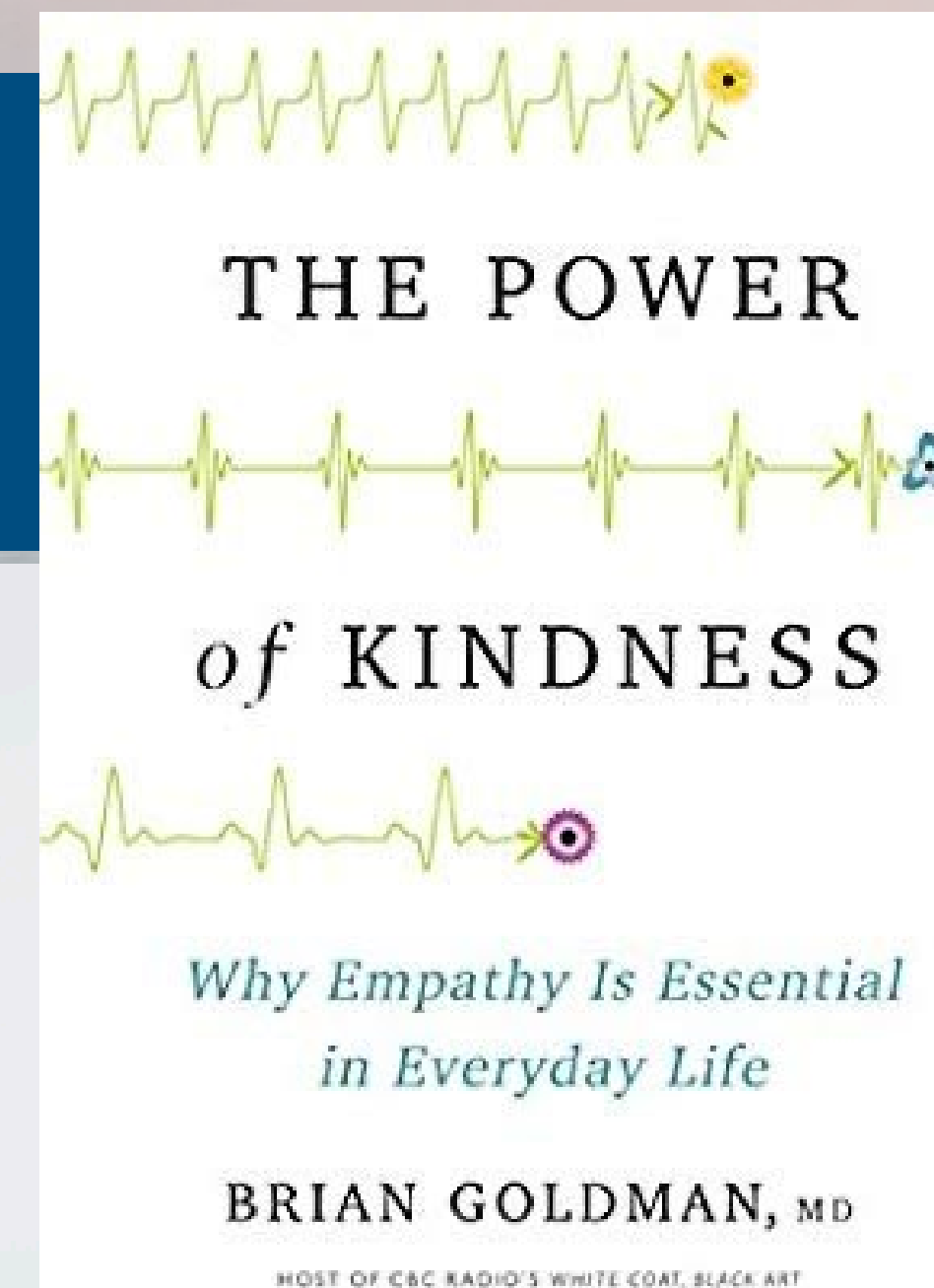


**Dr. Brian  
Goldman**



The Power Of Teamwork

# Objectives

1

Why I chose  
teamwork as the  
topic of my book

2

Teamwork stats  
in the age of the  
great resignation

3

The case for  
teamwork: safety  
efficiency and  
less burnout

4

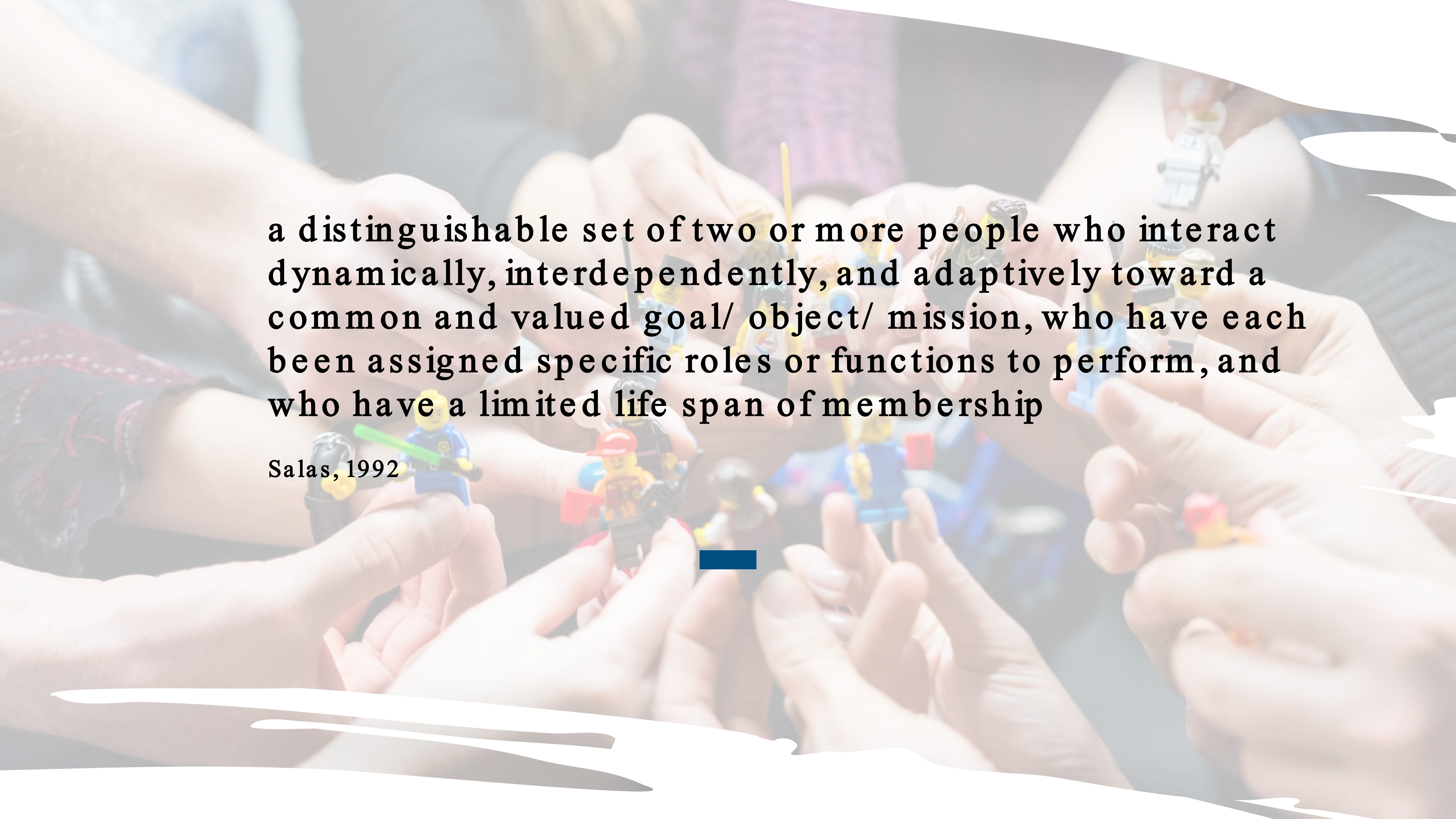
Discover team  
cohesion in  
expected and  
unexpected ways



“

**The more complex  
the project, the more  
you need a team.**

—

A group of hands holding various LEGO minifigures, symbolizing teamwork and collaboration. The background is a soft-focus image of many hands reaching towards the center, each holding a different colored LEGO minifigure. The overall tone is positive and collaborative.

**a distinguishable set of two or more people who interact dynamically, interdependently, and adaptively toward a common and valued goal/ object/ mission, who have each been assigned specific roles or functions to perform, and who have a limited life span of membership**

**Salas, 1992**



A team is not a bunch of people with job titles, but a congregation of individuals, each of whom has a role that is understood by other members.

— Meredith Belbin —

**AZ QUOTES**

Researcher in the psychology of ageing in research

The Power Of Teamwork

# Super-efficiency in the brain



Co-operative jugglers share neural pathways that activate the same areas of the brain.



At the same time different neural pathways compliment each juggler.

But the initial  
**COORDINATION COST**  
discourages many from  
trying. Unless you think of it  
as an **INVESTMENT**



# Benefits of teamwork in healthcare

More accurate diagnosis  
More appropriate treatment  
Better outcomes  
Improved access to expert providers  
Greater productivity and efficiency  
Improved safety  
Lower absenteeism  
Less cognitive stress  
Lower burnout



# Military and medical cultures



Similarities:

- Hierarchical
- Leaders who may dislike uncertainty
- Fire and blood; violence and death
- ‘Sacred’ aspects
- Struggle with vulnerability
- **Exposure to trauma: PTSD**
- “No one understands us except us.”
- The default is a silo

