

SILO²
SOCIAL INTELLIGENCE
LABORATORY

Personal Safety & Preparedness

*IN LARGE EVENTS & CROWDS
THROUGH PROACTIVE
RESILIENCY*



systems innovations.
localized outcomes.

What are your Intentions?

What are your Goals?

Intentionality in Safety

**Why do our intentions matter for us
and for our own personal safety?**

SILO²

S O C I A L I N T E L L I G E N C E
L A B O R A T O R Y

*for Opportunities in Systems Innovations with
Local Outcomes*

What we do:

We develop proactive resilience, prevent violence, and drive sustainable change, by supporting communities with expertise in multidisciplinary fields & emerging technology.

How we do it:

- 1. Identify opportunities & challenges within communities*
- 2. Augment existing capabilities with expertise & success stories based on the modality of Social Care*
- 3. Co-develop & deliver trainings, resources, and programs*

WHY DOES IT MATTER?

The Costs

- Loss of Life
- Psychological Impacts
- Community Impacts
- Estimates place total societal fiscal cost of a single violent incident around **\$10 to \$20 million**

Source: American Federation of Labor and Congress of Industrial Organizations, RAND Corporation, & DHS Center for Prevention Programs & Partnerships

TOTAL SOCIETAL COSTS OF HARMFUL BEHAVIORS

ADVERSE CHILDHOOD EXPERIENCES



\$14.1 TRILLION ANNUALLY

\$183 billion in direct medical spending and 113,9 trillion in lost healthy life-years

SUICIDE AND NONFATAL SELF-HARM



\$510 BILLION ANNUALLY

MENTAL HEALTH INEQUITIES



UP TO \$14 TRILLION
IN EXCESS COSTS BY 2040

CHRONIC AND MENTAL HEALTH CONDITIONS



\$4.5 TRILLION ANNUALLY

ALCOHOL ABUSE



\$249 BILLION ANNUALLY

Sources: Peterson Center on Healthcare, CDC, Mental Health To The Front and Center, CDC, NHTSA

WHY DOES IT MATTER?

The Impact is Felt Across our Communities

- Mass violence: since 2006, 3,183 victims have lost their lives in 617 mass killings
- Suicide deaths ~350x mass violence
- Substance abuse deaths ~1,000x outpaces mass violence
- 81% of women & 43% of men experience sexual harassment and assault
- Worldwide, depression & anxiety cost 12bn working days & \$1tn annually

Source: The USA TODAY/AP/Northeastern University mass killing database. K12 School Shooting Database, Death on the Job: The Toll of Neglect, 2024, World Health Organization, and National Sexual Violence

HOW DO WE ADDRESS THIS?

Nearly every violent incident is preceded by unmet crises and cries for help, typically 6-24 months prior.

Proactive resilience of Social Care involves identifying, responding to, and addressing these crises as early as possible. This minimizes their impact and fosters community resilience to recover and thrive.

STILO²
SILLO

Understanding & Planning for Risk

WILL SOMETHING BAD HAPPEN?
HOW LIKELY IS IT? HOW MUCH
WILL I BE AFFECTED?

Risk Assessment Matrix

RISK ASSESSMENT MATRIX				
SEVERITY PROBABILITY	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
Frequent (A)	High	High	Serious	Medium
Probable (B)	High	High	Serious	Medium
Occasional (C)	High	Serious	Medium	Low
Remote (D)	Serious	Medium	Medium	Low
Improbable (E)	Medium	Medium	Medium	Low
Eliminated (F)	Eliminated			

SOS ACT: Pre-Action Planning Tool





Situation Information

What we want to know

WHO

- Who all in your group is going?
- What's their strengths and gaps?
- Who put on the event?
- Who else may be at the event?
- How many are attending?

WHERE

- Where is the event at, and surrounding areas?
- What does the satellite imaging show? (Google Earth is our Friend!)
- What are the neighborhoods and streets and other geographical dynamics?

WHAT

- What's happening at this event?
- Do we have the schedule?
- What's the information and online communities saying?
- How high of profile event is this?



Objective Information



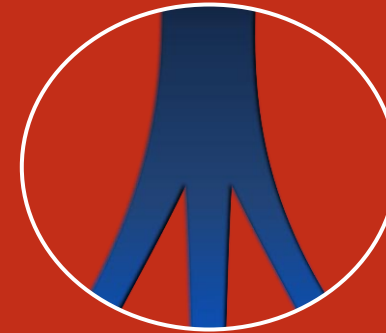
Overall Objective

- What do we want to get done with this event?
- What are we trying to achieve? Fun? Social Organizing? Music attendance?



Event Priorities

- Who wants to do what, and what's the list of priorities?
- How are we going to interact with this event to get our priorities done



Contingencies

- What if something can't happen?
- What do we flex and what do we bump up?



Dynamic Variable Process



Security & Safety Planning

The How and What of Keeping Safe during the Event

- **Human Risks**

- What are the chances of violence? Any known organized adversarial events nearby or in response to the event? Does the event have security? Is law enforcement there? How crowded is it expected to be?

- **Health Risks**

- Flu season? Is the area open and able to circulate air, or more interior spaces with lots of closed air movement? What do local health agencies report for current concerns on diseases?

- **Environmental Risks**

- What is weather projected to be like?
- Is there unique challenges with travel or the event due to environment?

- **Location Risks**

- What does the area look like? Do you know the streets it will be on? Have you downloaded the Google Maps of the area in case cell signals get overloaded?

- **Assess all the Risks!**

- How likely is it to occur, and if it does, how severe will it affect me?

- **Mitigate the Risks!**

- Can we avoid the risks? If not, what do we need to do lower or mitigate the risk?



Administrative Needs

Recommended Gear

- ✓ First Aid Kit (and *trauma kit*)
- ✓ Group Communication
- ✓ Pen & Notebook
- ✓ Personal Protective Equipment
- ✓ Portable Whistle / Personal Alarm
- ✓ Flashlight / Mini Keychain Light
- ✓ Glow Stick / Wristbands
- ✓ Poncho / Foldable Raincoat
- ✓ Others?

What other items, equipment or preparations are needed? Are you trained in these preparations?

Essentials!

