

My Brain Made Me Do It:

Psychological Drivers of Employee Behavior

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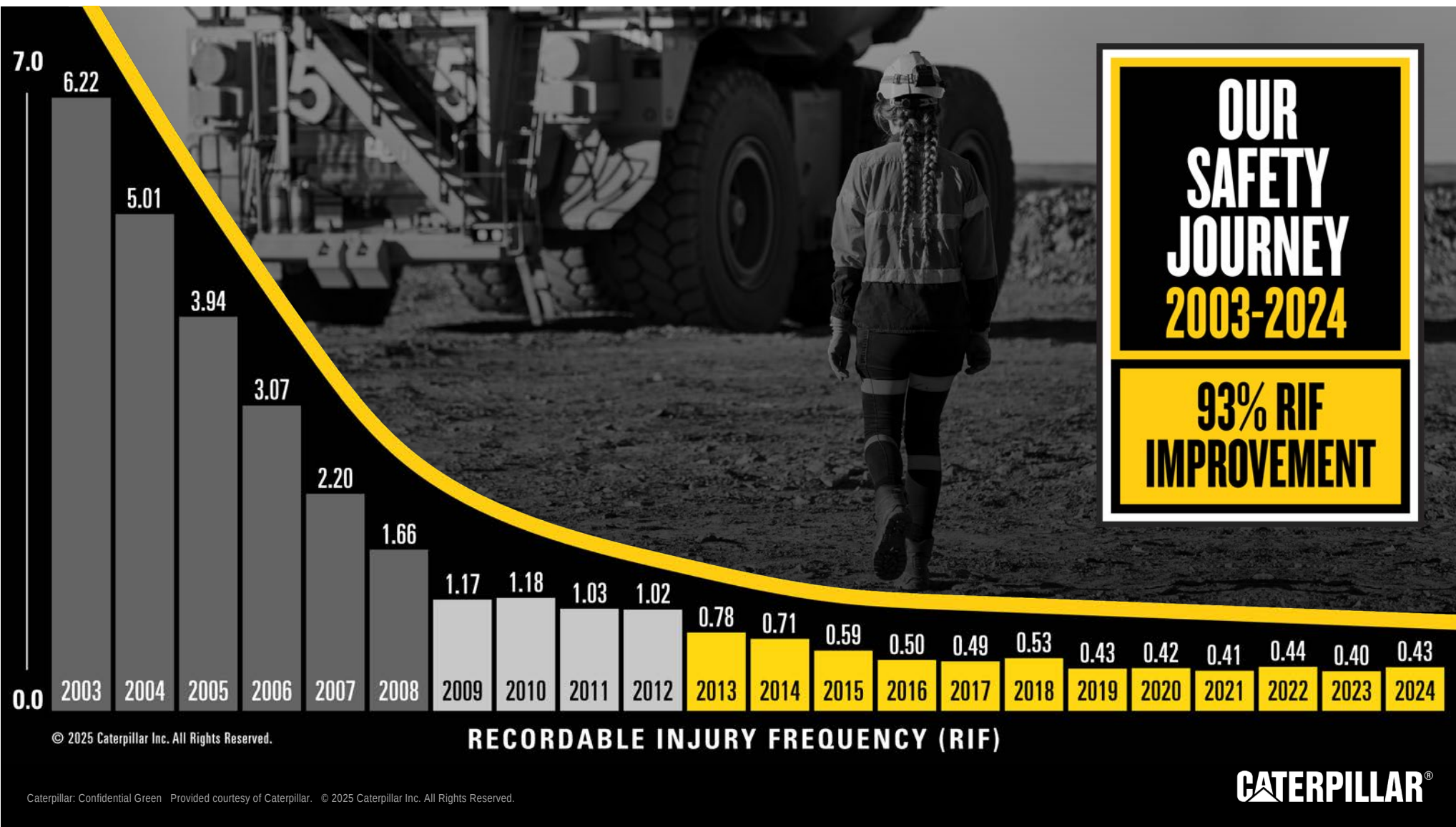


2025 FLORIDA ASPHALT
EXPO & CONFERENCE

NEXT MILE * NEXT LEVEL







Caterpillar's Global Safety Strategy Refresh

Building on our strengths, our refreshed strategy focuses on three outcomes:



Preventing Serious Injury is Critical

1

- We prevent serious injuries by focusing on controlling tasks with high energy
- Safety success is defined by improving the presence of safeguards to keep workers safe when things go wrong



Learning and Improving is Vital

2

- We foster a learning culture where we learn together from our mistakes and our successes (normal work)
- Event Learning focuses on fact finding (what caused the error) to learn and improve



Demonstrating Care is our Foundation

3

- Safety is a core value – our actions match our words. It is a state of mind we embrace at work, on the road, and at home
- Employees and leaders demonstrate care for each other and feel safe to speak up

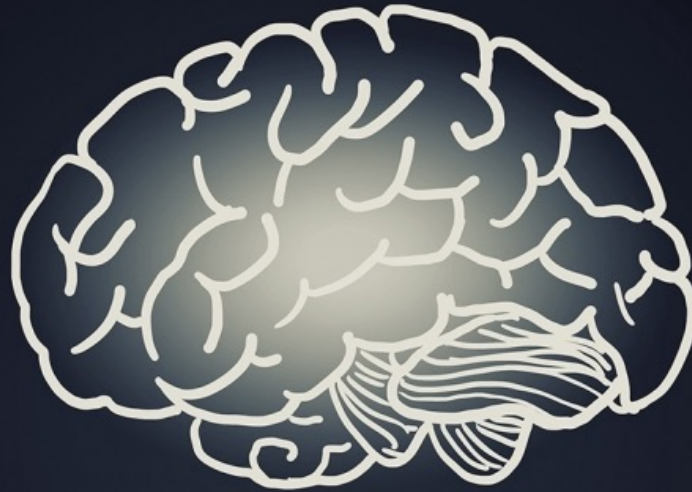


HOW DOES PSYCHOLOGY IMPACT SAFETY CULTURE?