**Both find teamwork challenging**

**What makes us strong as individuals  
may sometimes get in the way of  
teamwork.**

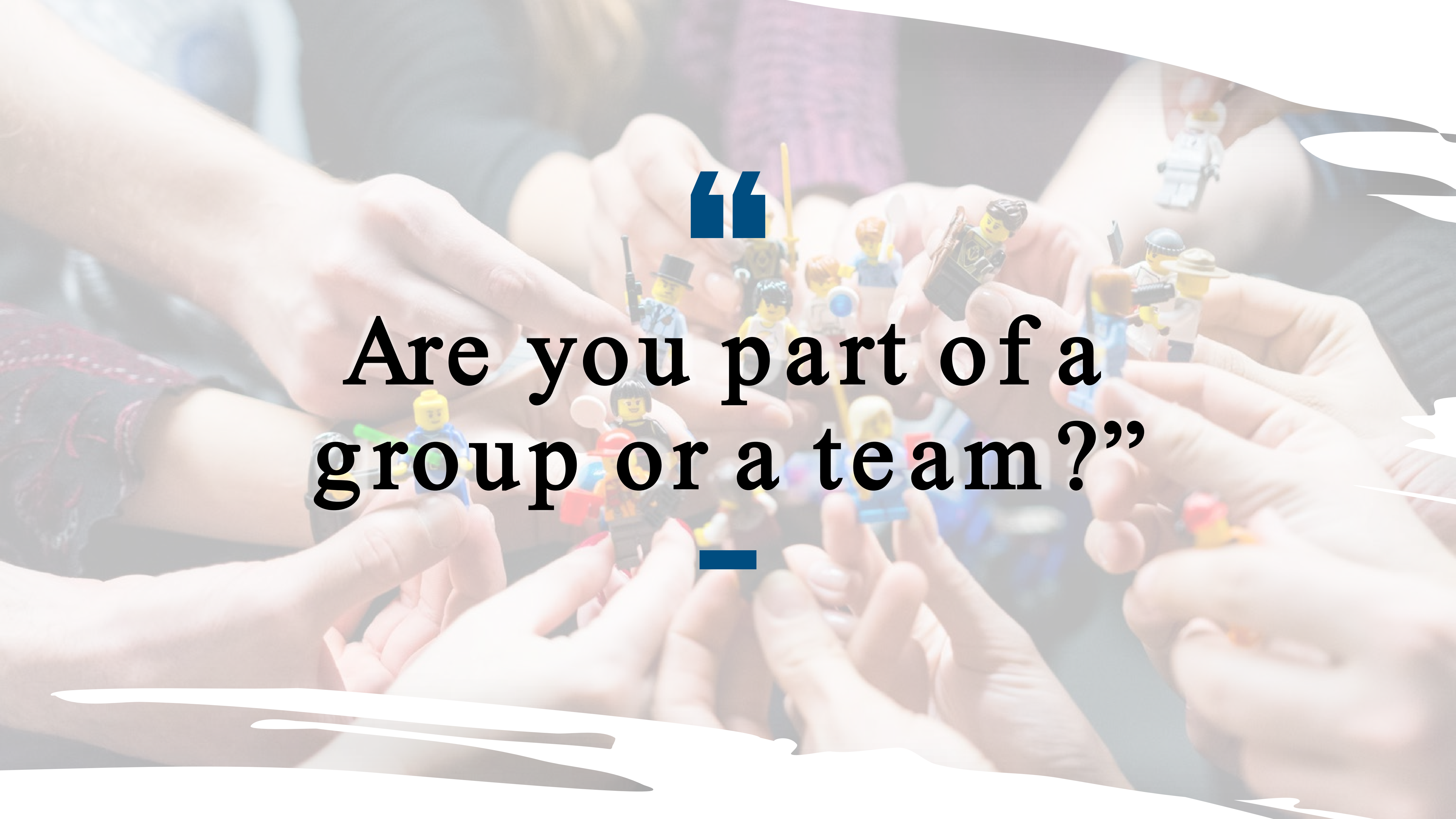




# Public service culture

- Smart, capable people
- Evolving to be more inclusive
- Doesn't always feel part of 'the mission'
- "I work for DND." Strong identification
- Sometimes have trouble speaking truth to power
- "Nobody understands us like us."
- The default is a silo



A group of hands of various skin tones are shown holding small, colorful LEGO minifigures. The hands are arranged in a circle, with each hand holding one or more figures. The background is a soft, out-of-focus light color. The text "Are you part of a group or a team?" is overlaid in the center in a bold, black, serif font. Above the text is a large blue double quote symbol, and below it is a blue horizontal line.

**“**  
**Are you part of a  
group or a team?”**  
**—**

Group Vs Team

**You're  
part of  
a team  
if:**



**1**

Team cohesion  
matters more than  
status.

**2**

Complaints are  
welcomed and  
addressed.

**3**

You feel safe  
making  
suggestions.

**4**

Your  
suggestions are  
actioned.

**5**

Everyone  
volunteers to  
pitch in.

Still think you're part of a team?



**56%**

Said Yes or  
Sometimes

**Do you feel your  
organization 'talks' a lot  
about teamwork  
without actually doing  
it?**

Google Surveys Canada 1000 Responses

Rounded down to the nearest percent.

April 2022

# Obstacles to teamwork



## System issues:

- People who mainly work on their own
- Constant turnover
- Attrition due to low wage, onerous overtime, redeployment

## Cultural issues: system

- Hierarchical: military, healthcare law enforcement
- Siloed: healthcare

## Cultural issues: individual

- “I, alone.”
- Accepting help seen as a sign of weakness

**Lack of knowledge & training!**

A background image showing several hands of different skin tones holding small, colorful figurines (resembling LEGO minifigures) in a circle. The image is slightly faded and has white brushstroke-like shapes at the top and bottom edges.

“

**How can we promote  
teamwork among  
individuals?**

—



The Power Of Teamwork

# Visual Thinking Strategies

Three questions

1

What's going on in this picture?

2

What do you see that makes you say that?

3

What more can we find?



# Visual thinking strategies (VTS)

1

What's going on in this picture?

2

What do you see that makes you say that?

3

What more can we find?





1

What's going on in this picture?

2

What do you see that makes you say that?

3

What more can we find?



CARMEN LÓPEZ GARZA  
"CURANDERA"

# Team Cognition:

Team cognition measures interactions among teammates, it ties strongly to the task context.