- ✓ Fully Charged Phone
- ✓ Photo ID / Driver's License
- ✓ Tickets / Event Pass / QR Code
- ✓ Cash & Card (not all places take digital payments)
- ✓ Transit Card / Rideshare App Installed

Things to Consider

- ✓ Cross-Body Bag to carry items (*in front of body*)
- ✓ Take Photos of each Group Member for Safety
Contacts immediately at Start of Event
- ✓ Ensure all group members have contact numbers and
printed/laminated contact cards

Contact & Communications Plan

- Communication Devices (*remember, cell networks will likely be overwhelmed in crowded event*)
- All Contact Numbers on the phone **and available offline** (*make a contact card!*)
- Who, When and How to check in with an Off-Site Contact
 - Family Member, Organizational Rep, or others!
- Important Contact Numbers
 - ✓ Local Health Services
 - ✓ Local Non-Emergency Numbers
 - ✓ Trusted Off-Site Safety Contacts
 - ✓ Event Support or Helpline
 - ✓ Event Security Number
 - ✓ Lost & Found Booth
 - ✓ Venue Operations Staff Line
 - ✓ Local Taxis (*in case rideshares overbooked*)
 - ✓ Lodging Front Desk or Concierge
 - ✓ 988 Suicide & Crisis Lifeline (USA)
 - ✓ Embassy or Consulate (if international)



Travel & Timelines

- ❑ Travel Plan Considerations
 - ✓ Designated Meetup Spot List (*take photos of the spot via Google Street View*)
 - ✓ Any Risk in Travel?
 - ✓ Prearranging Rideshares and Pickup Points
 - ✓ What are alternatives if travel out of event is disrupted?
- ❑ Know your Timelines! Think of:
 - ✓ Estimated Time at Event
 - ✓ Estimated Transit / Meetup / Arrival Times
 - ✓ Check-In Times with Safety Contacts
 - ✓ Leaving Home/Lodging
 - ✓ In Transit to Staging/Entry to Event
 - ✓ Arrived at Event Space
 - ✓ Leaving Event Space
 - ✓ In Transit to Lodging
 - ✓ Safe at Home/Lodging
 - ✓ Weather Affecting Timelines of Event/Group Meetup Spots
 - ✓ Contingencies if timelines need expanding

A Note on First Aid & Trauma Kits

“Boo-boo” Hand-Outs Kit

For treating minor injuries or handing out, keep in a separate small kit that can be accessed. Carry a moderate amount of all in a ziploc bag so you can hand out as needed. Items like:

- Roller gauze
- Band-aids, various sizes
- Alcohol or povidone iodine wipes
- Gauze (sterile or clean 4x4s or 3x3s)

A Note on First Aid & Trauma Kits

An Example Basic First Aid / Social Care Kit

- adhesive bandages (1", ¾", knuckle, fingertip, 2") [minor cuts]
- sterile gauze sponges, 4x4" (10) [dressing open wounds]
- sterile gauze sponges, 2x2" (10) [dressing open wounds]
- gauze bandage rolls, various sizes (6-10) [for bandaging dressings, splints]
- non-sterile latex gloves (20 pairs in zipper baggies, 1-2 pairs/bag) [bodily fluids/chemicals]
- Sugar (cake icing tube, glucose gel, or honey) for glucose emergencies
- Rehydration drink mix (e.g., dilute Gatorade, miso)
- triangle bandages/cravats (5) [sling, wraps]
- Self-adherent cohesive bandage rolls (2) [for wrapping smaller wounds]
- medical tape (1" roll, 2" roll) [affixing bandages]
- instant hand warmers (3-5) [cold weather emergencies]
- instant cold packs (2-5) [bruises, sprains, heat emergencies]
- ace bandage rolls (2", 3", 5") [sprains, splints]
- antiseptic/betadine swabs/wipes (6-10) [cleaning minor cuts/abrasions]
- non-latex gloves (2 pairs) [in case of latex allergies]
- sealed hand-wipes/towelettes (5-10)
- Saline or water for eye/wound flushing (sport-top squirt bottle)
- Female Personal Care (Pads, etc)

A Note on First Aid & Trauma Kits

Trauma Kit or Active Shooter Kit

However, only these supplies can make a real difference when controlling serious bleeding, such as open fractures from a fall or injuries from violent attacks. Good high-quality commercial equipment is recommended, and hands-on training by using training versions is invaluable.

Get training in how to use these via <https://www.stopthebleed.org/>

- **Tourniquets**
- **Occlusive Chest Seals**
- **Compression Bandage**
- **Hemostatic Gauze**

Consider a Patient Movement Aid!

- Can be as simple as a sturdy climbing strap to make a sling under someone's arms to drag them

