How we decide
Brain wiring 101.

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Situational Awareness Matters!
Definition of a decision:

A choice made from at least two or more alternatives.

Sort of...
Effortful Decisions

Conscious Decision Making

Automatic Decisions

Unconscious Decision Making
Education and training develops both decision making abilities.
Two types of memory
Classroom Education

Cognitive Memory
Muscle Memory
Long Term Memory
The capacity of long-term memory:

10 times all the information on the Internet.
Fact

You can only consciously access: 5% of your long-term memory data base.
Unconscious Decisions

95%

“Automatic”

Conscious Decisions

5%

“Effortful”
Memory Recall

Can trigger the 6th sense.
Intuition
Knowing...
Without knowing...
How you know.
How do we know...

If we don’t know...

How we know?
Hair stands up on the back of your neck.

Voices in your head talk to you.

Impending feeling of doom.
Gut Feeling
Your Emotion-Based Red Flag Warning System

Intuition
How to improve:

- Memory
- Recall
- Physical performance
- Decision making
Context-dependent Decision Making
STRESS
Inoculation
Repetition programs the brain

Automatic actions:

Subconscious decision making.
Performing UNDESIRABLE actions automatically:

Subconscious decision making.
You are a...

Stress can trigger automatic (subconscious) decision making.
An example of how:
Training Routines
+ Muscle Memory
+ Stress
Can trigger an automatic (subconscious) decision.
Multi-Sensory Stimulation
Learning from failure and consequence.

I’ve learned more from the mistakes I’ve made in life than the things I’ve done right.
Replicate the decision making of LODD events in training exercises.

When an officer says: "This doesn’t feel right!"

You are developing intuition. Their brain is learning what NOT to do.
Decision Making Research Project

I surveyed firefighters and fire officers about their situational awareness and decision making training.

The results were very telling.
What % of the respondents had received more than 2 hours of situational awareness training in their tenure on the fire department?

5%
Patient Assessment Decisions
Scene Safe.

BSI.

(Body Substance Isolation)
What % of EMTs were taught to say “Scene Safe” prior to beginning their patient assessment?

98%
What % of EMTs have practiced how to make sure a scene is safe prior to starting a patient assessment?

7%

Most were police officers or had a police officer on their department who taught this.
If you arrived at a structure fire and do nothing but watch…

You will likely observe 2 things:
Every building on fire should be assessed for the potential to flashover and/or collapse as part of an officer’s “Go” or “No Go” decision making process.
Concerns for flashover should be on every crew member’s mind as part of the “Go” or “No Go” decision making process at every structure fire.
What % of officers admitted having thoughts or concerns about flashover prior to making a decision to enter a pre-fabricated burn building?

3%

Does not include training in a flashover simulator.
The thought of a collapse occurring should be on every crew member’s mind as part of their “Go” or “No Go” decision making at every structure fire.
What % of officers admitted having thoughts or concerns about **collapse** prior to making a decision to enter a pre-fabricated burn building?

9%

5% of the concerns were based on the deteriorated condition of the burn building.
Thoughts & concerns about flashover and collapse...

Should be part of the decision making script programmed into the mind of the firefighters during training.
Size-up
[barring obstructions]

A 360 size-up should be completed prior to making a decision to enter a structure on fire.
What % of officers playing the role of first-arriving admitted to completing a 360 size-up for EVERY evolution at a pre-fabricated burn building?

11%
What % of officers playing the role of first-arriving admitted to completing a 360 size-up on EVERY evolution when using the fire station for evolutions?

< 1%
Hose line selection
The decision for hose line selection should be made after completing an assessment of fire conditions.
What % of fire officers admitted that during live burn evolutions the hose line selection was made prior to the start of the training evolution?

96%
What % of fire officers admitted that prior to live burn evolutions starting the attack lines were already laid out on the ground?

(Pulling the line was not part of the evolution)

94%
Go or No Go
“No go” should always be an tactical decision option.
What % of fire officers admitted that during live burn evolutions they practiced No-Go decision making?

<1%

Not just discussed no-go. But actually did not make entry into the burn building.
What % of fire officers admitted the decision to “go” was a given (no-go was never considered)?

99%

Including the “go” decision being made by the instructor (not the company officer).
Training the process of decision making

Using the Socratic Method of Teaching
Tactical decisions should be based on quantity and quality of staffing.
Staffing during live burn scenarios.
What % of fire officers admitted the size of the crews during training was based on how many were available at the training session, not the realistic numbers at emergency responses?

81%
The number of firefighters assigned to a task during training should match the number of firefighters who will be performing the task at real incidents.
Ventilation
Is this a learned behavior?
Vertical ventilation prop
What % of firefighters admitted to practicing vertical ventilation on a prop while not wearing full turnout gear and an SCBA?

86%
What % of firefighters admitted to making a no-go decision while practicing vertical ventilation on a prop?

0%

Not just discussed no-go. But actually did not go on the roof prop.
While on a roof, a crew should “sound the roof” to ensure structural integrity.
What % of firefighters admitted to learning how to “sound the roof” as part of their basic firefighter training?

100%
Fire conditions and building construction should be assessed as part of the decision to go (or not-go) to the roof.
What % of firefighters admitted to assessing building construction and fire conditions as part of their go or not-go to the roof decision while using a roof prop?

0%
How do we explain this?

Bravado?

Robotic Action?

Following Orders?

Habits?

Culture?

Complacency?

Decision Making Training?

Or lack of
“Engine 2 is at the front door, we have heavy, thick, black, hot smoke banked all the way down to the floor with zero visibility.”

Is this Go?

Or No Go?
Blind search
What % of firefighters admitted to participating in blind-search drills as part of their training regimen.

100%
What % of firefighters admitted to practicing no-go decisions during blinded evolutions?

< 1%
What % of firefighters admitted they have practiced how to make a decision to abandon a search and leave the victim behind because conditions were rapidly deteriorating? < 1%
Is it possible to teach responders how to be better decision makers?

YES!
Every hands-on training evolution should teach teaching and practicing:
Cognitive (thinking skills) and Kinesthetic (movement skills) and Decision making skills.
Step 1: Size-up
Step 2: Think
Step 3: Decide
Step 4: Predict
Step 5: Act
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