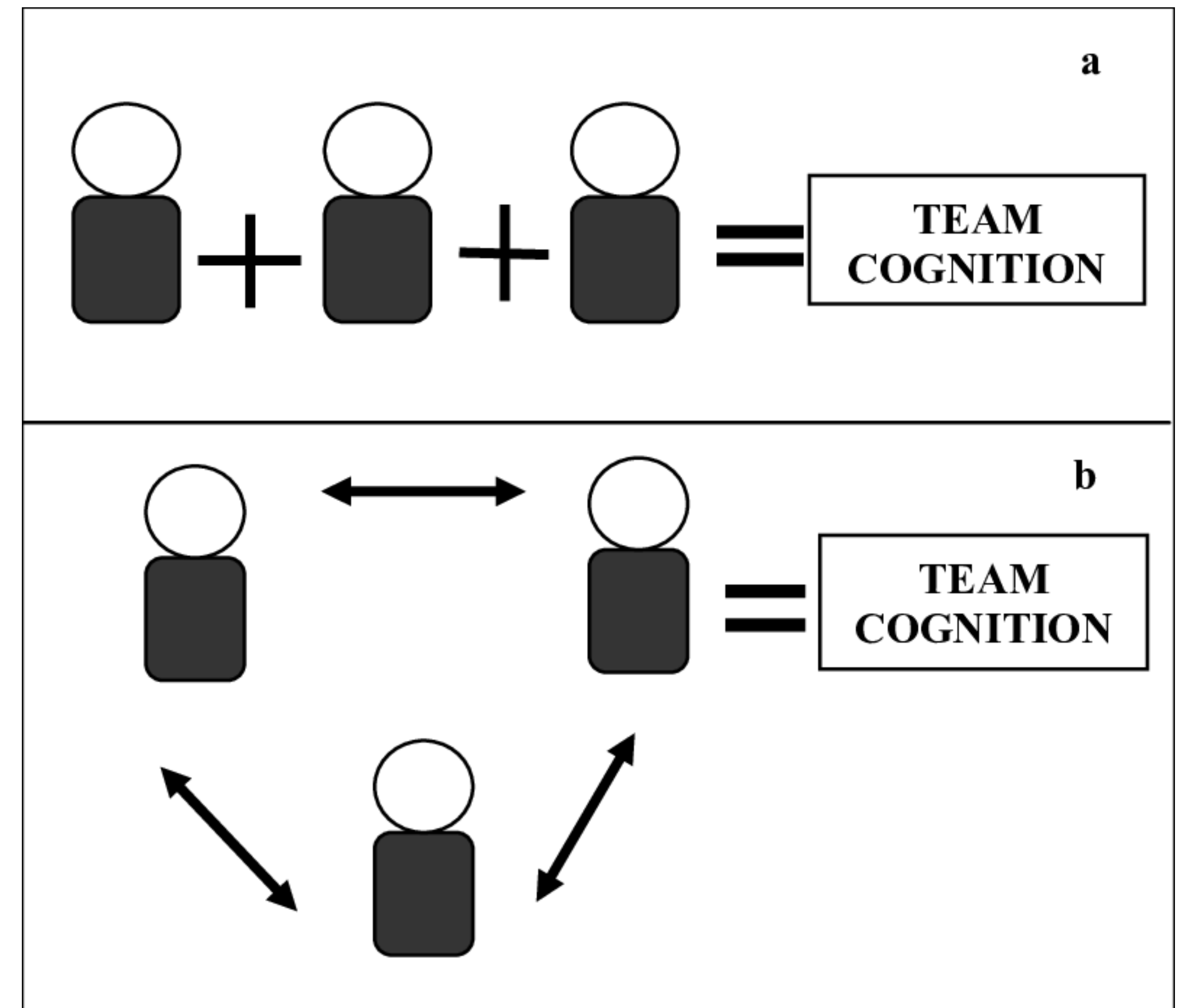
- continuous behavioral interaction data
- verbal communication: unobtrusive analysis of volume, frequency, pitch, content and who is talking to whom

**We need to develop ways to decode and analyze team cognition.**

”There is an imperative to view the diagnostic process as a team endeavor.”