STILO²
SILLO

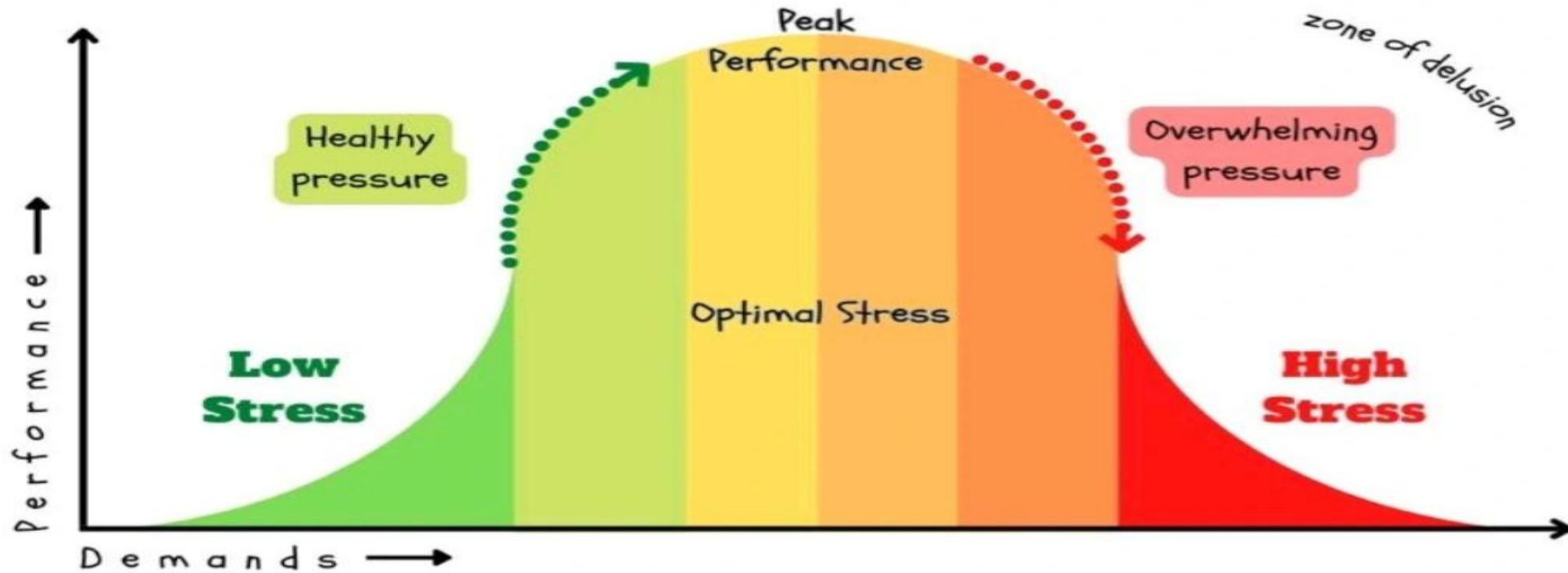
The Cognition of Personal Safety

MANAGING STRESS RESPONSE,
IDENTIFYING CONCERNING BEHAVIORS,
AND THE PSYCHOLOGY OF CRISIS

The Perceptual Process



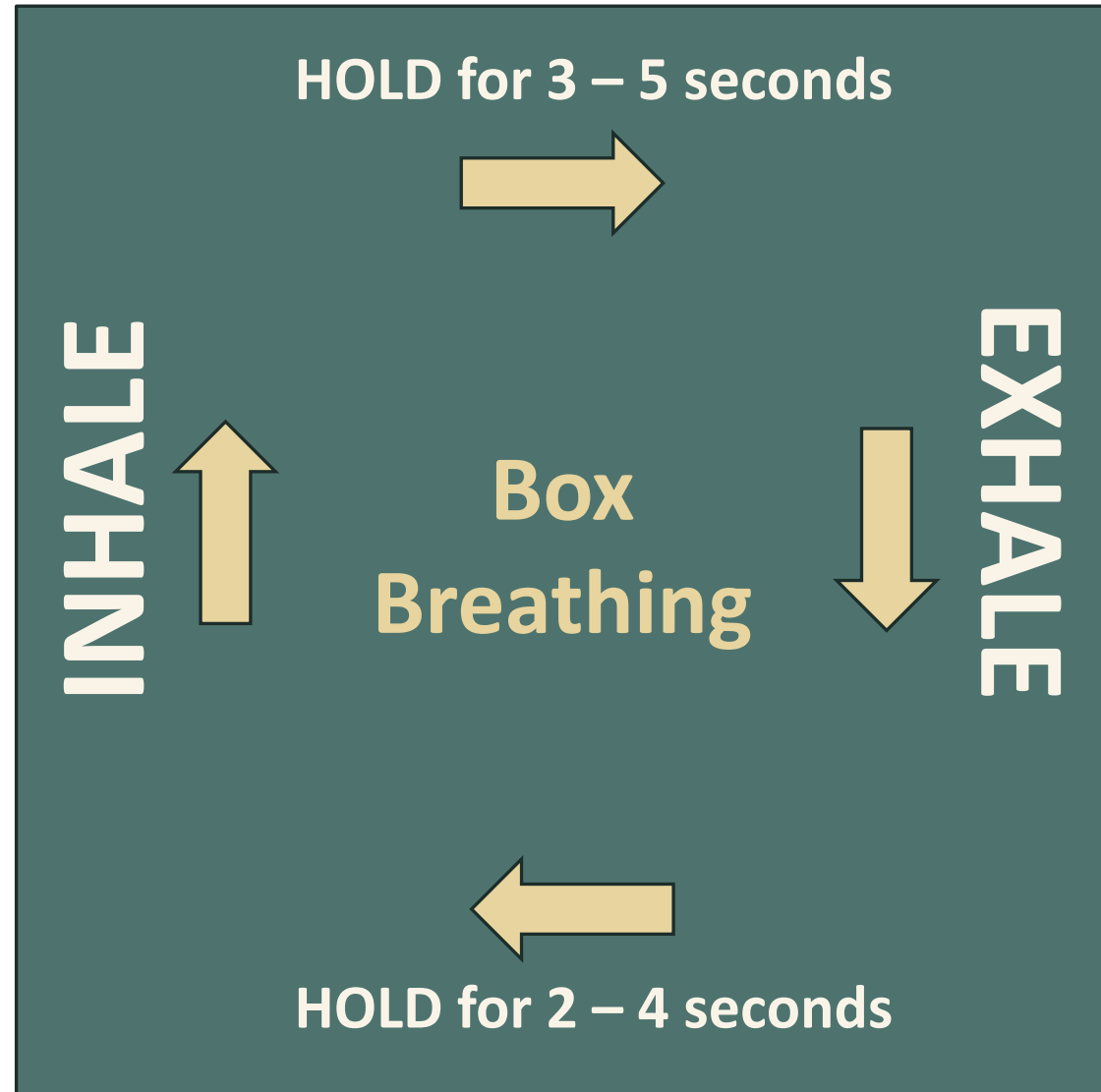
Stress Performance Curve



Stress Level

Low	Moderate	Optimal	High	Too high
Inactive Bored Unchallenged	Engaged Focused Motivated	Confident In control Productive	Distracted Fatigue Overwhelm	Exhaustion Anxiety Burnout
"I wish I had more to do!"	"I'm feeling focused & energised"	"Now I'm really in the zone"	"I feel anxious & unfocused"	"I can't take this anymore"

Waking Waves



Why it works: the physiology of box breathing

A slow, paced technique — inhale 4s · hold 4s · exhale 4s · hold 4s



Slows the heart rate

Raising vagal (parasympathetic) tone slows the heart — most on the exhale — and eases the fight-or-flight response.



Lowers blood pressure

Slow, even breathing raises baroreflex sensitivity and lowers sympathetic drive, which brings blood pressure down.



Balances oxygen & CO₂

Steady breathing improves ventilation efficiency and stabilizes CO₂, preventing the over-breathing that causes dizziness.



Boosts parasympathetic activity

Stimulates the vagus nerve and the “rest-and-digest” system, easing arousal and raising heart-rate variability (HRV).



Calms the nervous system

Mindful, paced breathing quiets the amygdala and strengthens its link to the prefrontal cortex, aiding focus and control.



Releases muscle tension

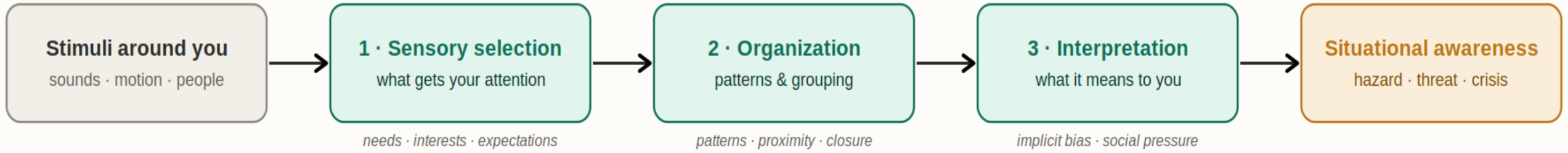
Diaphragmatic breathing relaxes the diaphragm, chest, and shoulders, letting go of tension that builds under stress.

Effects are drawn from peer-reviewed slow, paced-breathing research; box breathing uses equal 4-count phases.

