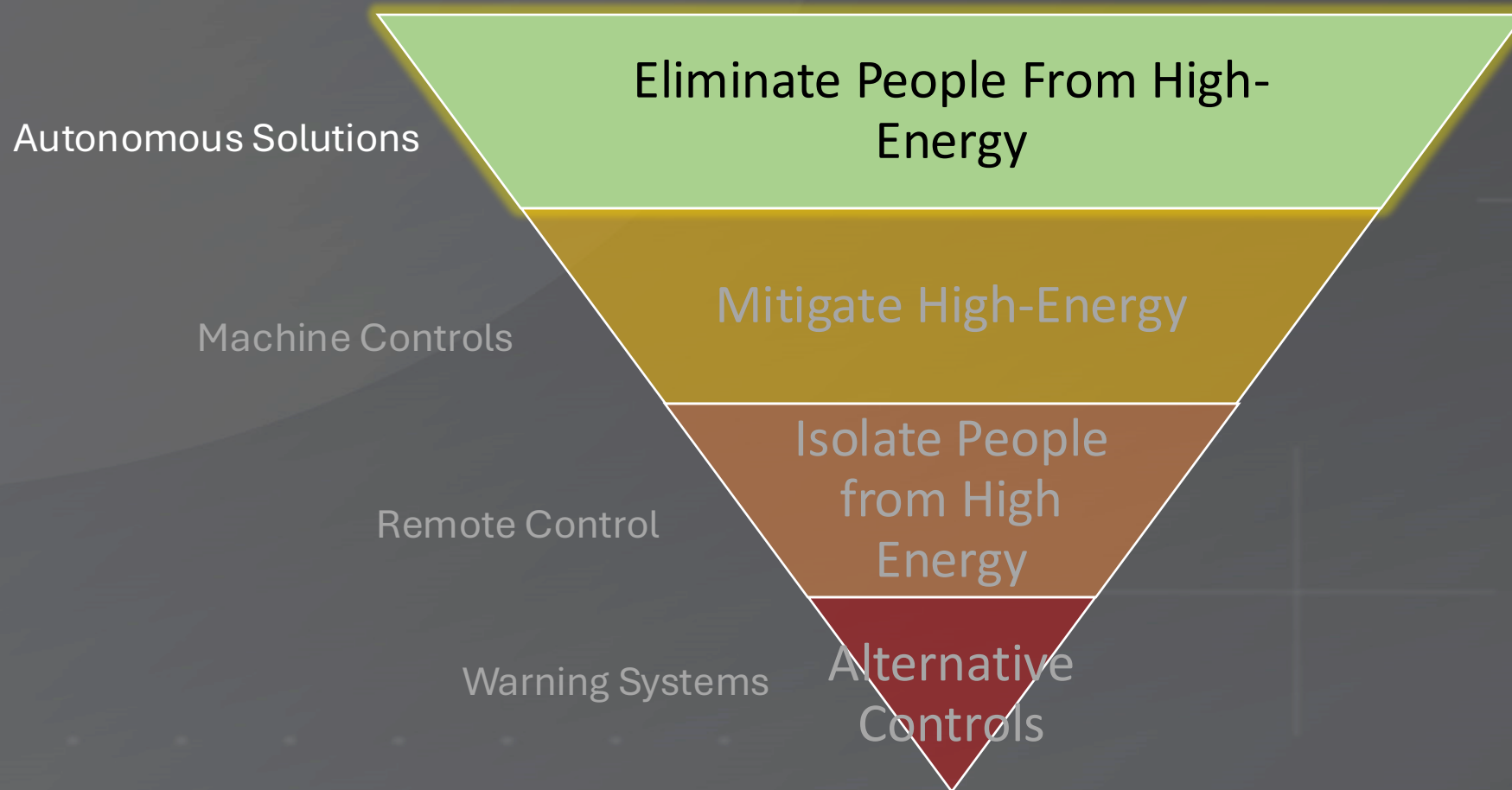
HIGH-ENERGY HIERARCHY OF CONTROLS



SYSTEMS WHERE PEOPLE ARE SAFE BOTH PHYSICALLY & PSYCHOLOGICALLY - THAT SUPPLEMENT **HUMAN FACTORS**, **MITIGATES RISK** AND **GENERATES DATA** TO INFORM CONTINUOUS IMPROVEMENT AND DRIVE BEHAVIOR CHANGE.