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ASSUMPTIONS ABOUT HOW OUR BRAINS WORK...





**RATIONAL
CONSCIOUS
OBJECTIVE
REASONABLE**

**ALL
OF THE TIME**

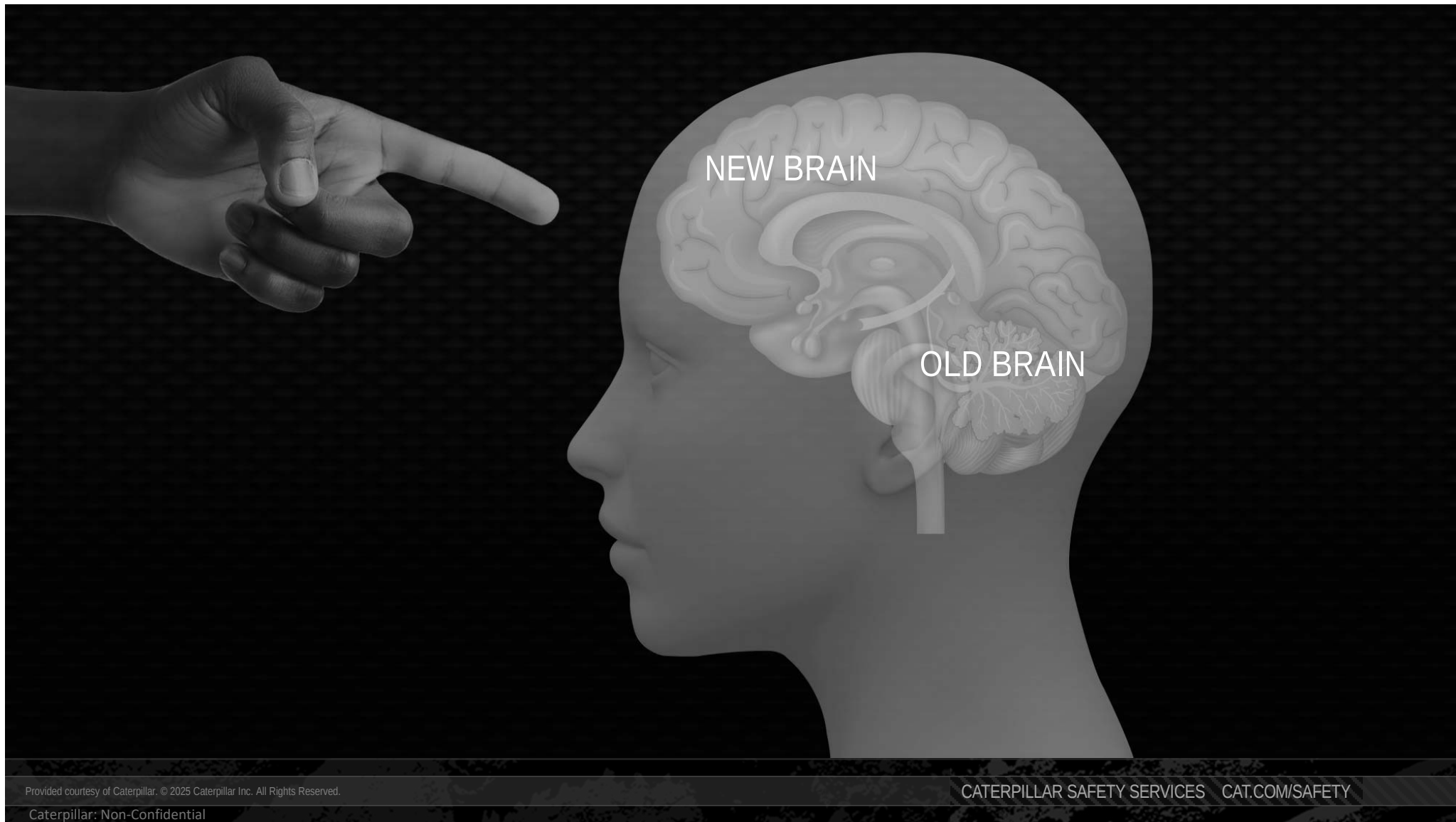


HAS THIS EVER HAPPENED TO YOU?