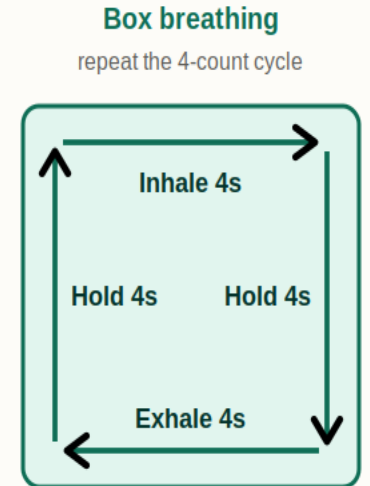
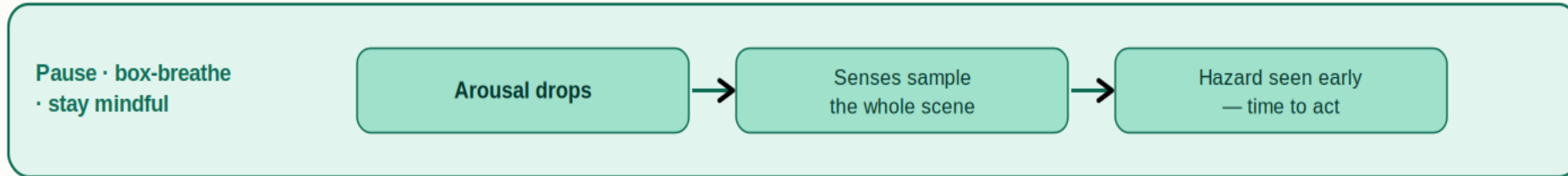
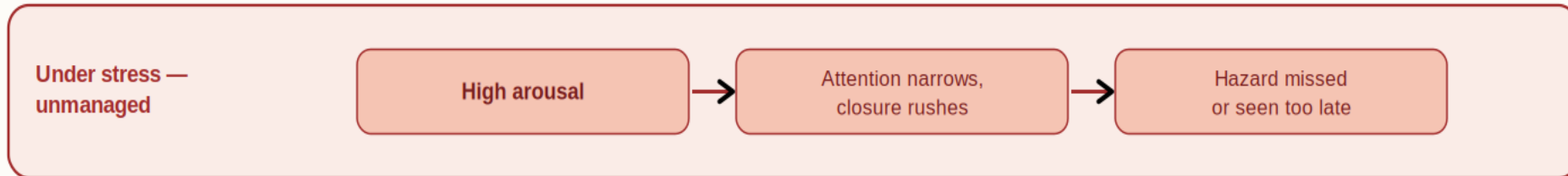
Laborde et al. 2022 (Neurosci. Biobehav. Rev.) · Joseph et al. 2005 (Hypertension) · Fincham et al. 2023 (Sci. Reports) · Doll et al. 2016 (NeuroImage) · Bilo et al. 2012 & Szulczewski 2019 (PLoS ONE)

The perception process — why pausing sharpens situational awareness

How the brain turns raw sensory input into awareness of hazards, threats, and crises



Physiological arousal gates every stage



A calm body lets your senses do their job — that is how you raise situational awareness

Perception model: Green et al., "The Perception Process," Introduction to Communication (CC BY-NC)

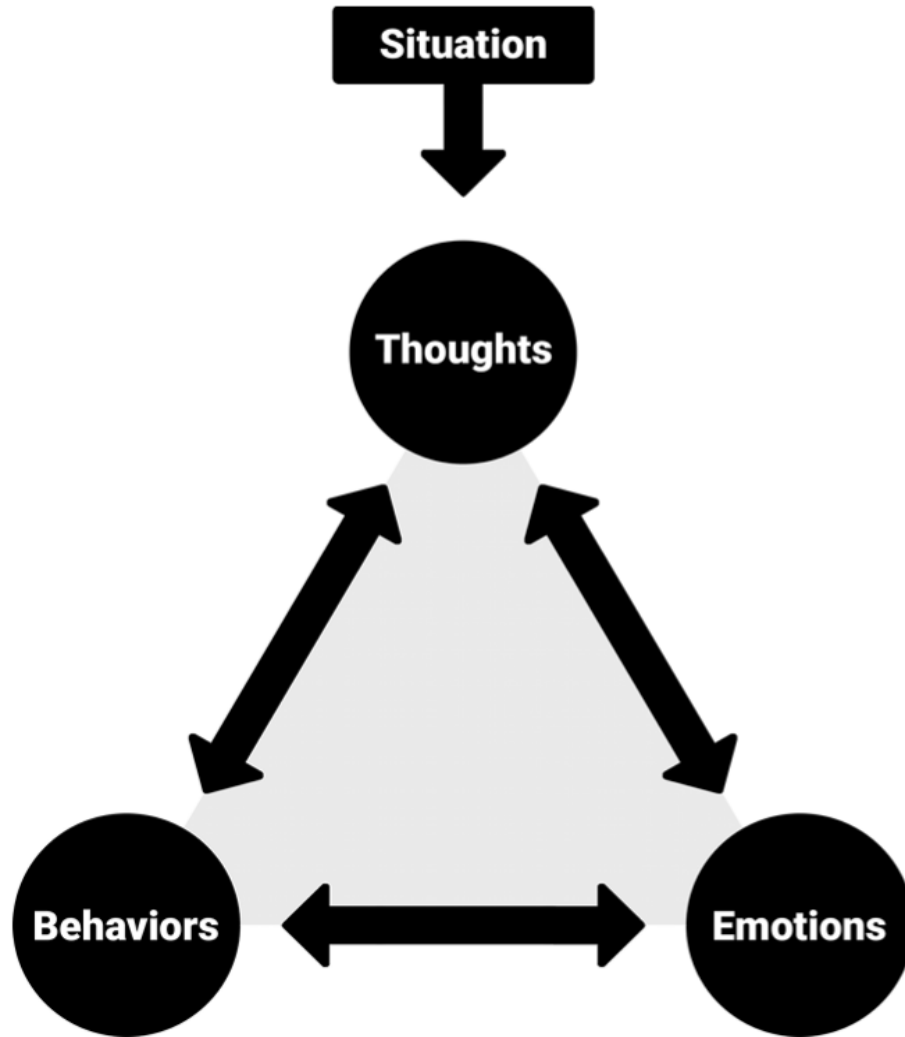
Five Universal Truths of Human Interaction

- 1. People feel the need to be respected**
- 2. People would rather be asked than be told**
- 3. People have a desire to know why**
- 4. People prefer to have options over threats**
- 5. People want to have a second chance**

Source: Dr. George Thompson, Verbal Judo Institute

The Cognitive Triangle

The **cognitive triangle** shows how thoughts, emotions, and behaviors affect one another. This means changing your *thoughts* will change how you *feel* and *behave*.



A **situation** is anything that happens in your life, which triggers the cognitive triangle.

