Identifying High Performance Indicators for Close Combat Forces

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Maneuver Center of Excellence - Team of Soldiers, Families, and Civilians from the Best Army in the World!
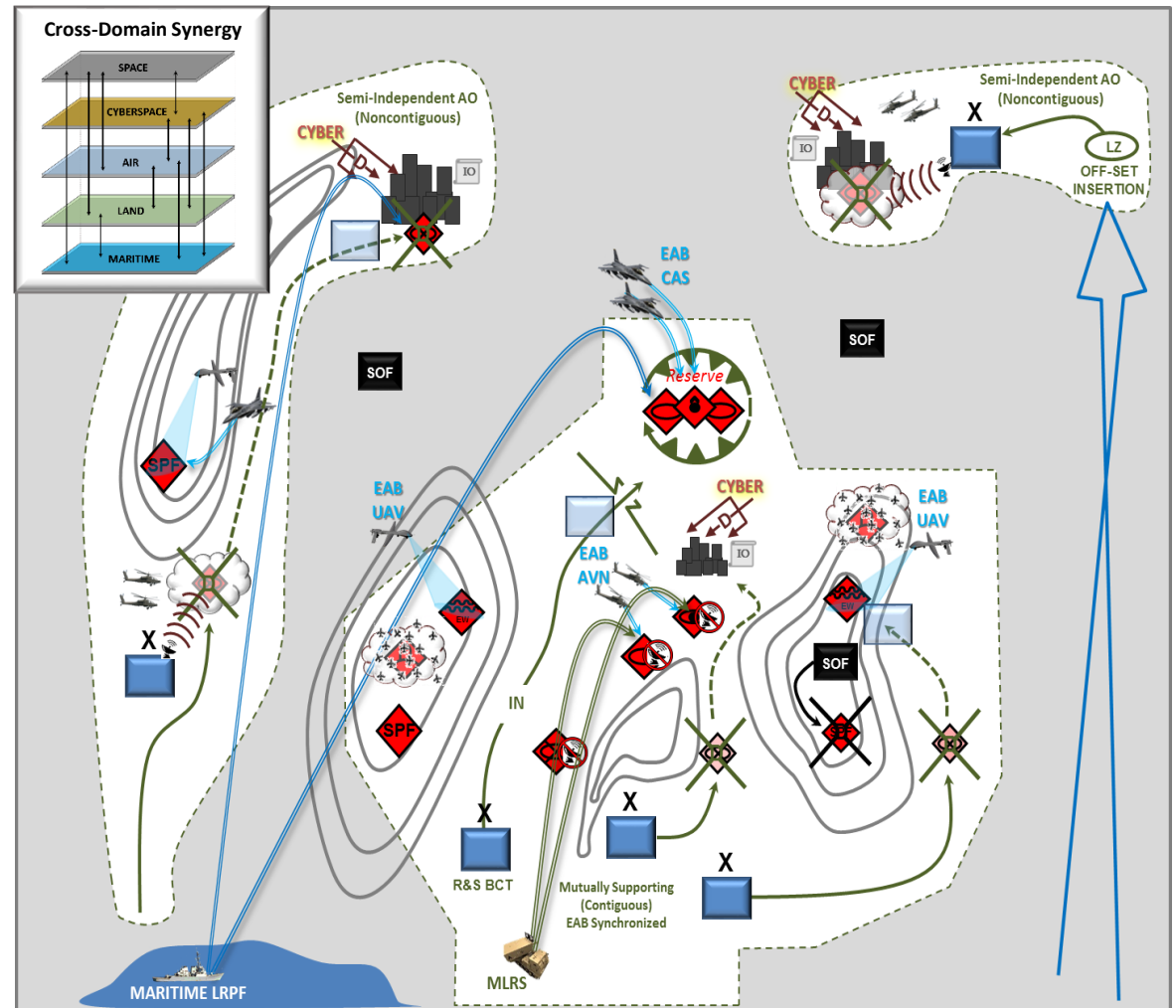
High Performance Indicators (HPI) Study

Fort Benning, Home of the MCoE

Background

- Future multi-domain battlefields projected to have near-peer threats

- Optimization of human performance in parallel with material solutions to achieve overmatch

- Infantry One Station Unit Training (IN OSUT) focused on increasing proficiency and performance