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OLD BRAIN
= FAST BRAIN

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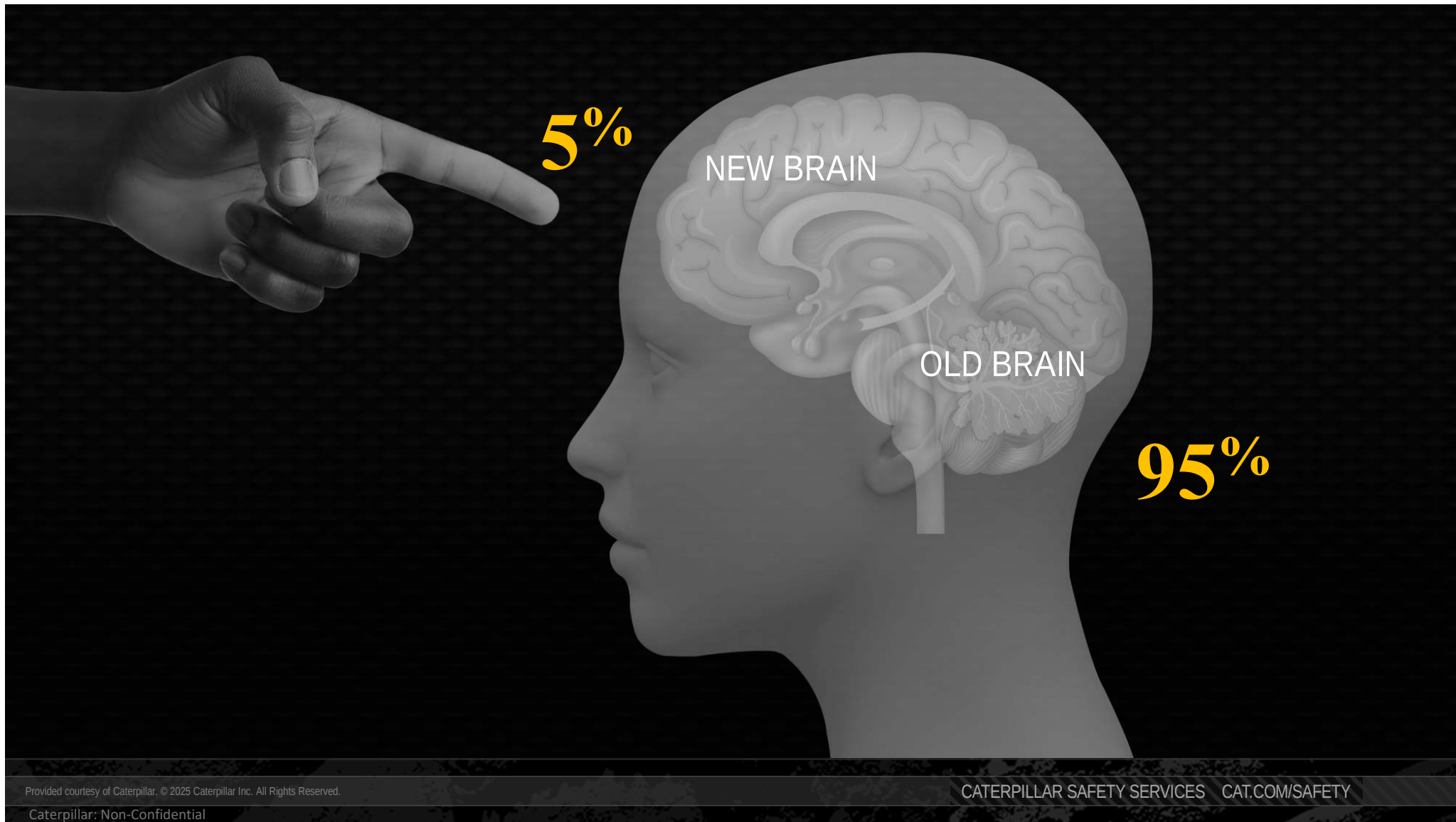
NEW BRAIN
= SLOW BRAIN



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A close-up, high-contrast photograph of heavy machinery tracks, likely from a Caterpillar vehicle, pressed into dark, wet mud. The tracks are arranged in a repeating pattern of diagonal ridges and grooves, creating a textured, almost geometric appearance. The lighting is dramatic, with deep shadows in the grooves and bright highlights on the ridges, emphasizing the ruggedness of the terrain and the power of the machine.