Dr. Pat Croskerry

*The Cognitive Autopsy: A Root Cause Analysis of Medical Decision making*



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# VTS: The Payoff



Critical thinking is encouraged with these questions



Reduces premature closure & other cognitive errors



Group cognition is more accurate than solo



Creates a safe space for EVERYONE to say what they see

Leans into uncertainty

Medicine uses VTS

At the clinical  
bedside

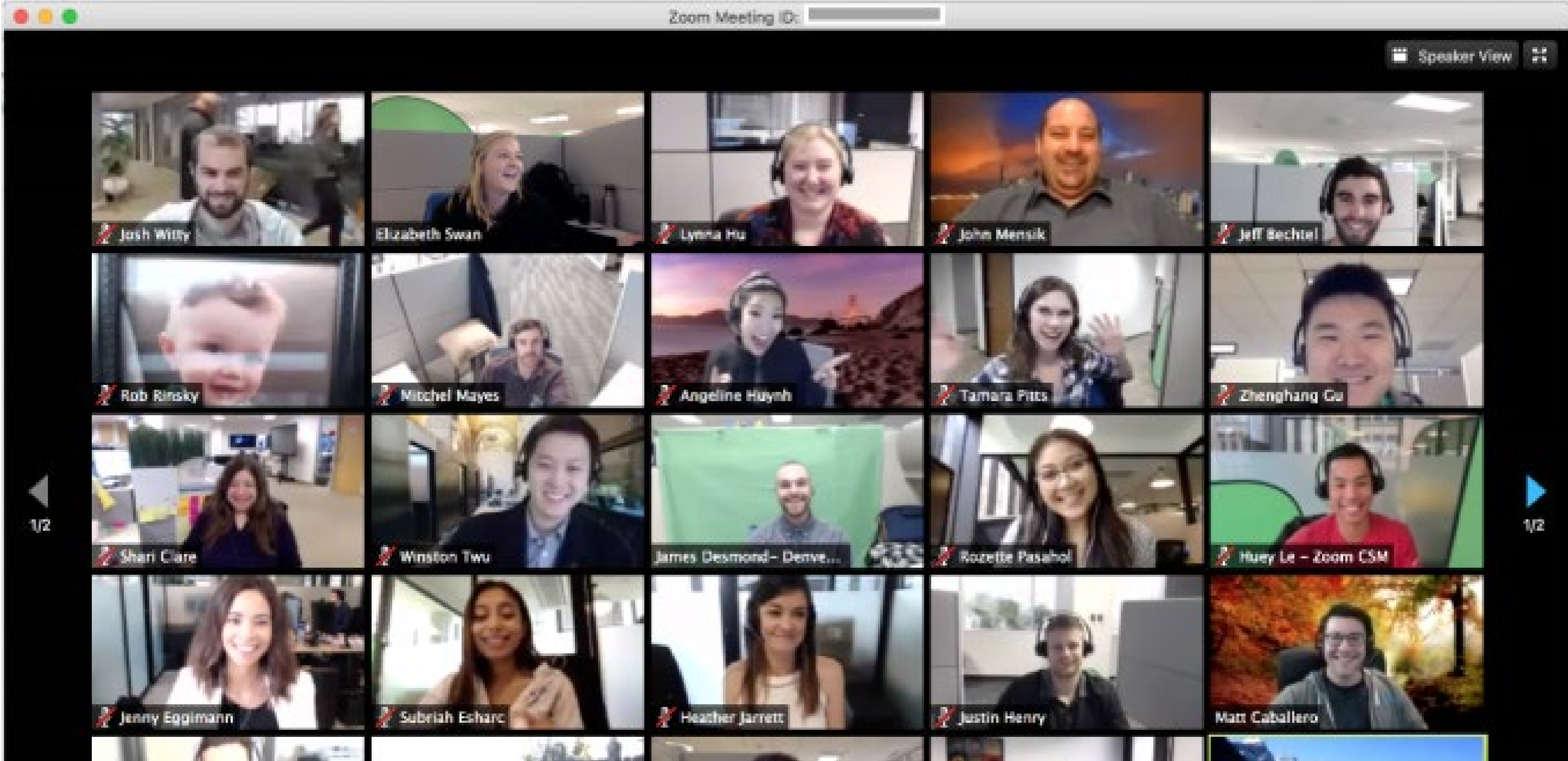
And at a 'Protected  
Code Blue' (PCB) or  
a trauma  
resuscitation

At meetings



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# At virtual meetings



Crew Resource Management



# CRM

Training procedures for environments where human error can be deadly



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# CRM: The Payoff



Fosters a culture where authority may be questioned



Team includes EVERYONE with skin in the game



Can be used in the OR to manage unexpected emergencies



Pilots teach OR staff. Culture change requires more effort

## Crew Resource Management

# CRM

“Teams make up US nuclear power plants (NPPs) Main Control Rooms (MCR), and it has been this way from the beginning of commercial NPPs. A group of people randomly in place, however, does not guarantee they act together as a team. Teams without teamwork defeat the purpose of teams.”

Frank Wurster, P.E., Lead Instructor -  
Licensed Operator Continuing Training at  
Nawah Energy Company





A group of hands holding small LEGO minifigures. The hands are of various skin tones and are arranged in a circle, each holding a different colored minifigure. The background is a soft, out-of-focus light color. The text is overlaid on the center of the image.

“

**Are your regular  
meetings the place  
where great ideas go  
to die?**

—



**YES + AND = IMPROV**

1. You receive a scenario.
2. First person makes a statement about the scenario by beginning with the words, ‘Yes, and...’
3. The second person replies to what the first person said with the words, ‘Yes, and.’
4. The first person replies to the second person beginning with the words, ‘Yes, and’ and so on.
5. The word ‘Yes’ implies acceptance of what the other person said; the word ‘and’ builds on what the other person said.
6. **The key is for each person to listen carefully to what the other person has said.**

# Games and Simulations are a silo buster

- A board game that shows managers how a hospital runs better on cooperation instead of competition
- A 'win' for my silo is a 'loss' for the team and vice versa
- Used by Fortune 500 companies, the CIA and EPA





The Power Of Teamwork

# Trevor Jain



Overseeing the largest  
makeshift morgue in  
recent history

- Trauma and emergency physician in P.E.I.
- Awarded the Meritorious Service Medal
- Leader who gets teamwork



The Power Of Teamwork

# Swissair 111

1

229 passengers and crew remains had been identified.

2

Jain did it by leveraging skills gleaned from pathology and the military.

3

And by listening to everyone on the team. Especially the least advantaged.

