

HSSE - Acumen Safety Learning Model

Heat Stress & Weather Awareness

Labour Welfare & Site Visibility

Introduction

Introduction to Acumen

- Data, data & more data

Part 1: The Acumen Safety Model

Part 2: Applying the Safety Model: Heat Stress & Weather Awareness

Part 3: Applying the Safety Model: Labour Welfare & Site Visibility

Introduction

Acumen

- Delivering Safety Management Solutions since 2004
- Supporting over 200 clients
- Over 100,000 users
- 350 million transactions

Paul Robinson PhD

- Blends his academic track record with 20 years industry experience in technology and safety solutions working for organisations
- Working with NHS Patient Safety Program, Skanska, Qatar Foundation. Microsoft, Amey, AVOVE, Pitney Bowes, Balfour Beatty and many others.

Why is this Presentation Important

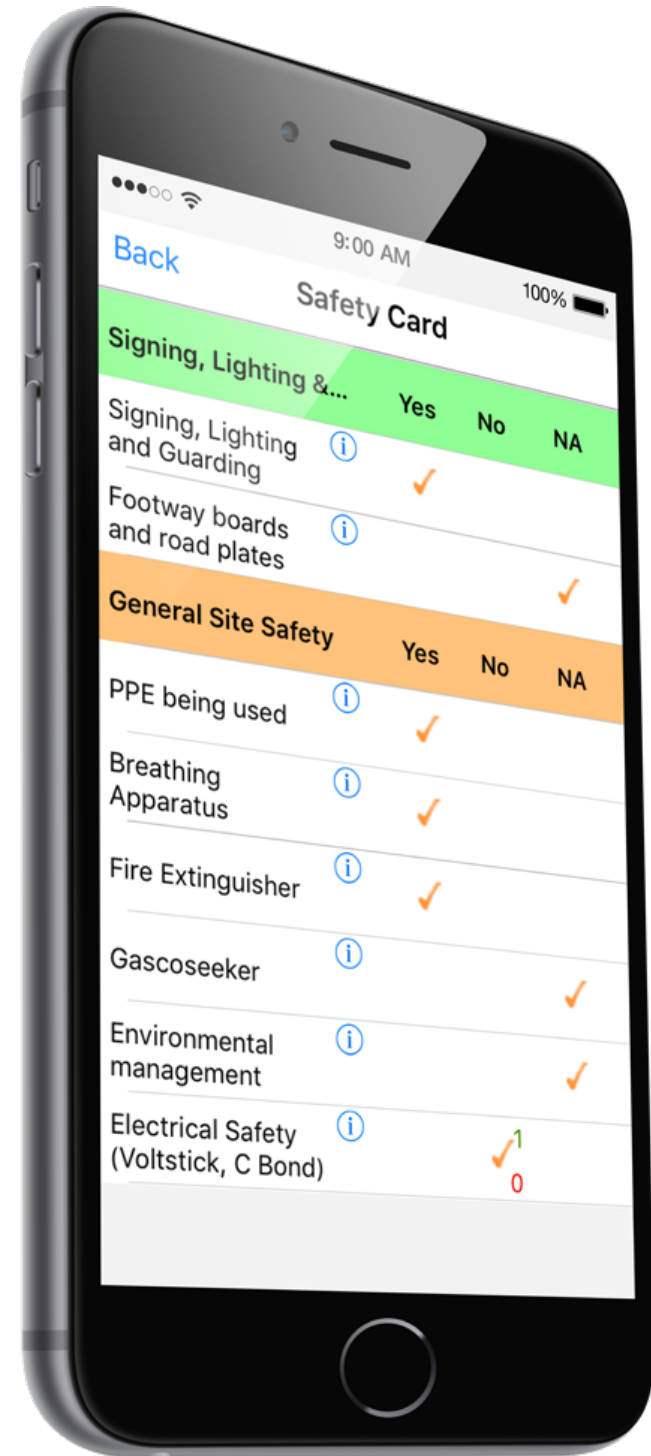
- MENA are ongoing unprecedented construction and development
- MENA region is under huge threat from global weather changes. Average temperatures are rising
- 60% increase in heat related deaths projected
- Construction demands require huge labour work force - need to keep safe