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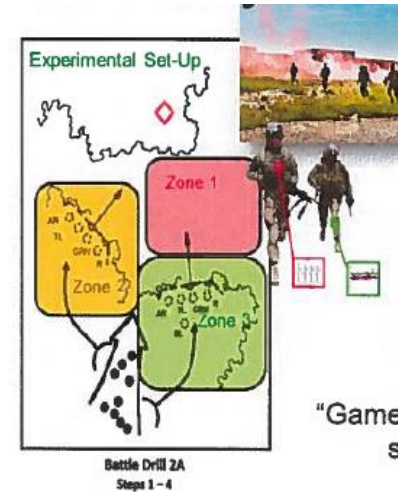# High Performance Indicators (HPI) Study

MASTR-E

- Short-term structured, acute assessment of Soldier performance
- 72 hrs

Squad Performance Model

- Squad-based assessment
- Collective performance during battle drills

Experimental Set-Up

Zone 1

Zone 2

Zone 3

"Game t

sn

Battle Drill 2A
Steps 1 – 4

High Performance Indicators (HPI) Study

Study Questions:

1. What are the physical, psychological, and physiological high performance indicators (HPIs) in initial trainees for Close Combat Forces?

2. How can HPIs be used to improve training programs, assist recruiting, impact selection methods, and reduce attrition in Close Combat Forces?
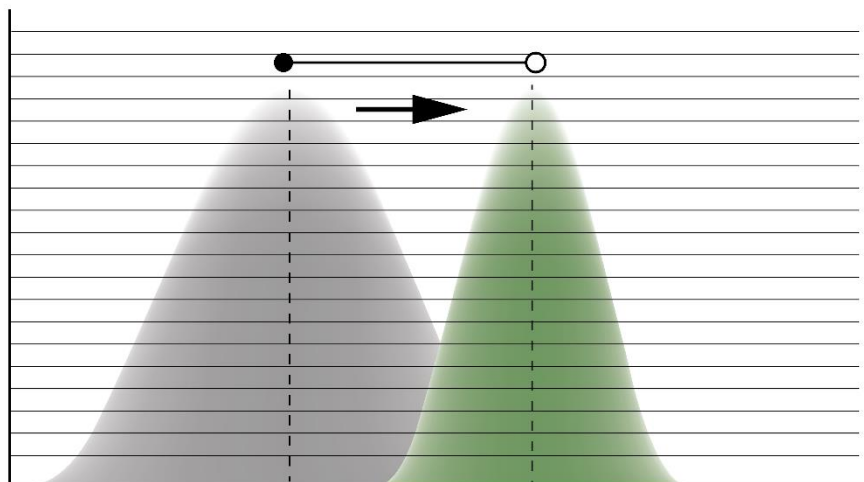
Methodology

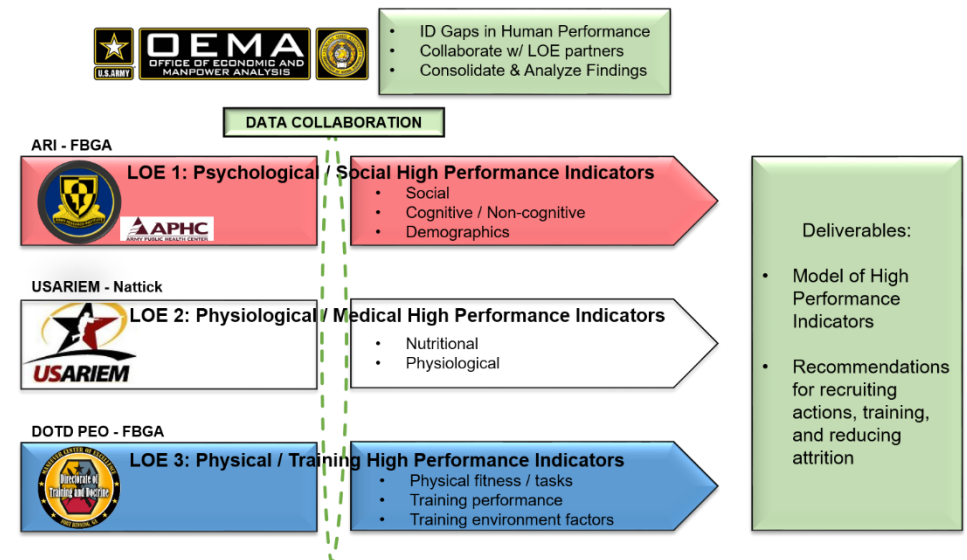- # "Success Case Method"[1]
  - "Success Case" = selectee for SFAS/RASP1
  - ID traits/attributes w/ highest correlation to success
  - Enhance traits/attributes in larger population
  - "Shift the Bell Curve"