Thoughts are your interpretations of a situation. For example, if a stranger looks at you with an angry expression, you could think: "Oh no, what did I do wrong?" or "Maybe they are having a bad day."

Emotions are feelings, such as happy, sad, angry, or worried. Emotions can have physical components as well as mental, such as low energy when feeling sad, or a stomachache when nervous.

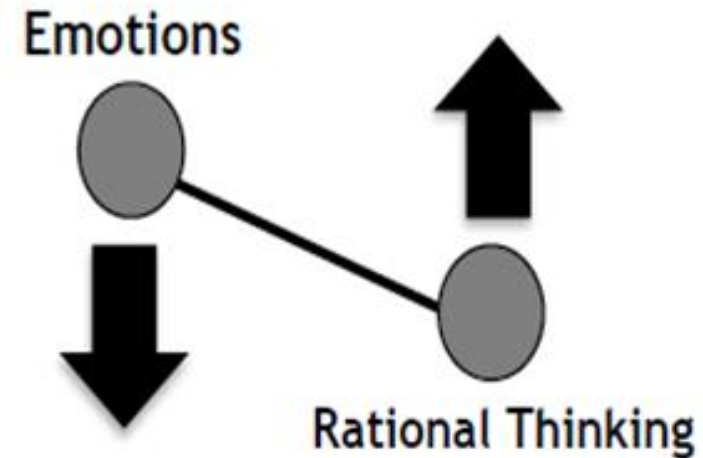
Behaviors are your response to a situation. Behaviors include actions such as saying something or doing something (or, choosing not to do something).

Manage the Loop, Break the Loop

■ Manage Your Reactions

- Human can experience physiological changes as a subject in crisis
- Important to consciously slow your breathing, move slowly and smoothly, stay in control

- Control your body language
- Your words need to match your demeanor



Remember Good Active Listening & Non-Verbal Skills!

- LEAPS as a technique
 - Listen
 - Empathize
 - Ask
 - Paraphrase
 - Summarize



Types of Violence

Impulsive Reactive

- Emotional and impromptu
- Frequently a defensive behavior in response to a perceived imminent threat

Predatory Planned

- Premeditated and serves some purpose for those who plan and conduct violent attacks
- All instances of targeted violence (violence directed towards individuals or groups due to perceived grievances) and almost all mass murders are premeditated
- The planned nature provides an opportunity to detect and protect from plans

Sources: DHS National Threat Evaluation & Reporting Program Office, *Threat Evaluation & Reporting Overview*
Calhoun, F., & Weston, S. (2017). *Threat Assessment and Management Strategies: Identifying the Howlers and Hunters, Second Edition*

Types of Violence

Impulsive Reactive

- Emotional and impromptu
- Frequently a defensive behavior in response to a perceived imminent threat

This violence is often an emotionally-driven action in response to stress stimulus; often defensive in a reaction to what is perceived as some sort of direct threat in the moment.

This is often due to overwhelming stress response that overrides internal decision-making process and shifts an individual into the *fight* status of the threat response.

Types of Violence

Predatory Planned

- Premeditated and serves some purpose for those who plan and conduct violent attacks
- All instances of targeted violence (violence directed towards individuals or groups due to perceived grievances) and almost all mass murders are premeditated
- The planned nature provides an opportunity to detect and protect from plans

Targeted violence is often an incident of violence where an identifiable perpetrator commits an act of violence toward a particular individual, group, place, or thing. It is not spontaneous, emotion-driven, impulsive crimes emanating from a person's immediate anger or fear.

A target can be, but is not always, a point of fixation for a perpetrator or potential perpetrator of targeted violence. It is often a result of grievances against the targeted individual, group, place, or thing.

Sources: Meloy, J. Reid., Hoffmann, J., et. al, (2021). *Threat Assessment and Threat Management. International Handbook of Threat Assessment (2nd ed.)*
Calhoun, F., & Weston, S. (2017). *Threat Assessment and Management Strategies: Identifying the Howlers and Hunters, Second Edition*

WHAT ARE THE WARNING SIGNS?

Disclaimer: The behaviors and factors below include constitutionally protected activities and life circumstances that are experienced by many people who will never engage in violent activity. Each indicator listed may be, by itself, lawful conduct or behavior and may constitute the exercise of rights guaranteed by the US Constitution.

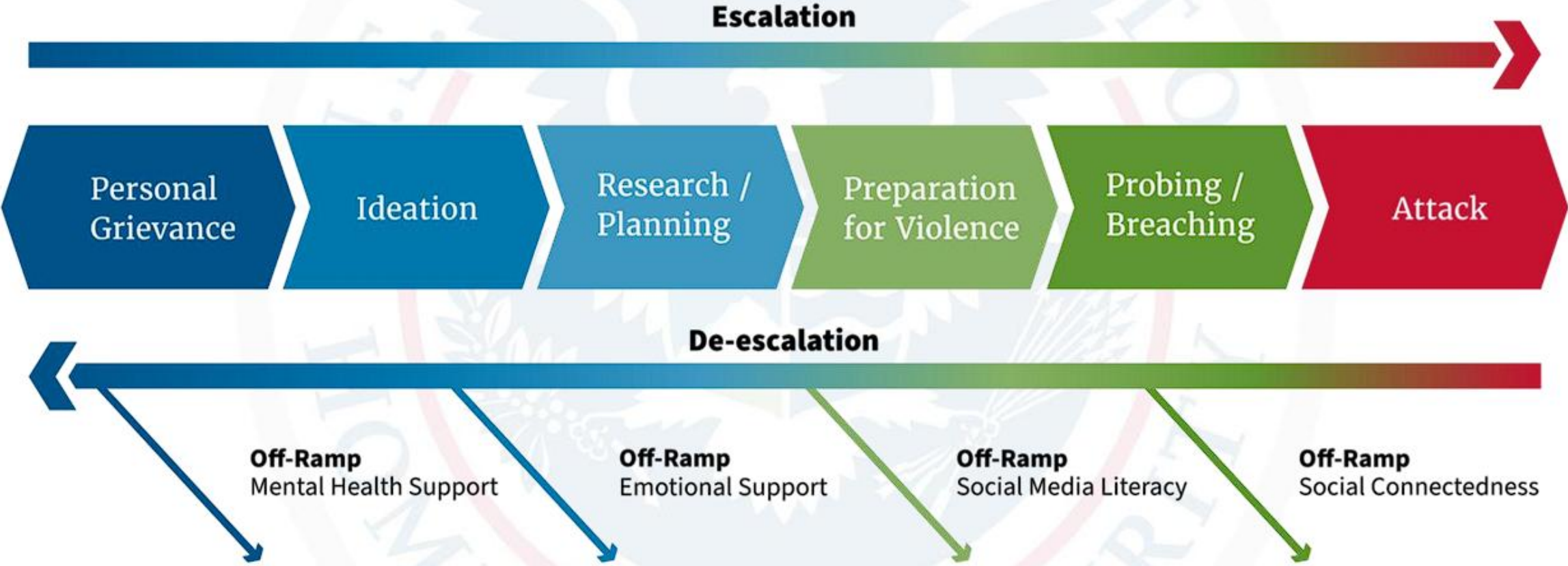


Behaviors that may indicate: ■ Concern ■ Heightened Concern ■ Imminent Concern

Sources: DHS National Threat Evaluation & Reporting Program Office

Pathway to Violence Model

This is one of several models proposed to describe a progression from grievance to attack. Steps along a pathway include a highly personalized grievance, violent ideation, research and planning, specific preparations for violence, breaches of security or other boundaries, and attack. Individual pathways may differ by person. Not every individual who commits violence takes a pathway