# How Dr. Jain turns silos into a team on overseas missions

- Job 1: keeping commanding officers in the loop
- Conducts field simulations and tabletop exercises
- Pre-deployment and in situ
- The 'idea' is to increase communication and empathy across silos
- A sense of humour is his other secret weapon
- Could you make use of a similar approach?



The Power Of Teamwork

# A good team leader



Asks instead of answers questions



Delegates instead of taking on every task



Knows team members' 'superpower'



Encourages team to work to potential & doesn't throw them under the bus

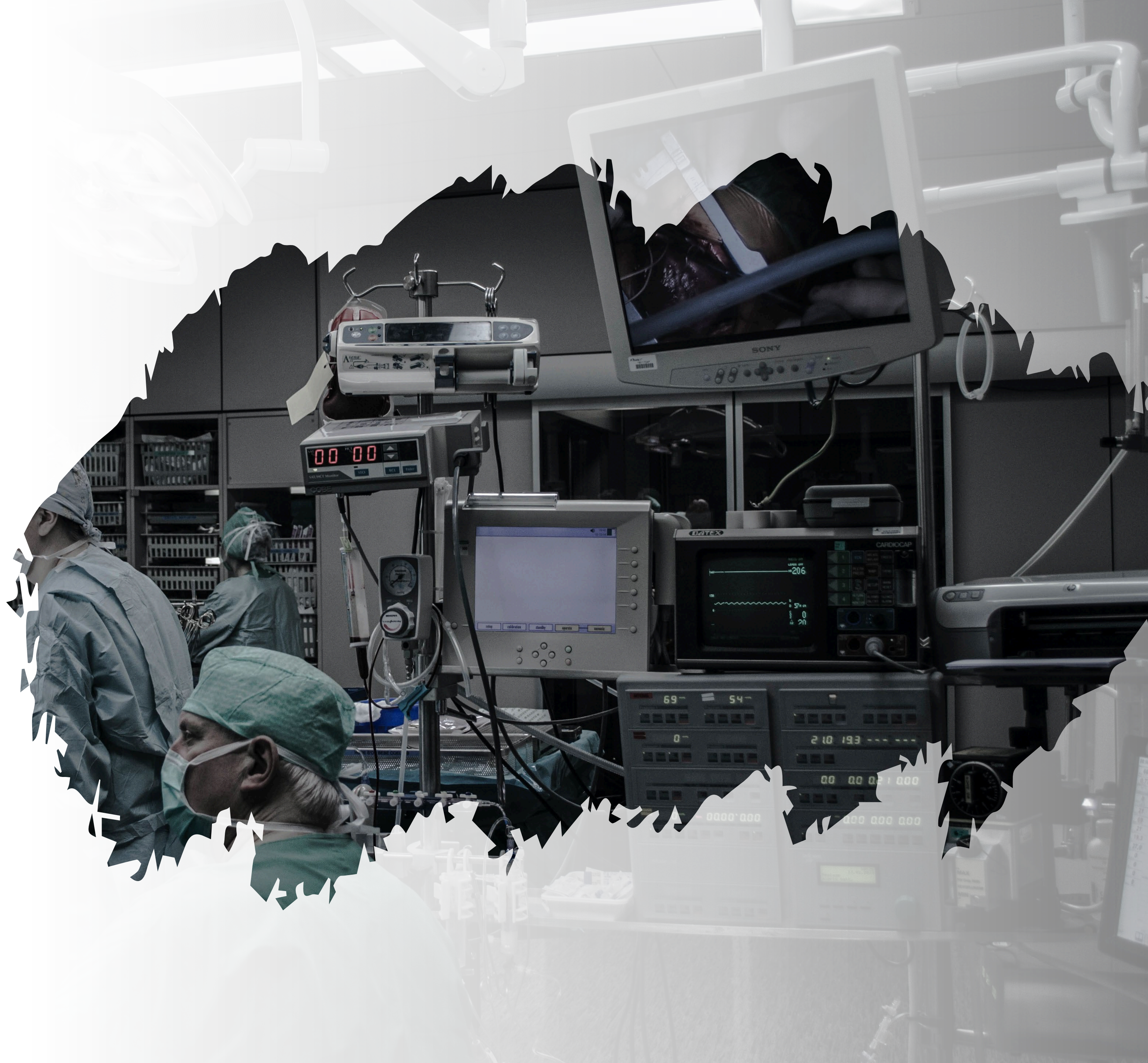
Operating Room Black Box



# ORBB

Records everything that happens in an operating theatre, from multiple cameras and microphones.

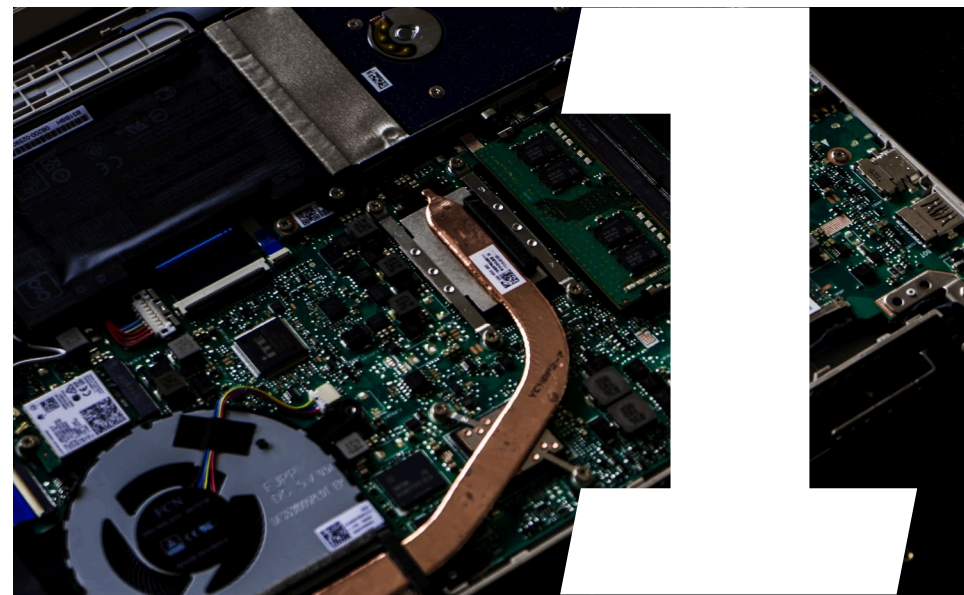
- Pixilated images and disguised voices
- Vital signs and machine parameters
- Full access to electronic record
- Sensors on all instruments