- Safety is more important now than ever
- Reduced working hours
- Extreme heat
- Large extensive work force
- Laws & Regulations
- Avoid bad PR
- BUT most importantly....need to save lives

Part 1: The Acumen Safety Learning Model

Data, Data & More Data



250,000 safety incidents

100,000 users

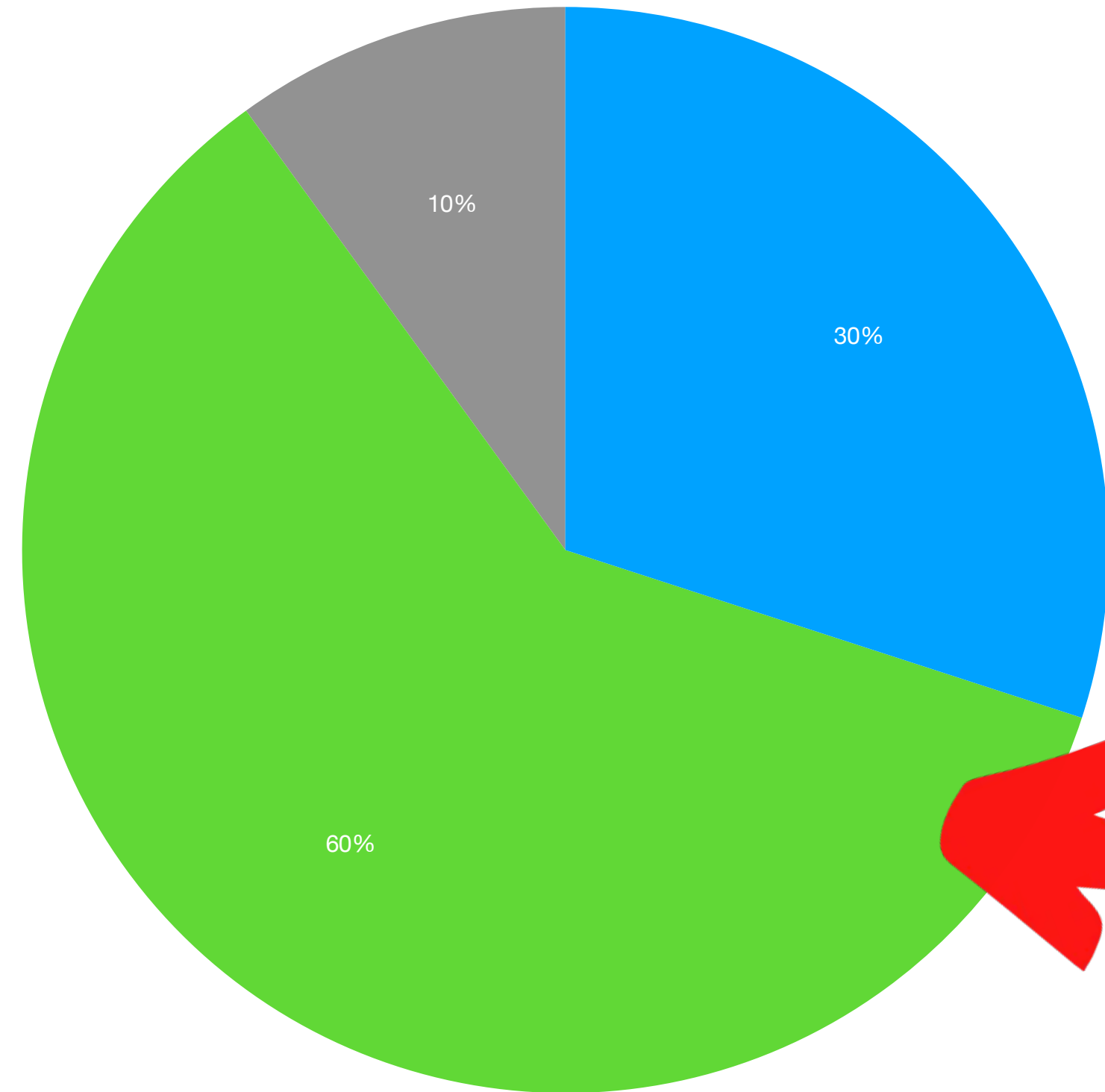
Numerous applications of the safety model