- # Comprehensive Performance Evaluation[2]
  - Multi-disciplined approach
  - Connect & correlate data
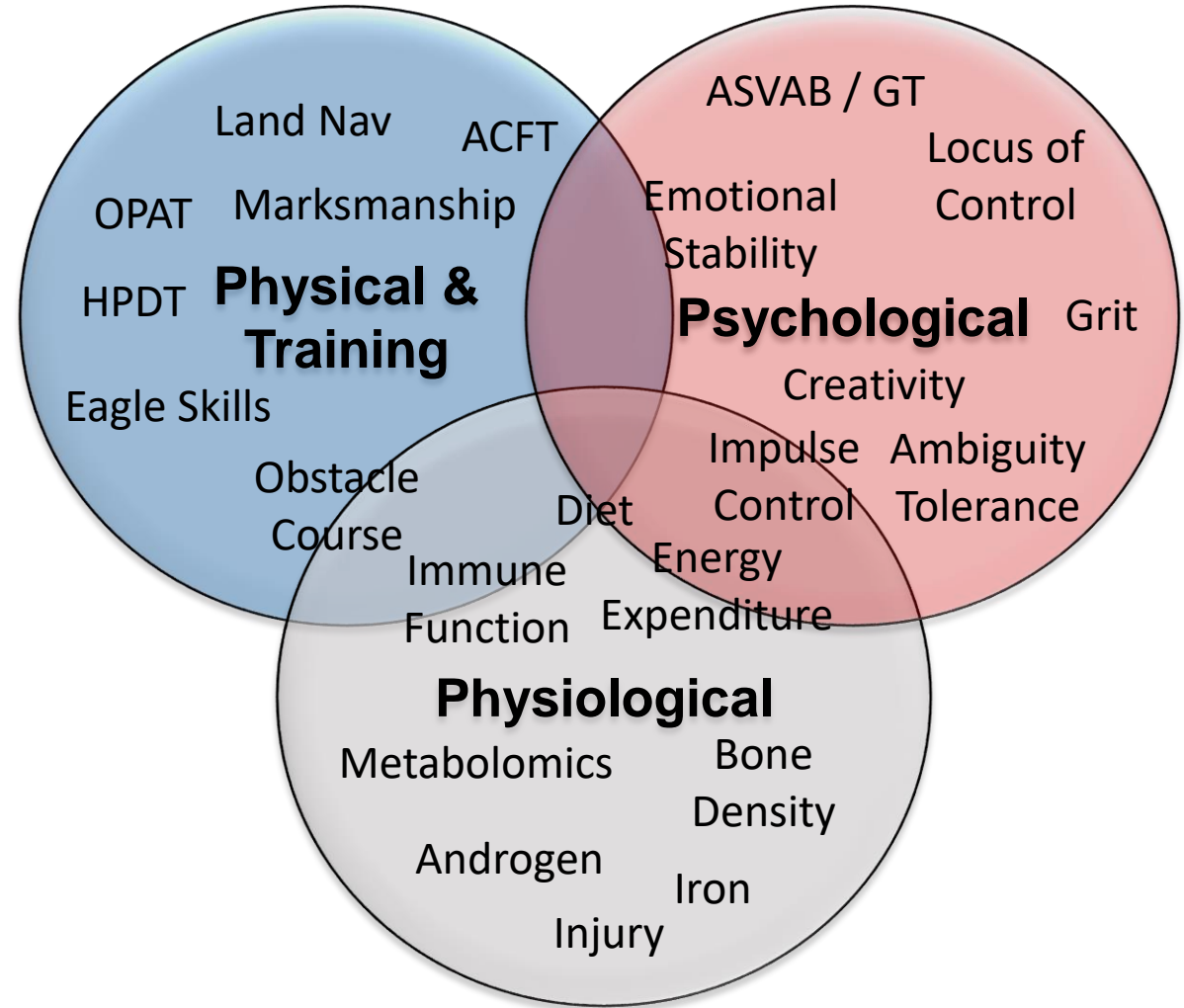 - Model relationships
  - Validate results

Data Collection

- Comprehensive data: pre-OSUT through Selection
- Quantitative and qualitative data collection
- 200-350 individual data points per Soldier