Sources: Centers for Prevention Programs & Partnerships. Shaw, Kate (2024). Targeted Violence & Terrorism Prevention through Behavioral Threat Assessment and Management
Calhoun, F., & Weston, S. (2003). Contemporary threat management: A practical guide for identifying, assessing and managing individuals of violent intent.

STILO²

The Physicality of Personal Safety

THE PHYSICAL DYNAMICS OF
INTERACTIONS, INTERIOR SPACES,
OPEN SPACES, AND CROWDS

Win. The. Race

What does it mean to physically *and* mentally
win the race?



Key Concepts

Win the Race.

Remember that while moving into and through *any Space* and during *any interaction or crisis*, you want to *win the race*, whether that's *to the exit* or the *race to clear thinking*. Build your exits, maintain the overall picture, and keep yourself close routes to safety.



Key Concepts

Build your Exits on Entry.

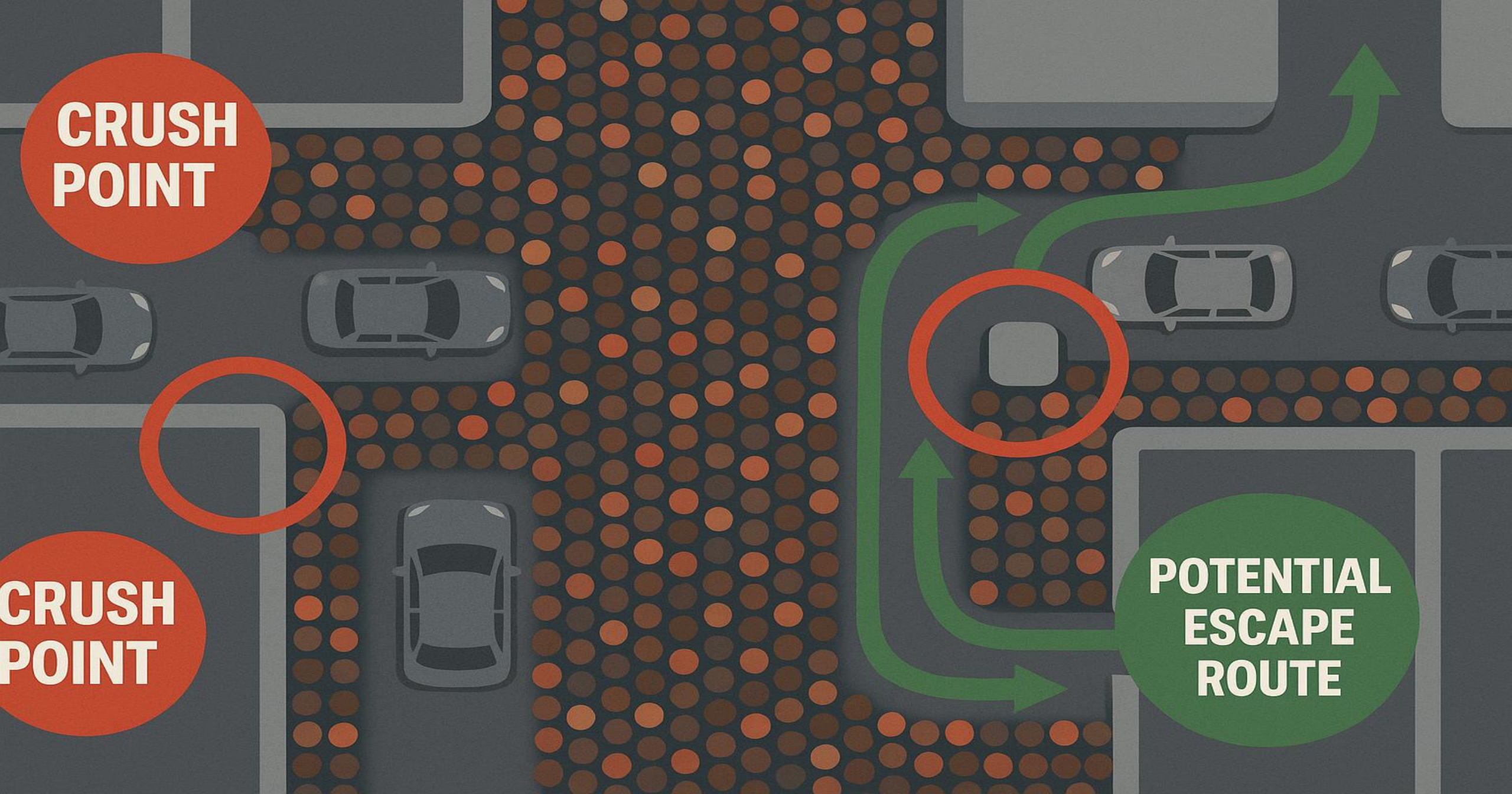
As we enter a new Space, we want to take a moment and identify all the possible ways to exit that Space. We literally “build” in our mind the exit out of this new Space.

Build your Exits!