50 millions photos

350 million transaction

Data, Data & More Data

● Health ● Safety ● Wellbeing

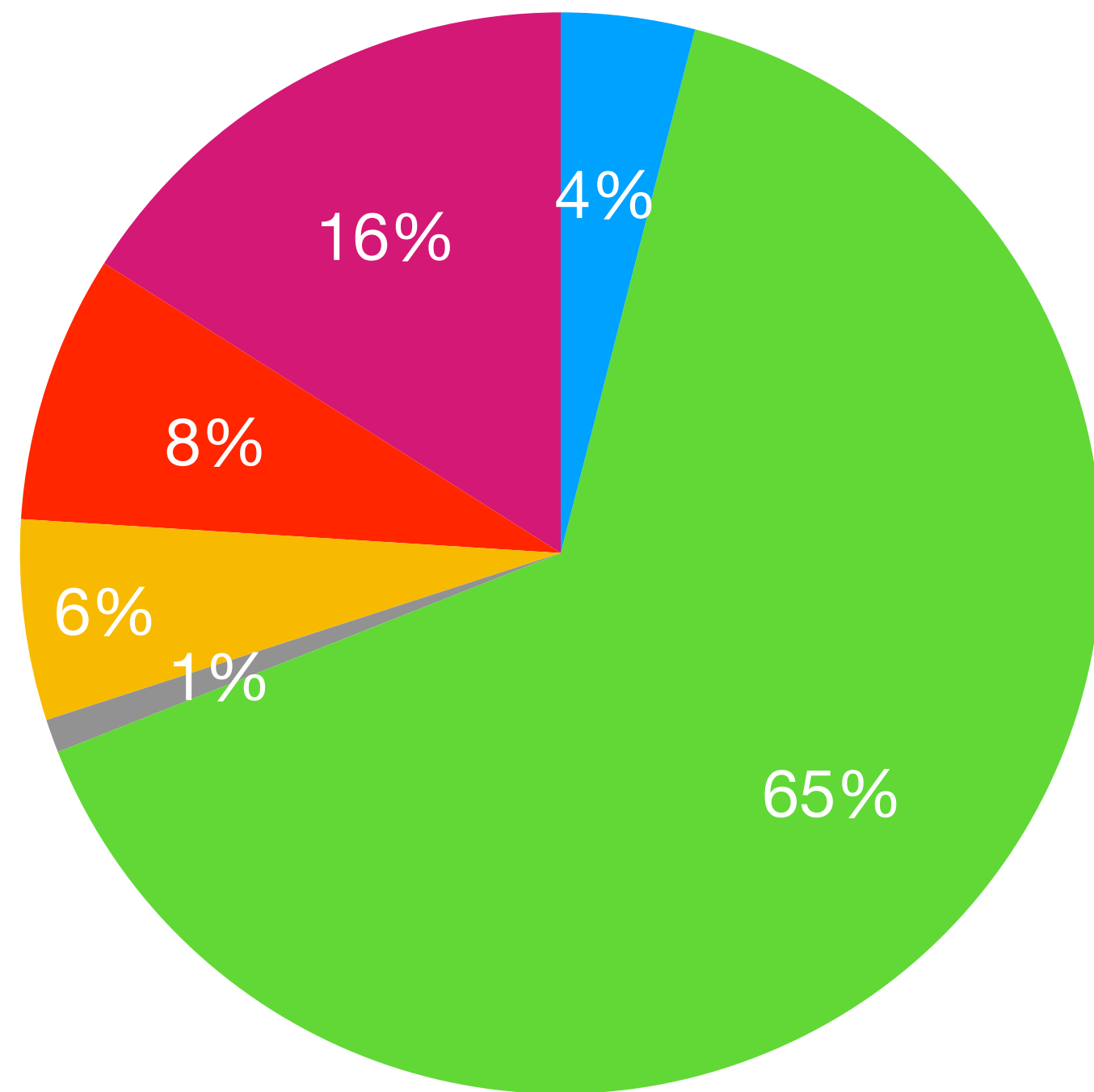


20% Heat & Weather