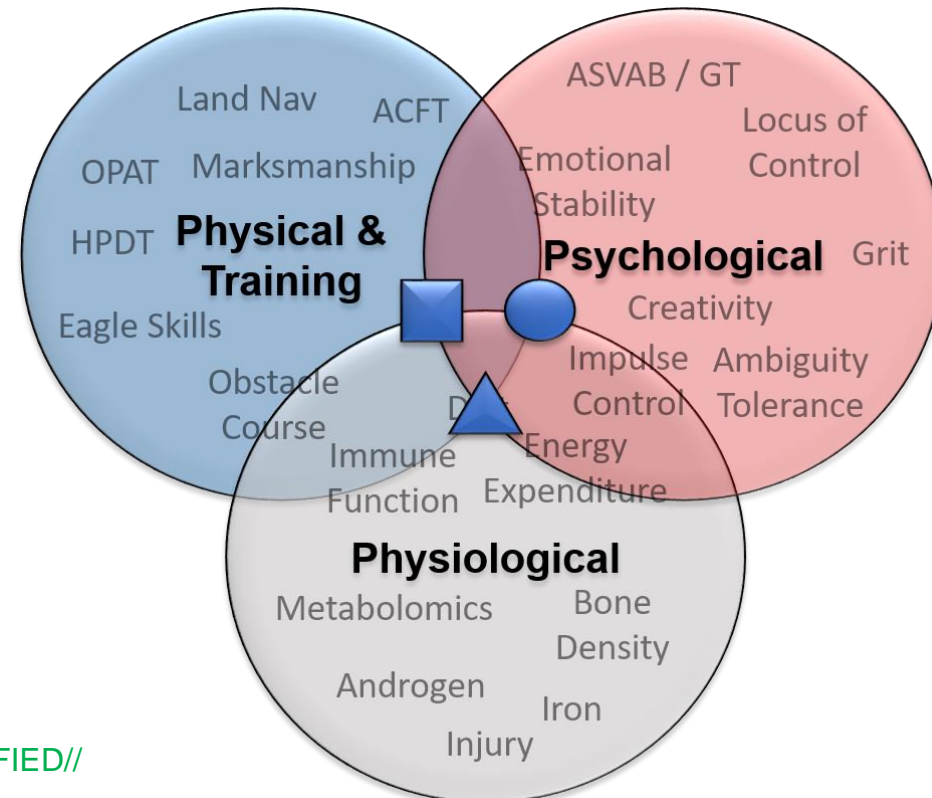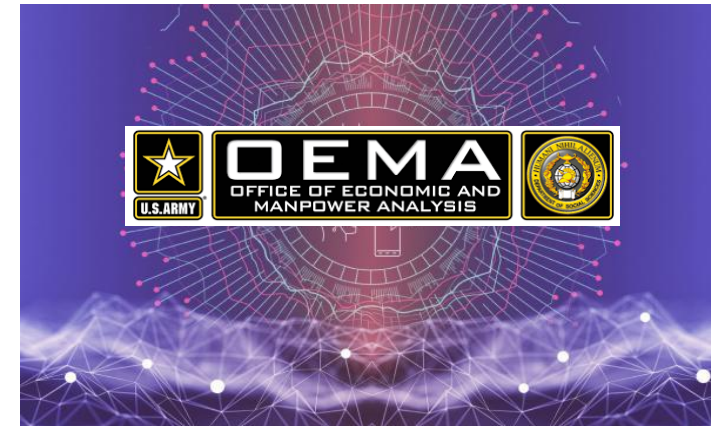|	30th AG	198th IN BDE		75th / SWCS
Unit				
Phase	Pre-OSUT	Blue Phase	Gold Phase	RASP / SFAS

	• **1-2 days prior to ship***
	
	• Administer informed consent
	
	• Computer-based psychological assessment / demographics
	
	• 1 x Focus Group (18X; 6 x trainees)
	
	• 1 x Focus Group (Rgr; 6 x trainees)
	
	*Dependent on # trainees
		• **Post Blue Phase**
		
		• Paper survey
		  • Confidence
		  • Injuries
		
		• 1 x Focus Group (18X; 6 x trainees)
		
		• 1 x Focus Group (Rgr; 6 x trainees)
		
		• Peer evaluations
			• **End/Post Gold Phase**
			
			• Computer-based psychological assessment / demographics
			
			• 1 x Focus Group (18X; 6 x trainees)
			
			• 1 x Focus Group (Rgr; 6 x trainees)
			
			• Peer evaluations
			
			• DS/LNO assessment survey
				• **RASP / SFAS**
				
				• Psychological assessments
				
				• Performance Assessments
				
				• Exit interviews

Physical & Training: Land Nav, ACFT, OPAT, Marksmanship, HPDT, Eagle Skills, Obstacle Course

Psychological: ASVAB / GT, Locus of Control, Emotional Stability, Grit, Creativity, Impulse Control, Ambiguity Tolerance