HIGH-ENERGY HIERARCHY OF CONTROLS



A large yellow autonomous mining truck is shown from a rear three-quarter view, driving on a wide, dusty road in a desert environment. The background features rolling hills and mountains under a cloudy sky. The truck is positioned on the left side of the frame, moving away from the viewer.

AUTONOMY FOR MINING

8,620,000,000+

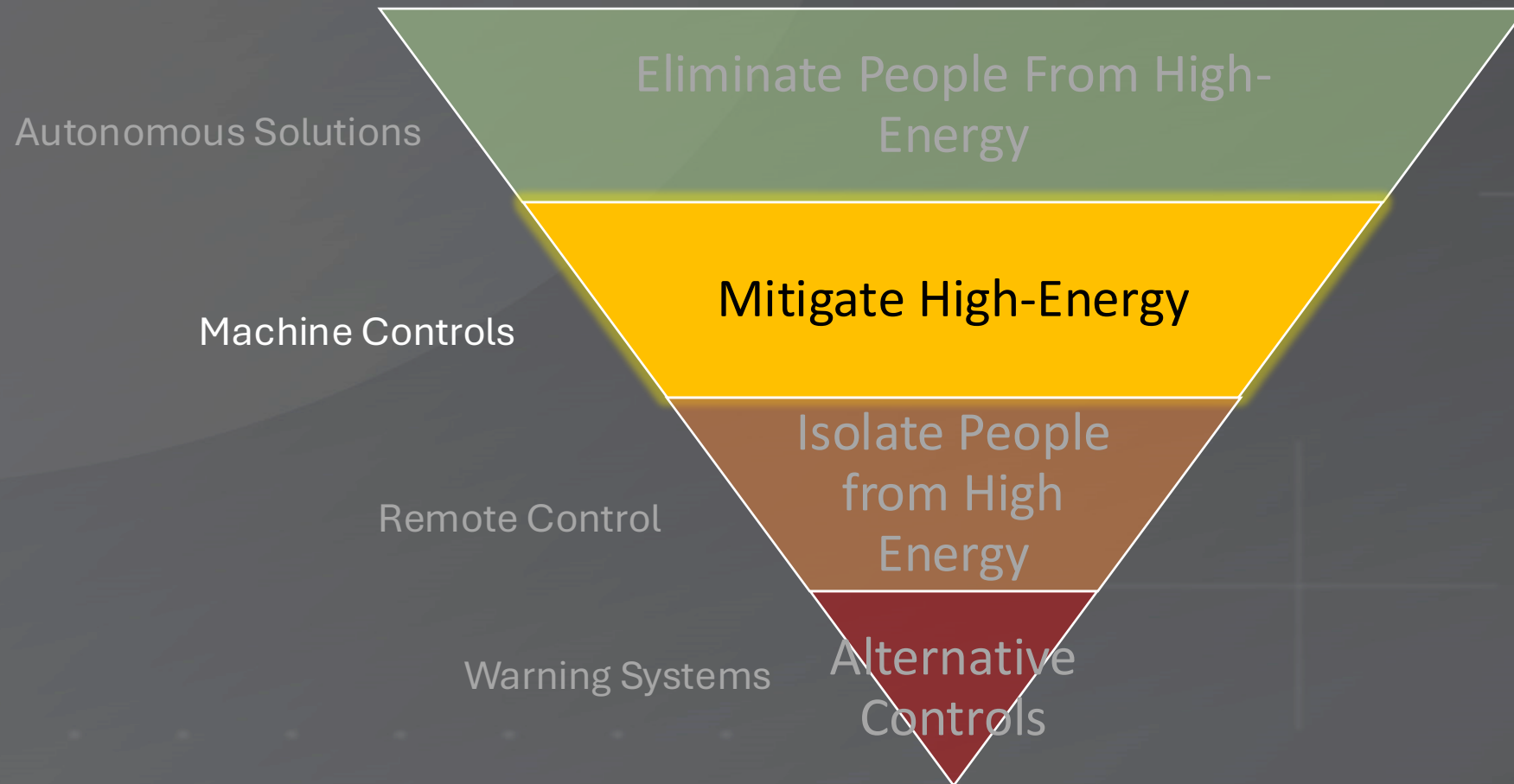
TONNES SAFELY* HAULED BY AUTONOMOUS TRUCKS

325,000,000+

KILOMETERS SAFELY* TRAVELED

**No reported injuries while operating autonomously*

HIGH-ENERGY HIERARCHY OF CONTROLS

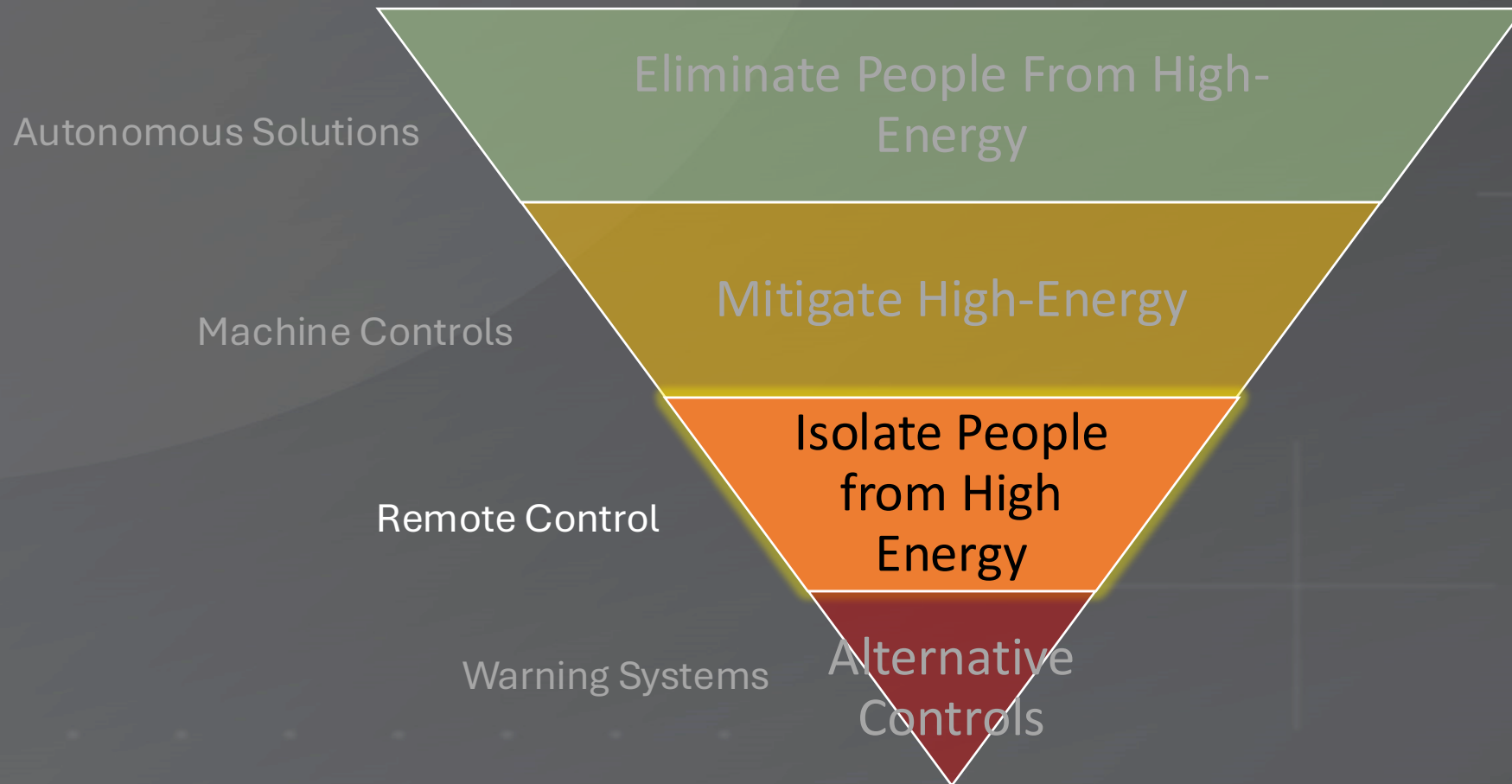


CAT® COLLISION WARNING with MOTION INHIBIT

AVAILABLE NOW on SELECT MODELS