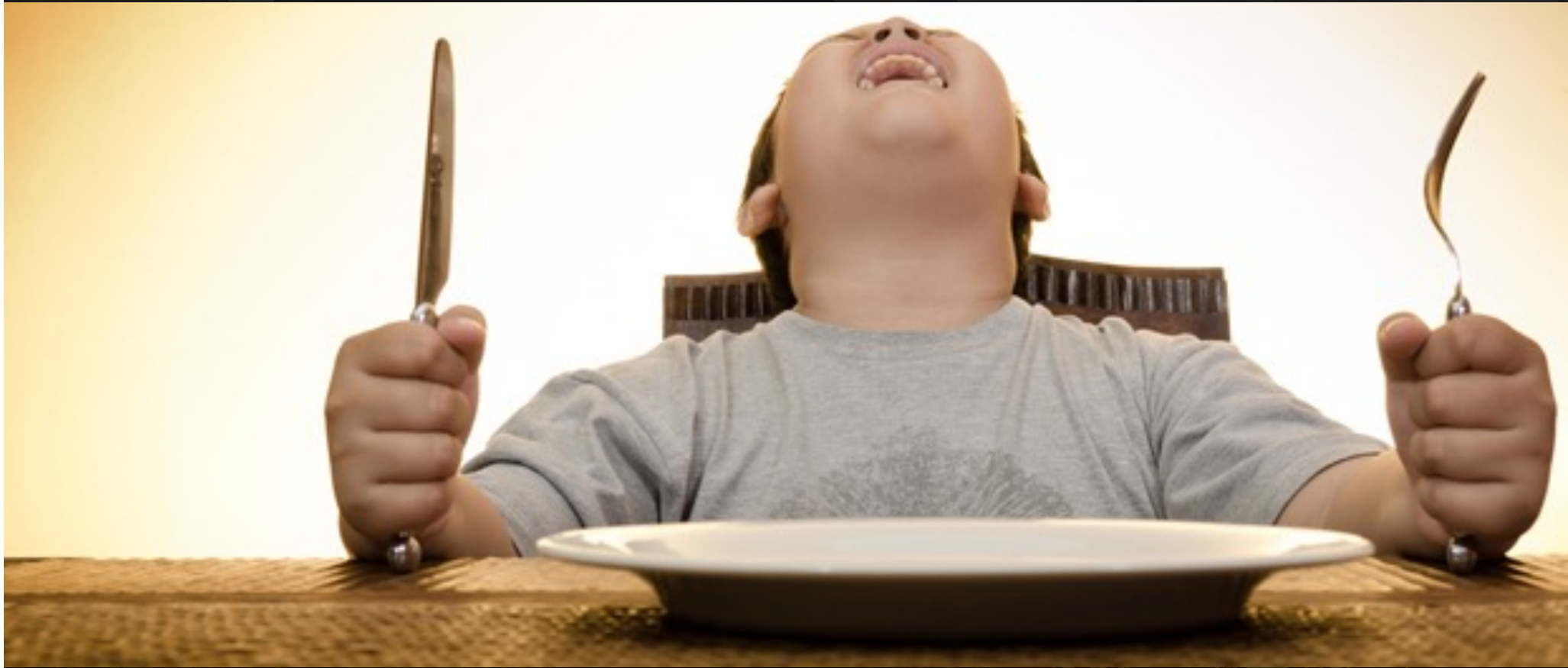
THE ECONOMICAL BRAIN

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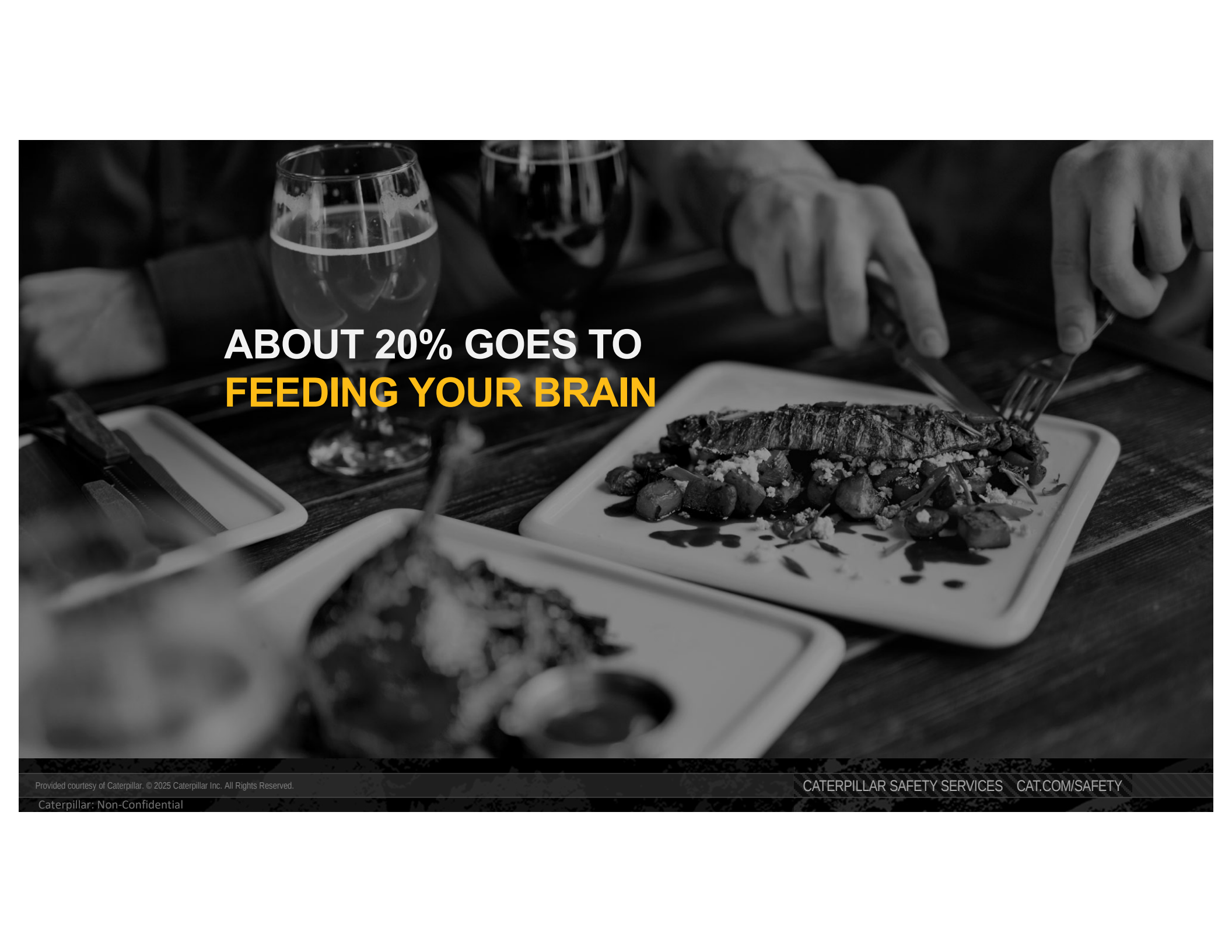
OUR BRAIN IS HUNGRY!



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**ABOUT 20% GOES TO
FEEDING YOUR BRAIN**

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FOR
EXAMPLE...



...OR THIS

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QUESTION:
WHAT ARE SOME “FAST BRAIN” ASPECTS OF THE
JOB THAT COULD BECOME SAFETY ISSUES?

A large, dark, spherical boulder sits in the middle of a two-lane asphalt road that stretches into the distance. The landscape is arid with sparse vegetation and distant hills under a cloudy sky. The left side of the image has a yellowish tint, while the right side is in grayscale.

HOW DID
THEY **NOT**
SEE THAT?!



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THE BIASED BRAIN

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EVERY SECOND OF EVERYDAY OUR BRAIN
IS FLOODED WITH INFORMATION

SO WE HAVE A SWITCH
THAT STOPS US FROM
LOSING OUR MINDS!



R.A.S.
Reticular
Activating
System



... AND REDUCES THIS
TO A MANAGEABLE LEVEL

> 13,000 bits of data

RAS

7 +/- 2 bits of
conscious data

WE ARE LEFT WITH WHAT IS...