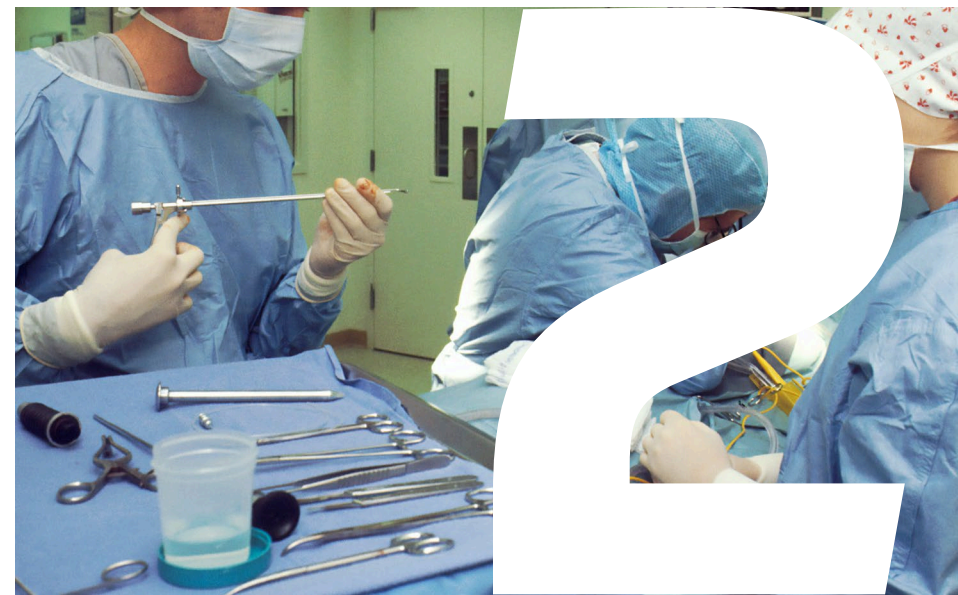


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# ORBB: The Payoff



Problems are identified without blame



Helps find miscounts of surgical instruments in operations



May detect errors during the operation *before* they cause harm



Shows how surgeons, scrub nurses, and anesthesiologists interact as a TEAM

# Three silos: one team



- The ORBB revealed that 3 silos with 3 different goals and 3 different critical moments
- Each distracted by the other 2
- What might their team objectives be as a direct result of these insights?

# ORBB development: an exercise in teamwork



## Team members

- Surgeons
- Nurses
- Anesthesiologists
- Coders
- Data analysts
- Clinical analysts
- Air Canada engineers
- Deep learning engineers

## Organizational culture

### Four divisions:

- Administration
- Clinical analysts: evaluate errors on video
- Front-end engineering team: create apps
- AI engineering team: deep learning
- **Flat hierarchy**
- **Clinicians and computer experts works closely with one another**

# Help from outside of the silo

Carl Allamby ran a successful repair shop in East Cleveland  
Got his MD and did ED residency  
He says ED patients are like customers who need emergency car repairs

The Allamby example works because he's from outside yet embedded inside.



# Teamwork at BCNET



Shared Services for Higher Education & Research

## HOW WE DO WHAT WE DO

- We foster a cooperative community by forging successful collaborations among members, industry and government by:
- Fostering member involvement through our governance and committees
- Leading IT-related initiatives, procurements and service development in partnership with our entire membership
- Negotiating service agreements on behalf of our membership
- Measuring and reporting our service adoption
- Building strategic alliances with industry partners
- Brokering connections through city and community partnerships

# FOSTERING COMMUNITY at BCNET



Our collaborative culture translates into tangible and measurable results.

“We cultivate a strong community, where members can actively engage with peers to share, explore and develop innovative solutions for mutual challenges.

Our unique collaboration model is carefully designed to support member engagement every step of the way. We facilitate forums and events across domains for discussion, learning and the development of shared service delivery. Our members are a part of an important exchange where they tackle a spectrum of topics—from networking and cybersecurity to procurement and shared systems and technology services.”