HIGH-ENERGY HIERARCHY OF CONTROLS



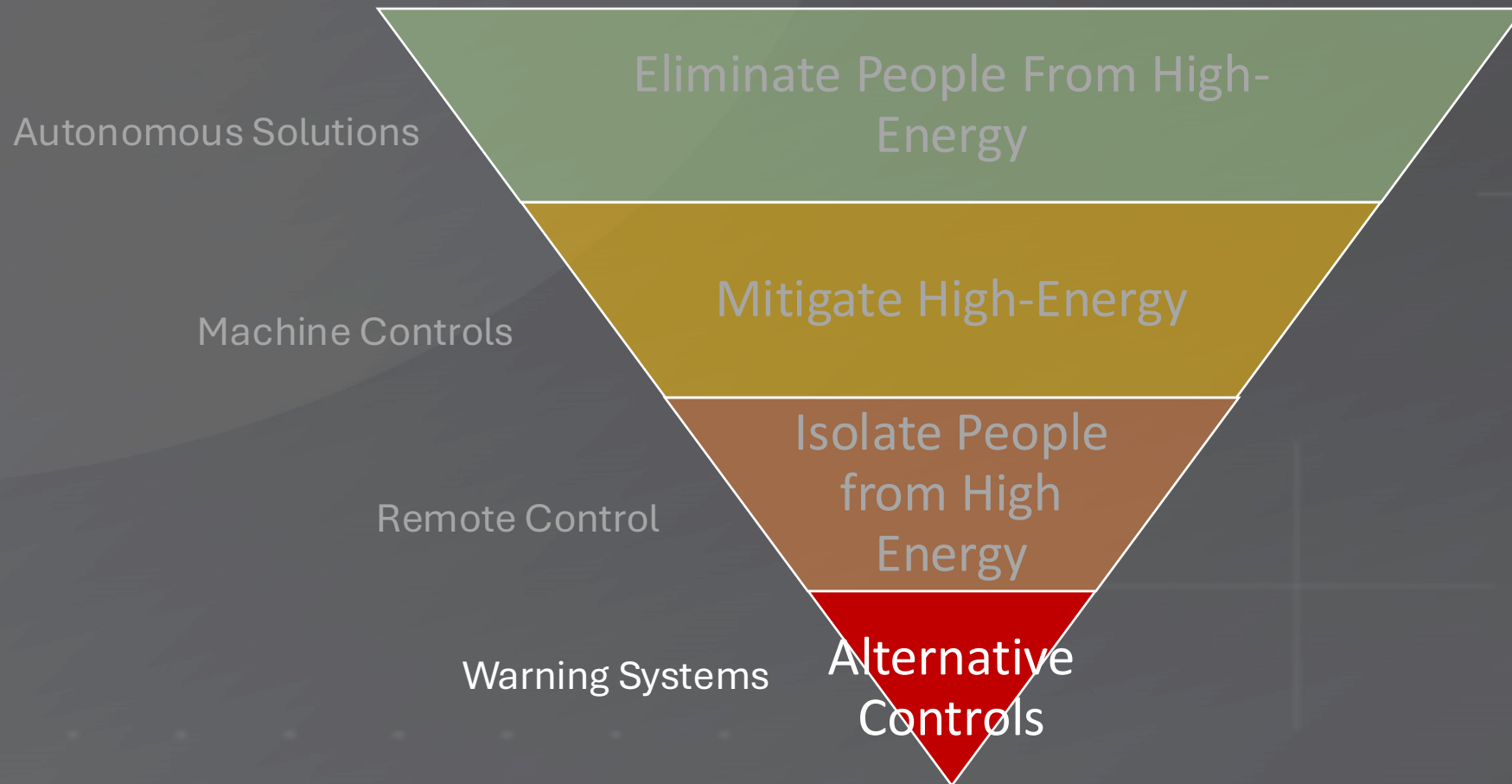


CAT COMMAND

Remote Control – Non-line of sight



HIGH-ENERGY HIERARCHY OF CONTROLS



WHY DETECT?

STUDIES HAVE SHOWN THAT FIELD
WORKERS CAN ONLY IDENTIFY ABOUT
45% OF THE HAZARDS

THAT MEANS 55% GO **UNDETECTED!**







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