DANGEROUS



IMPORTANT

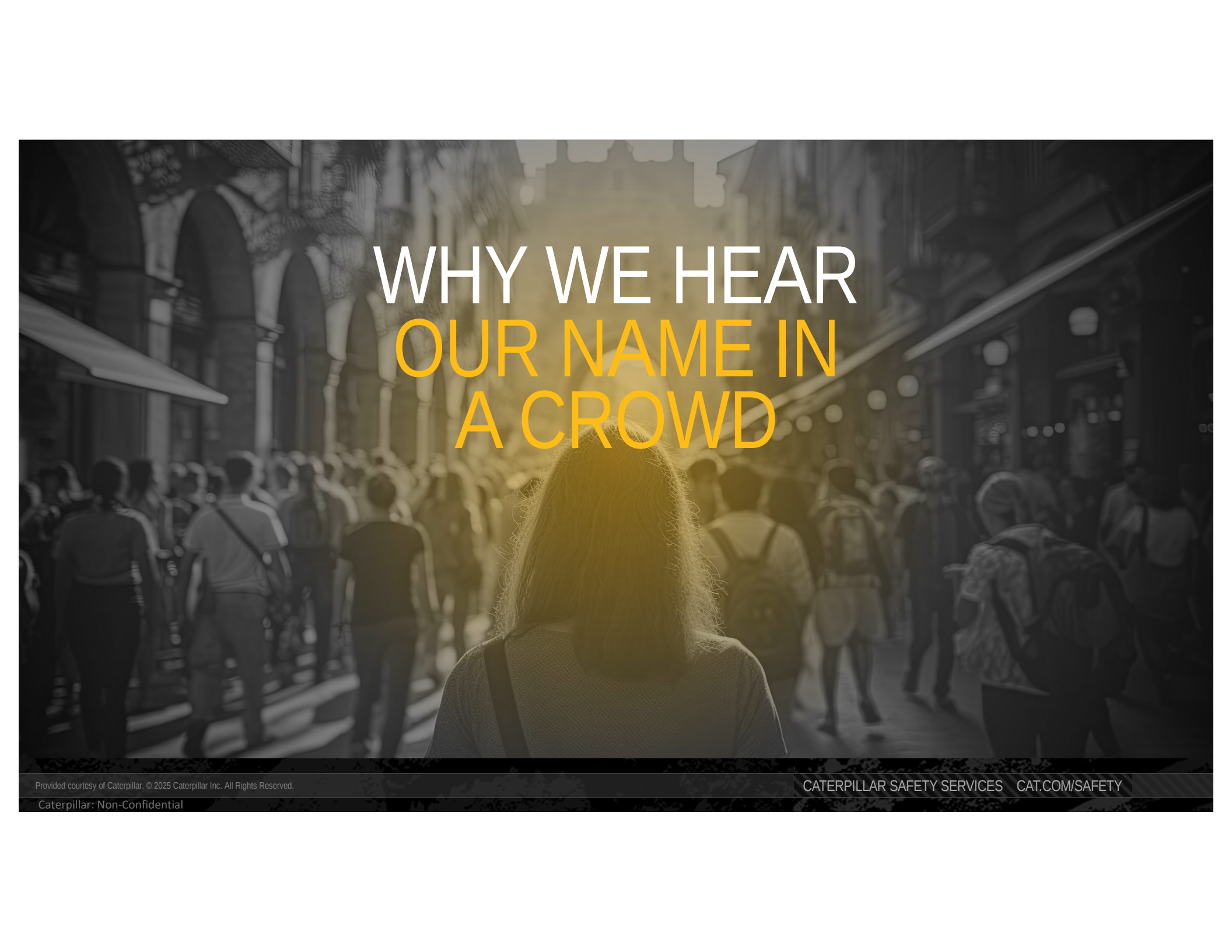


PLEASURABLE



INTERESTING



A black and white photograph of a crowded city street. In the foreground, the back of a person's head and shoulders are visible, looking down the street. The street is filled with many other people walking in the same direction. The architecture of the buildings lining the street is visible in the background. The overall mood is one of being part of a large, busy crowd.

WHY WE HEAR OUR NAME IN A CROWD

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NOTICE THAT CAR YOU'VE CHOSEN TO BUY

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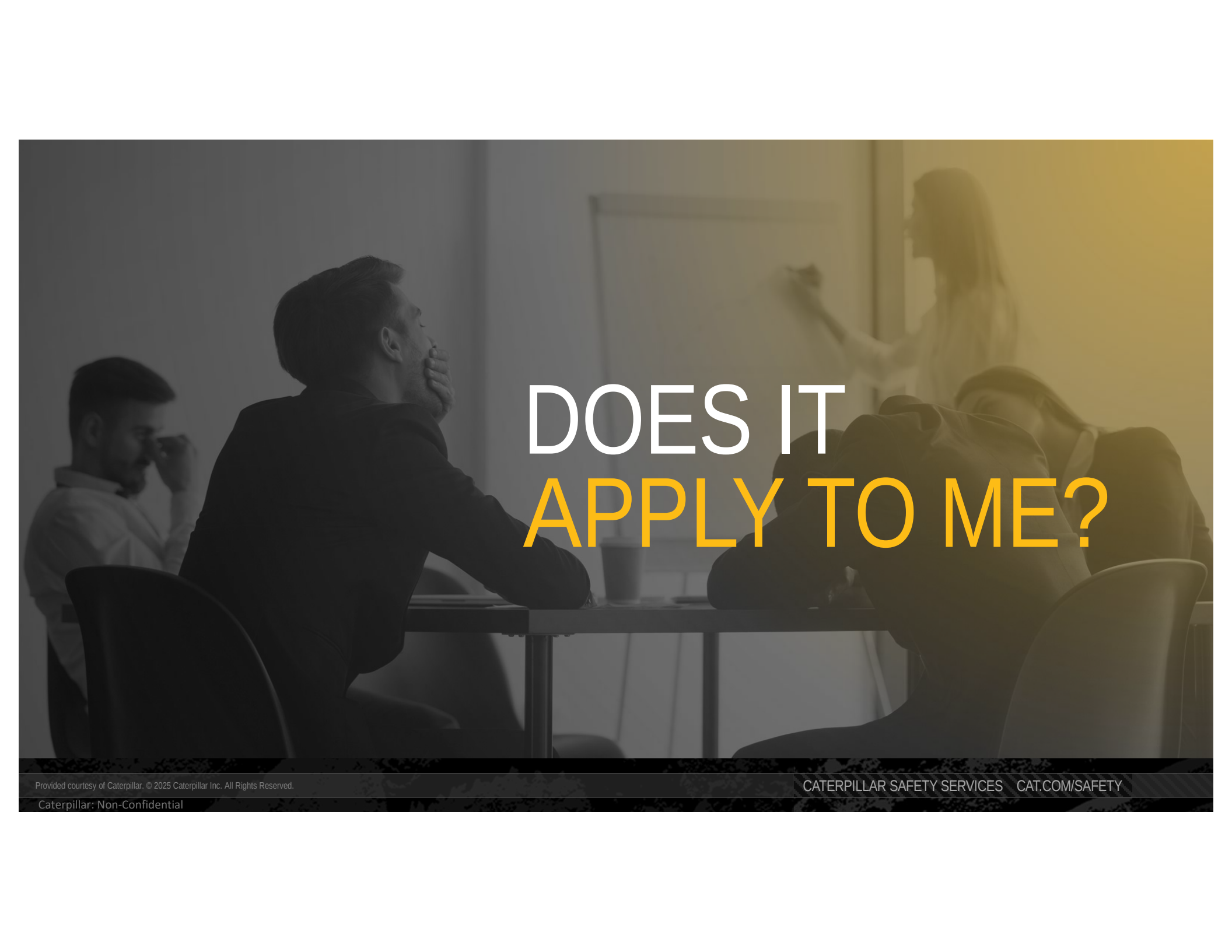
A photograph of a gas station at dusk or dawn, with a yellow-to-black gradient overlay. The station has several fuel pumps and a large canopy. The text is centered over the image.