# Team basics: how to get started



Support



Awareness



Research

- Do you have team's goals?
- What's our mission?
- Has everyone had a say in establishing team goals?
- Fundraising and membership targets
- Service goals
- Research priorities
- Media recognition
- Public and/ or government advocacy
- **It's NOT Win-Lose! An individual's 'loss' and a team's 'win' IS A WIN!**

# Share the joy!

## Congratulations TO OUR 2021 RESEARCH GRANT RECIPIENTS!

This year, we have granted \$175,000 towards improving prostate cancer therapeutics, outcomes, and diagnostics



**Jane Foo,  
Graduate Student**

\$25,000 for  
'Structure-based  
Development of MYC  
Inhibitors for Neuroendocrine  
Prostate Cancer'



**Dr. Felipe Eltit,  
Post-Doctoral Fellow**

\$50,000 for  
'Effects of Prostate  
Cancer Metastasis in  
Vertebrae'



**Dr. Stephen Yiu Chuen Choi,  
Post-Doctoral Fellow**

\$50,000 for  
'Optimization and  
Validation of MCT4-  
targeting Small Molecule  
Inhibitors for Treatment of  
Advanced Prostate  
Cancers'



**Karan Khanna,  
Graduate Student**

\$25,000 for  
'Biomarker analysis of  
extracellular vesicles  
to improve prostate  
cancer detection'



**Ugur Meric Dikbas,  
Graduate Student**

\$25,000 for  
'Structural Characterization of  
HOXB13 as a novel  
pharmacological target to treat  
castration resistant prostate  
cancer'



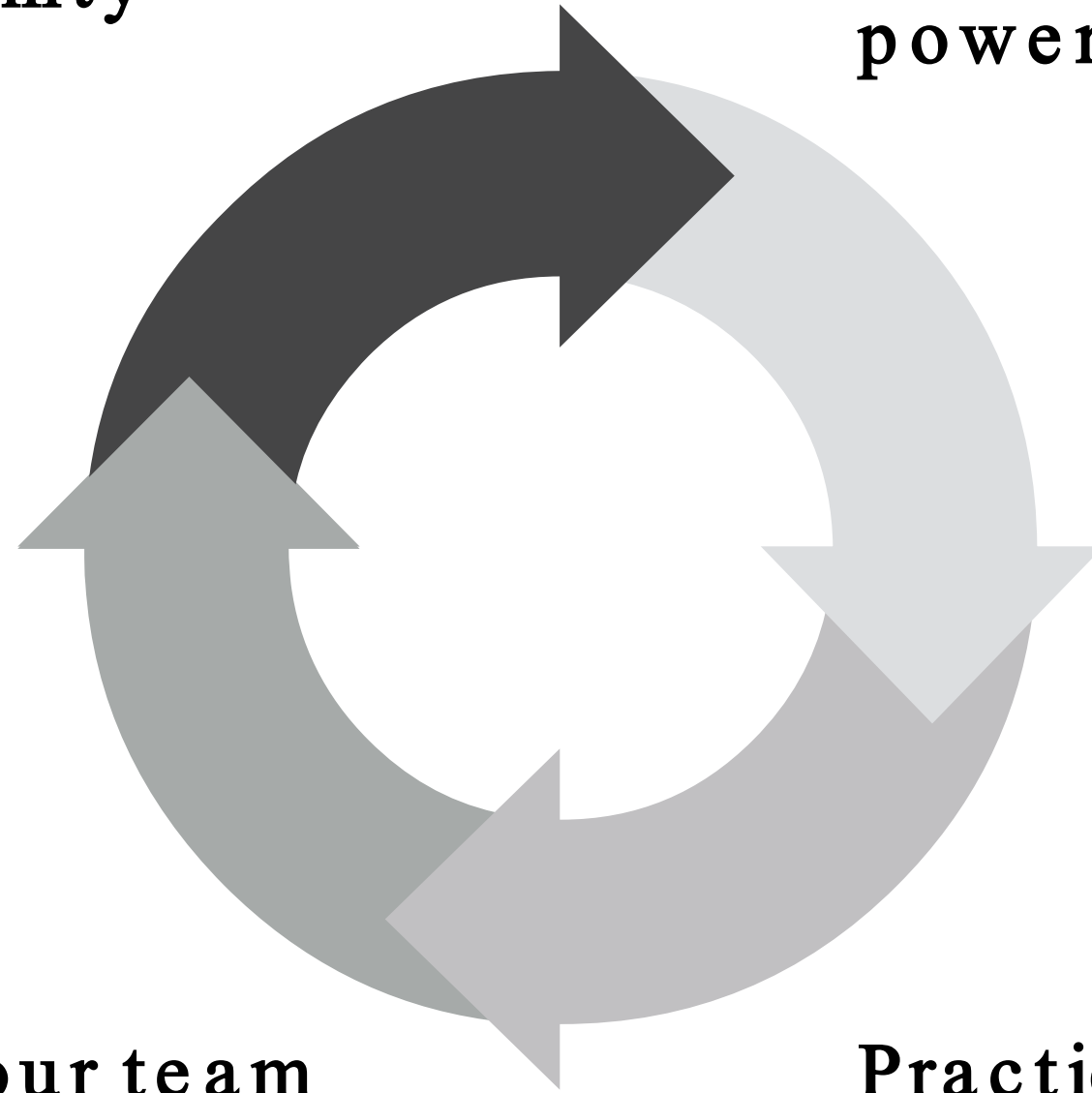
- Shared team goals means shared joy
- When was the last time you fist-bumped and said, "We did it!"





Lean into  
uncertainty

Praise everyone  
for their super  
power



Make your team  
mates look  
good

Practice Visual  
Thinking  
Strategies

The Power Of Teamwork

# What can we do today?

How we all can work together better



Spread the joy!