Physiological: Metabolomics, Bone Density, Androgen, Iron, Injury

Overlaps: Diet, Energy Expenditure, Immune Function
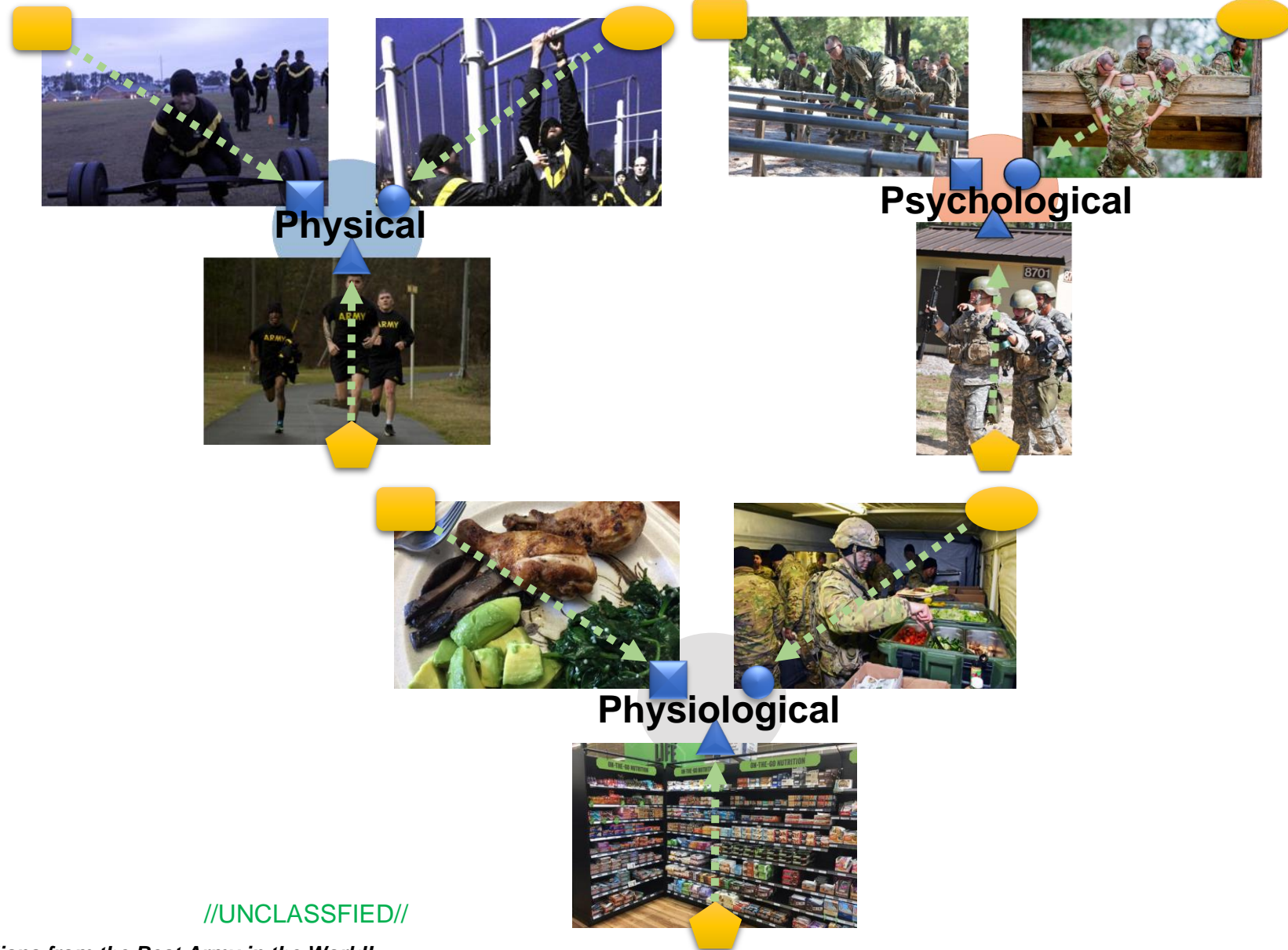
Data Analysis

- Office of Economic and Manpower Analysis (OEMA) at West Point

- Machine learning to analyze ~650k data points
  - 200-350 data pts. / Soldier
  - ~3,000 Soldiers / year

- Multiple targeted profiles for success

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Potential Performance Interventions

- Identify success profiles most closely associated with Soldier

- Modify existing training event conditions

- Interventions must be feasible at scale

Physical

Psychological

Physiological

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Questions

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