...THE GAS STATION WHEN WE'RE RUNNING LOW

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DOES IT APPLY TO ME?

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YOU $\neq$ ME



WHAT IS D.I.P.I. TO YOUR PEOPLE?

- Be curious – study your team like a scientist
- Watch what they say and do
- Ask questions
- Listen and suspend judgement
- Connect with them in ways that are personal

THE SAFETY RIVER



HAZARD IDENTIFICATION/
CORRECTION



OBSERVATIONS



NEAR-MISS
REPORTING



ONBOARDING



INSPECTIONS



MEETINGS



INCIDENT
INVESTIGATIONS



TRAINING

SET EXPECTATIONS AROUND
WHAT PEOPLE CAN CONTROL



UPSTREAM
ACTIVITIES
SUPERVISORS
CAN IMPACT

DOWNSTREAM
RESULTS
EVERYONE
WANTS



FEWER
INJURIES



STRONGER
CULTURE



LOWER
CLAIMS



REDUCED
INCIDENTS

THE PRE-SHIFT SAFETY MEETING

Dangerous

Discuss near-term tasks with specific hazards to mitigate

Important

Relate topic to personal impact of those at home depending on them to work safe

Pleasurable

Provide recognition for proactive measures taken by employees to make safety positive

Interesting

Mix in topics important to employees that include safety off the job to keep them engaged

REFLECTION

WHAT HAZARDOUS TASKS HAVE A RISK OF BECOMING
“FAST BRAIN” ACTIVITIES?

HOW CAN WE MAKE THESE TASKS MORE DIPI TO EMPLOYEES?



OUR RESPONSE = THEIR REACTION



HOW DOES THIS
MAKE YOU FEEL?

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A cheetah is chasing a gazelle in a savanna. The cheetah is on the right, running towards the left. The gazelle is on the left, running away from the cheetah. The background is a blurred savanna landscape.

UNDERSTANDING YOUR REACTION

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AMYGDALA HIJACKING



Higher Cortex Disabled
High Emotion
(Anger, Disgust, Excitement, Fear,
Frustration, Hate, Love)



Higher Cortex Enabled
Low Emotion
(Calm, Relaxed)