40% Labour Safety & Welfare
30% Failure in Laws

Incident Types - All Data

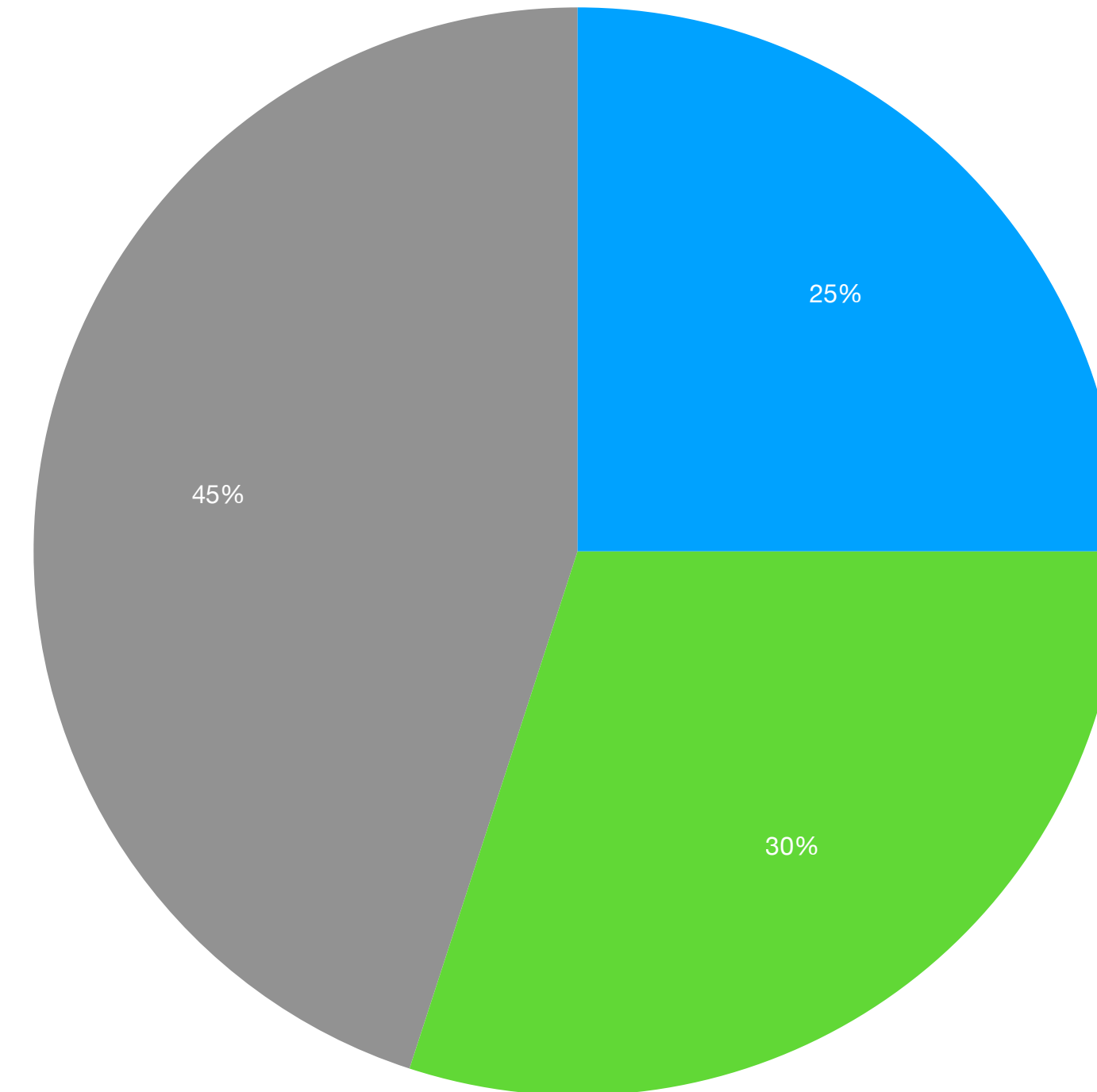
Data, Data & More Data

- Depot
- Point of Construction