**CRUSH
POINTS**

**POTENTIAL
ESCAPE ROUTE**



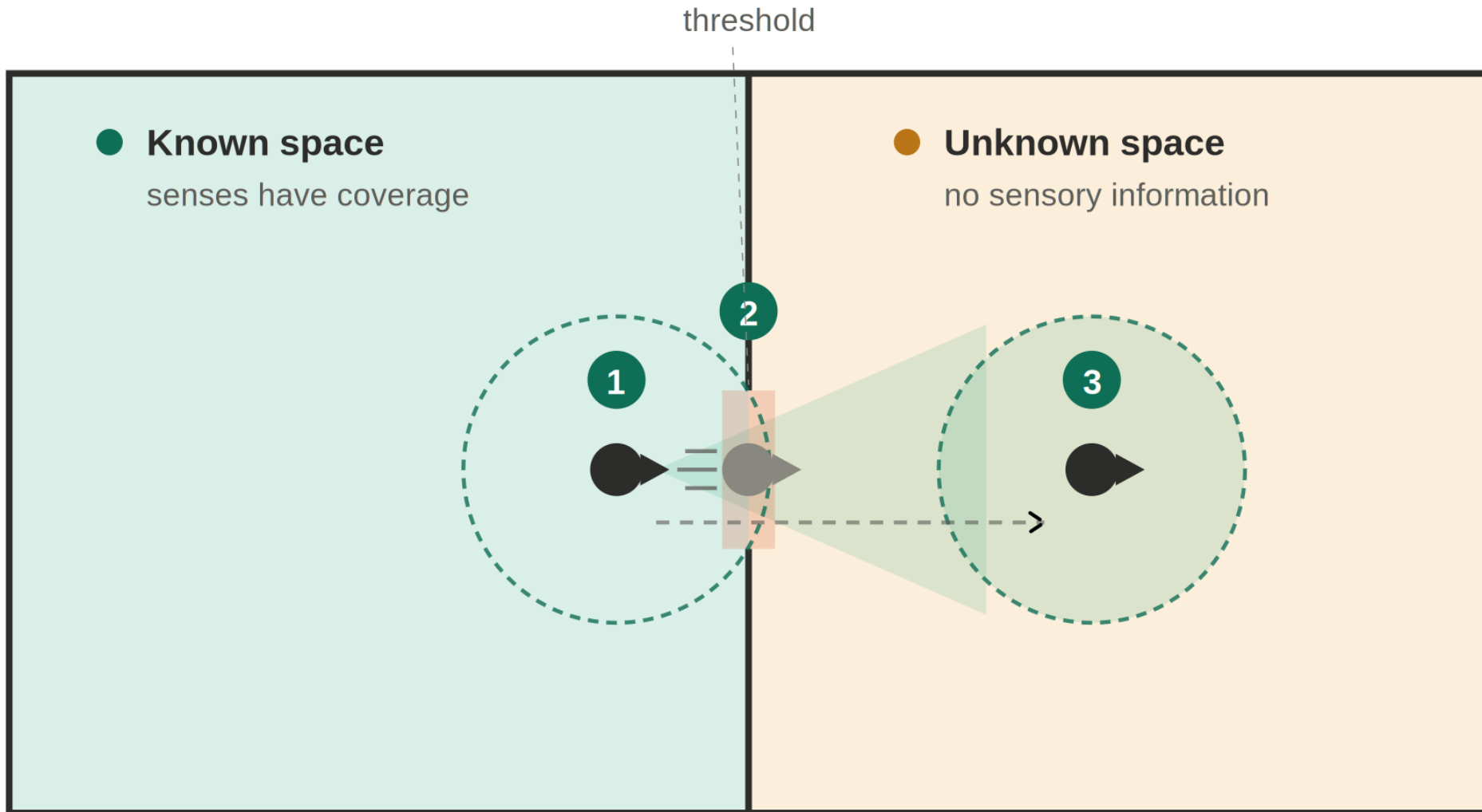




Key Concepts

Cross the Threshold, Paint the Picture.

As we cross the Threshold into a Space, whether that's passing through a door into a new room or turning the corner onto a new street, we want to let our senses reorient our understanding of this new Space. When crossing over a Threshold into a new Space, we want to do this quickly and move out of that Threshold such as a doorway or the middle of a street.



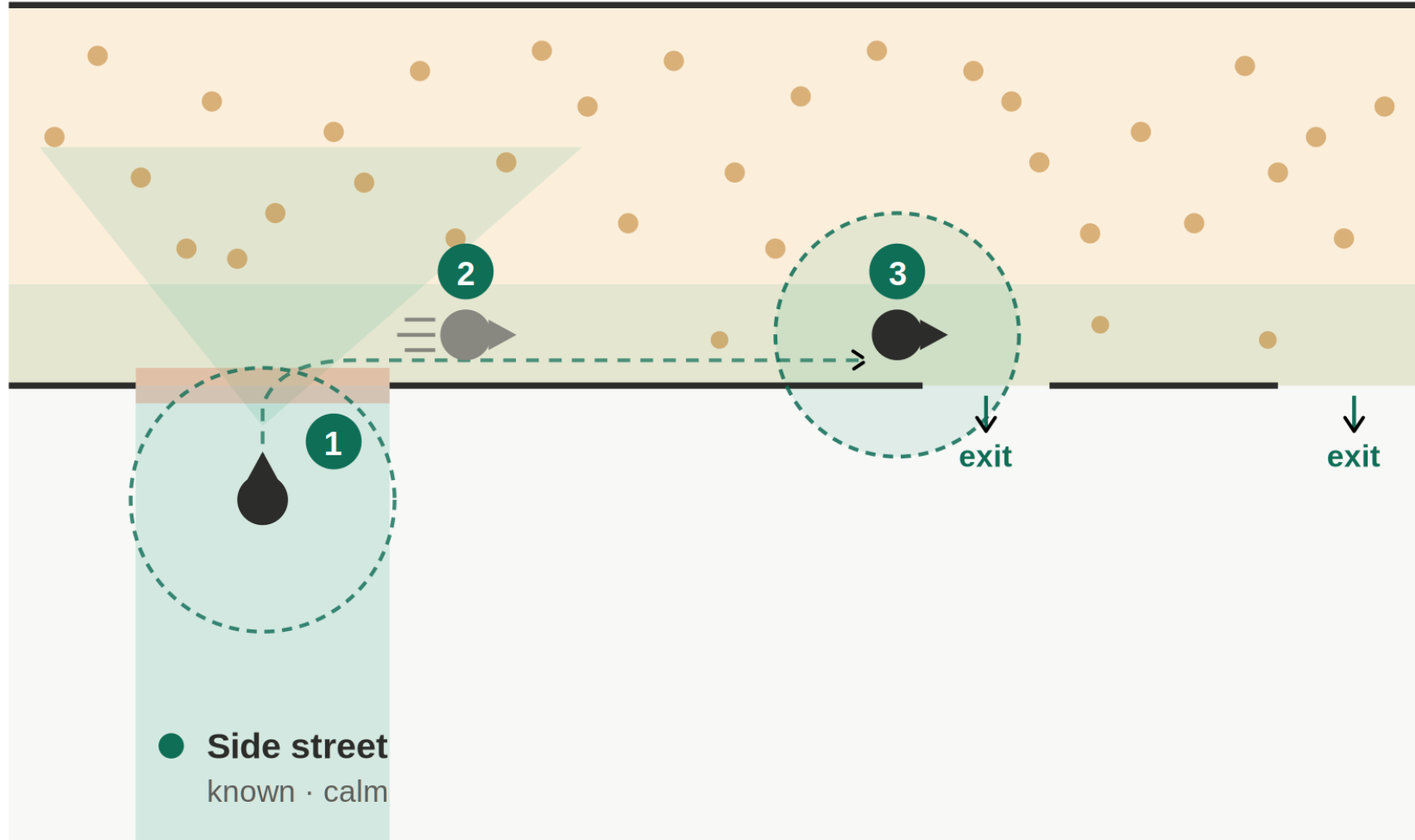
1 — Pause & assess
read the space you're in