Source: TTI Success Insights



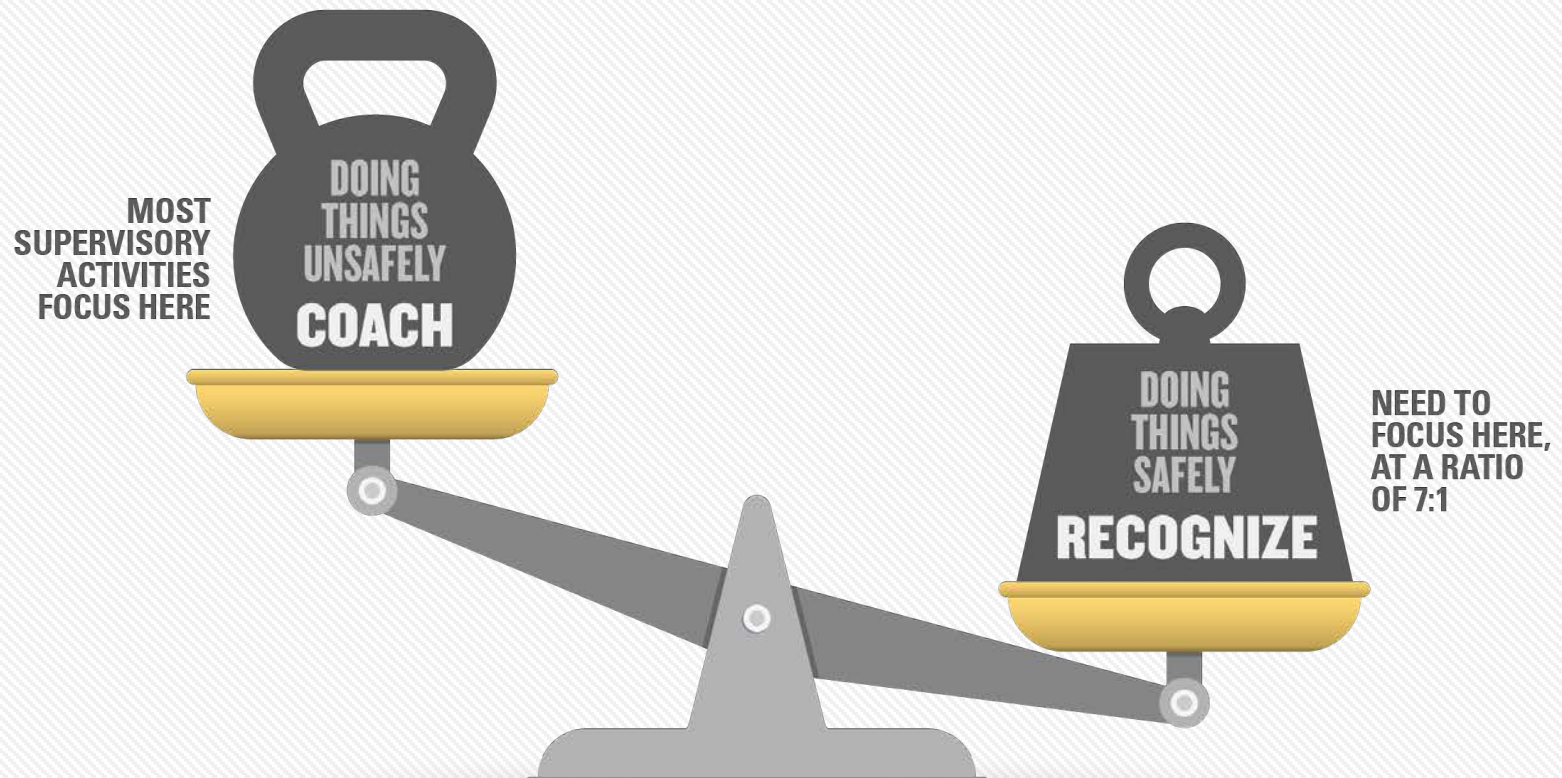
RECOGNITION > DISCIPLINE

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As a percentage, do employees do more things right or wrong?



WORDS CAN CHANGE YOUR BRAIN



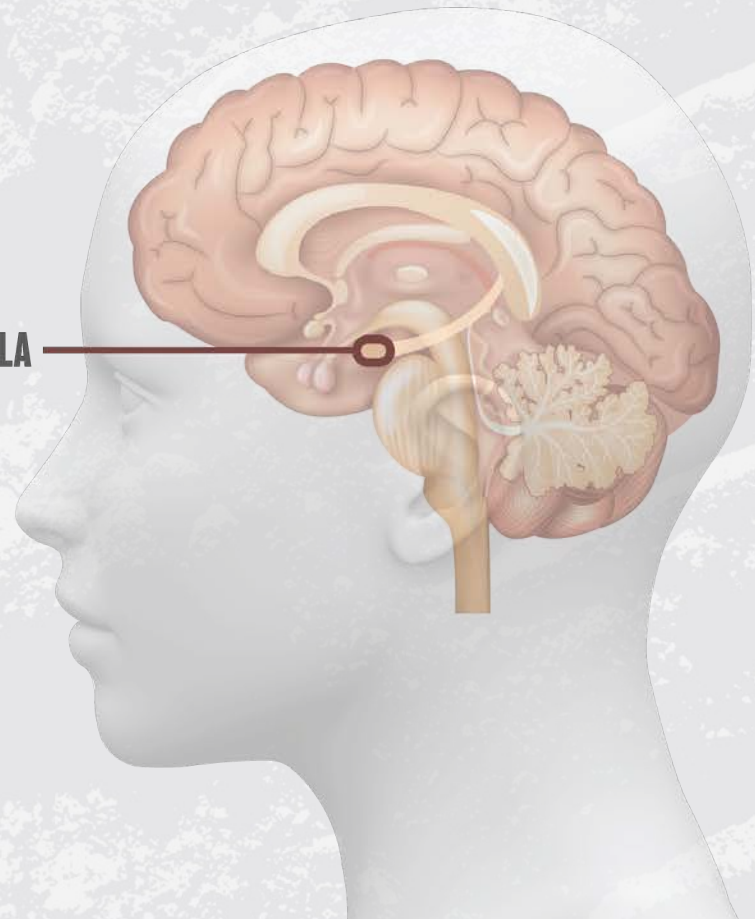
NEGATIVE WORDS

**ACTIVATE FEAR CENTER
(AMYGDALA)**

**RELEASES HORMONE THAT SHUTS
DOWN LOGIC / REASONING**

**RESULTS IN
"FIGHT OR FLIGHT" REACTION**

AMYGDALA



POSITIVE WORDS



FRONTAL LOBE



A photograph of two men in a large industrial facility, possibly a concrete manufacturing plant. They are standing in an aisle between tall stacks of large, rectangular concrete blocks. The man on the left is wearing a white hard hat, a high-visibility yellow safety vest over a grey jacket, and blue jeans. He is holding a clipboard and looking at the other man. The man on the right is wearing a red hard hat, a grey jacket with red accents, and dark pants. He is gesturing with his right hand while looking at the first man. The background shows more stacks of concrete blocks and industrial structures under a high ceiling with some lighting fixtures.

But we must do it with quality...