2 — Cross quickly
cross the threshold fast

3 — Re-orient
map the new space

● **Festival main street**

dense, unpredictable crowd



● **Side street**
known · calm

1 — Pause & scan
read the street first

2 — Hug the edges
avoid the dense center

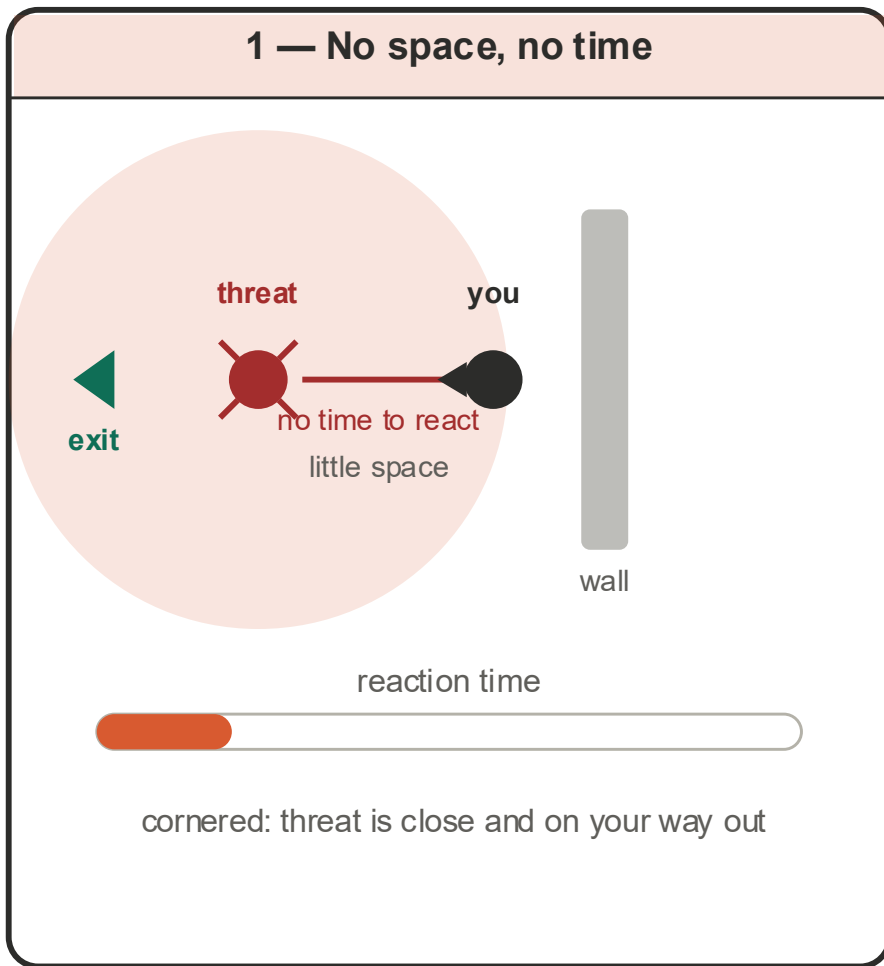
3 — Pause & re-adapt
re-orient by an exit



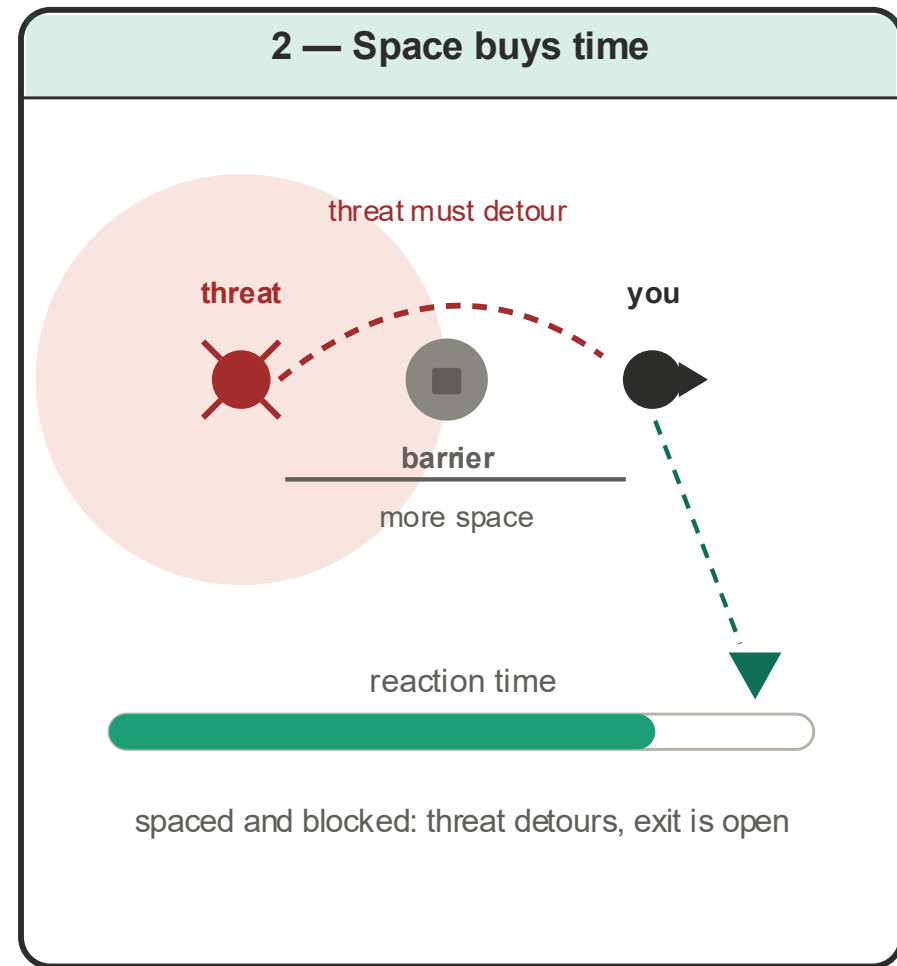
Key Concepts

Work blocking to create and protect reaction space.

Use objects and the Space layout to create blocking from the crowd, potential harm, or from someone in Crisis to open reaction space and provide better movement in the need of escape. Prevent yourself from being blocked via objects, people, or difficult access points.



>



With space you buy time — with time you buy space



WITH SPACE YOU BUY TIME — WITH TIME YOU BUY SPACE

Questions?

Caleb Lovelace

lovelace@silos2.org

907-575-7451

SILO² | Social Intelligence Laboratory:

www.silos2.org