TIMELY
RELEVANT
SINCERE
CONFIRMED
FREQUENT

TYPES OF RECOGNITION

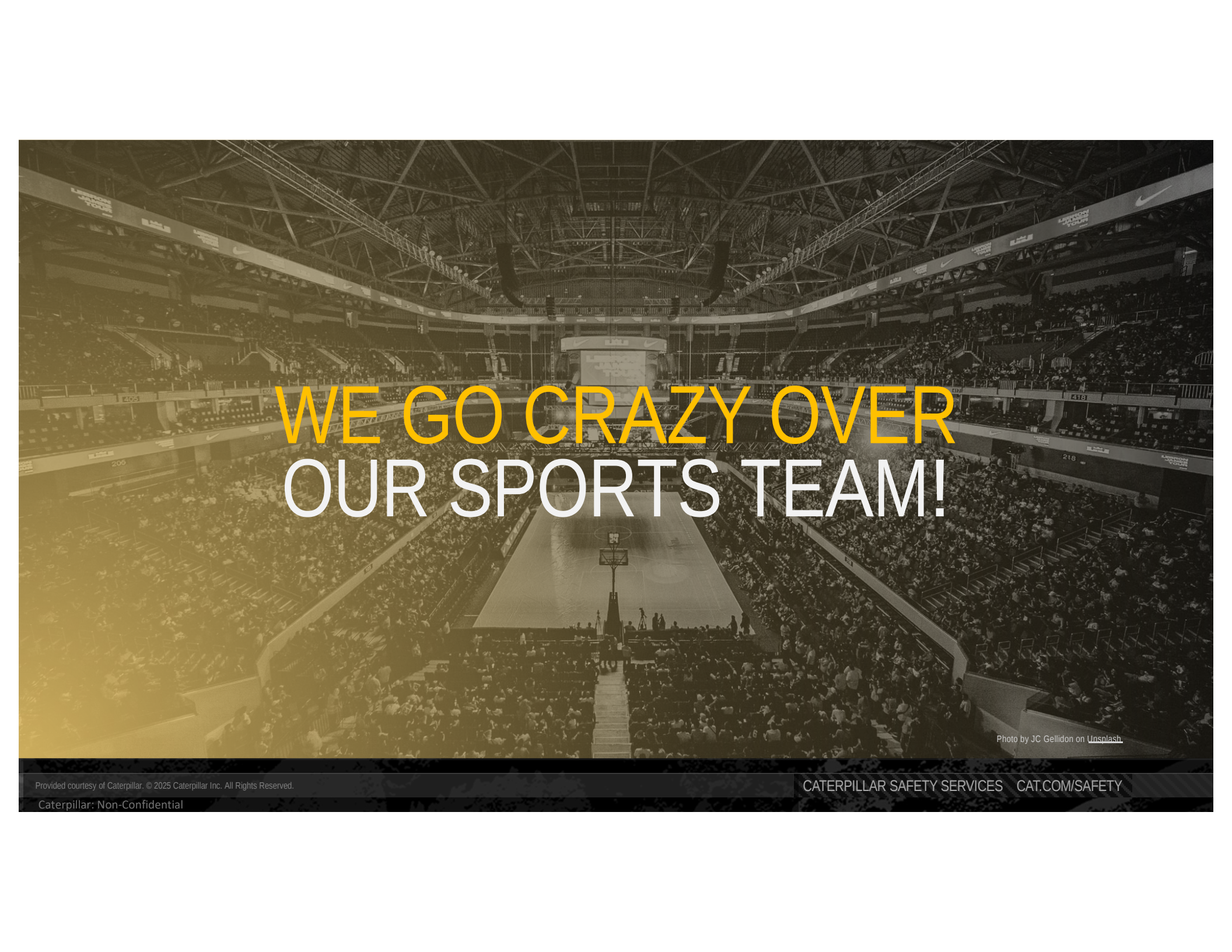
FORMAL:

- Planned
- Rehearsed
- May include reward
- May be public
- Initiated by authority figure
- Occurs at lower frequency



INFORMAL:

- Spontaneous
- Off-the-cuff
- Typically no reward
- Typically one-on-one
- Initiated by anyone
- Occurs at high frequency



WE GO CRAZY OVER
OUR SPORTS TEAM!

Photo by JC Gellidon on [Unsplash](#).

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A TYPICAL WEEK AT WORK...

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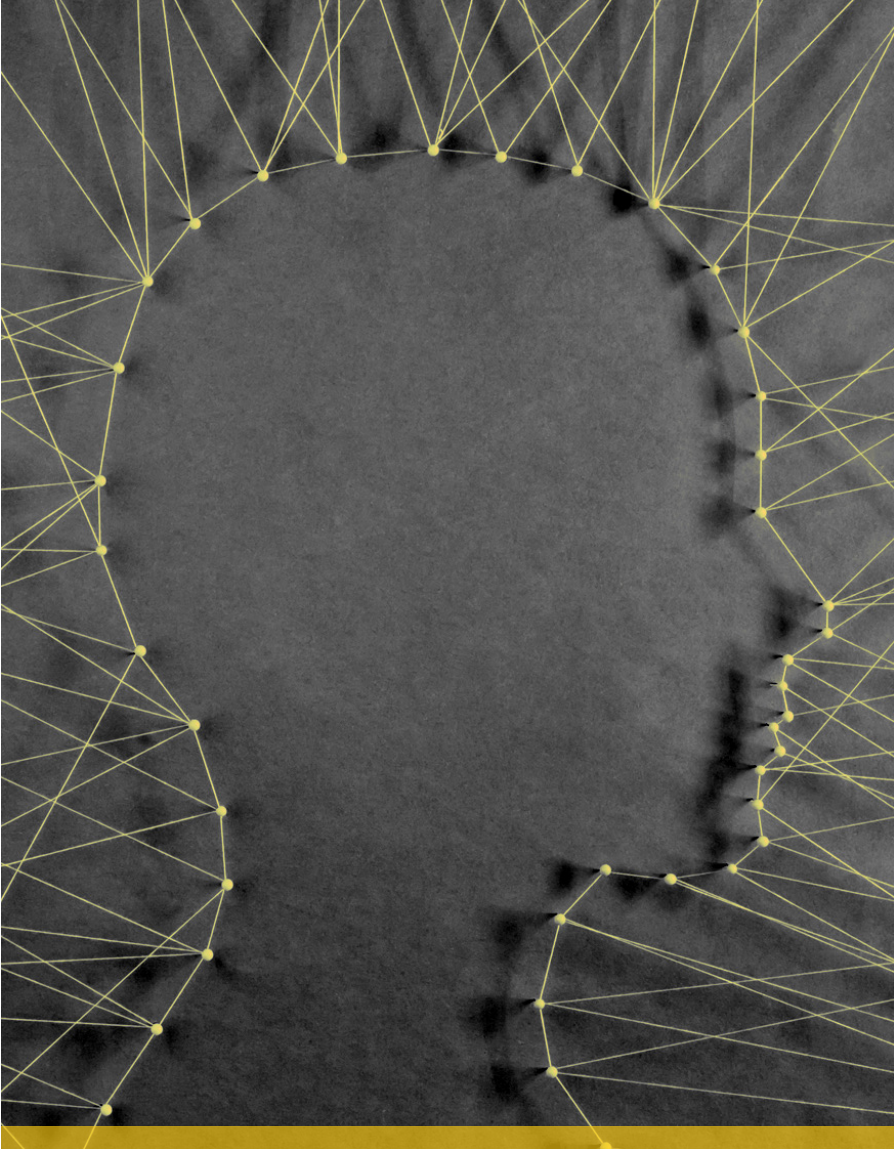
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...WHAT GETS RECOGNIZED GETS REPEATED...

RESILIENT SAFETY CULTURE COMPONENTS





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