- Office
- Boundary
- Vehicle
- Off Site



Location of Incident

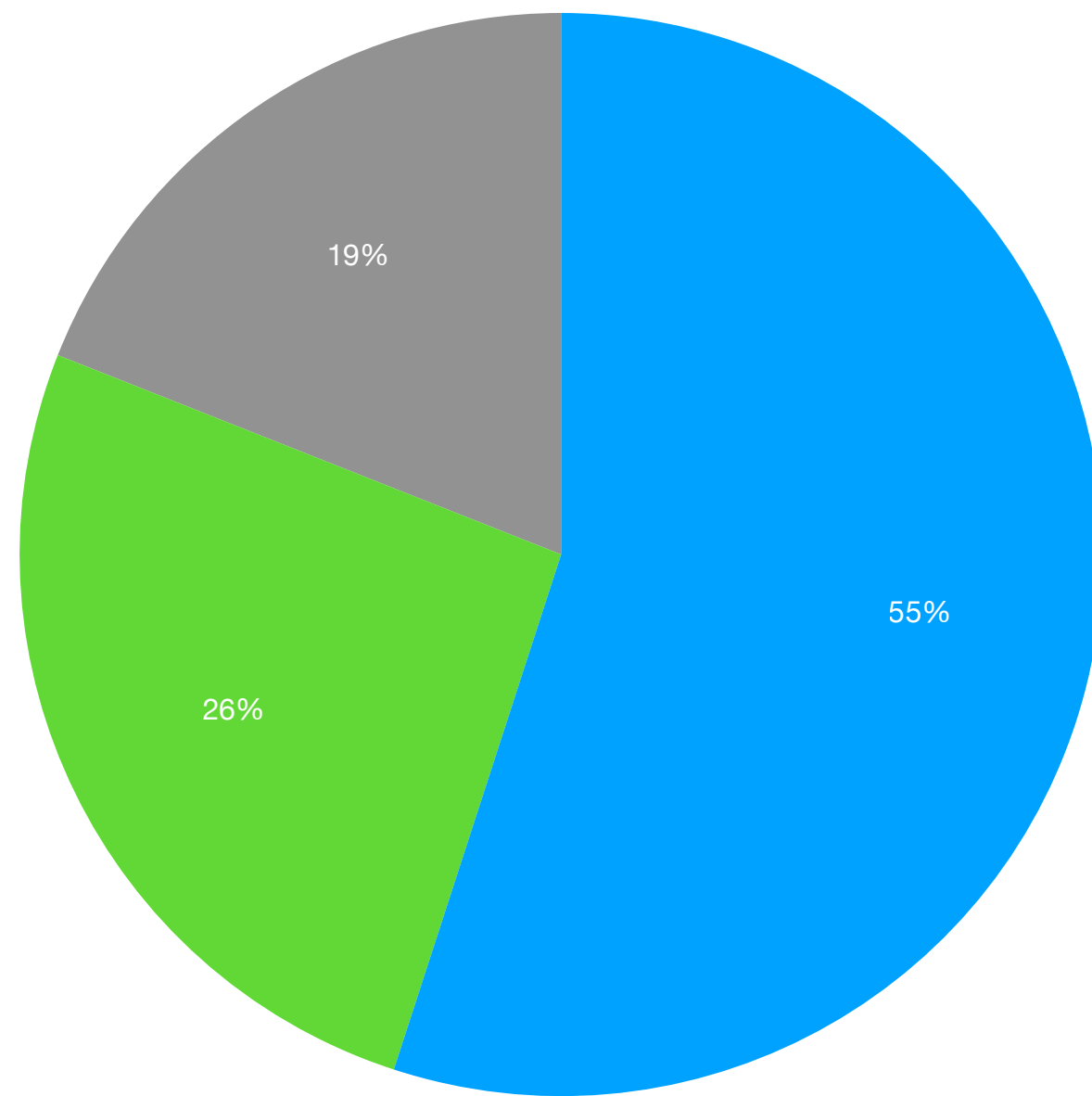
- High
- Medium
- Low



Incident Severity

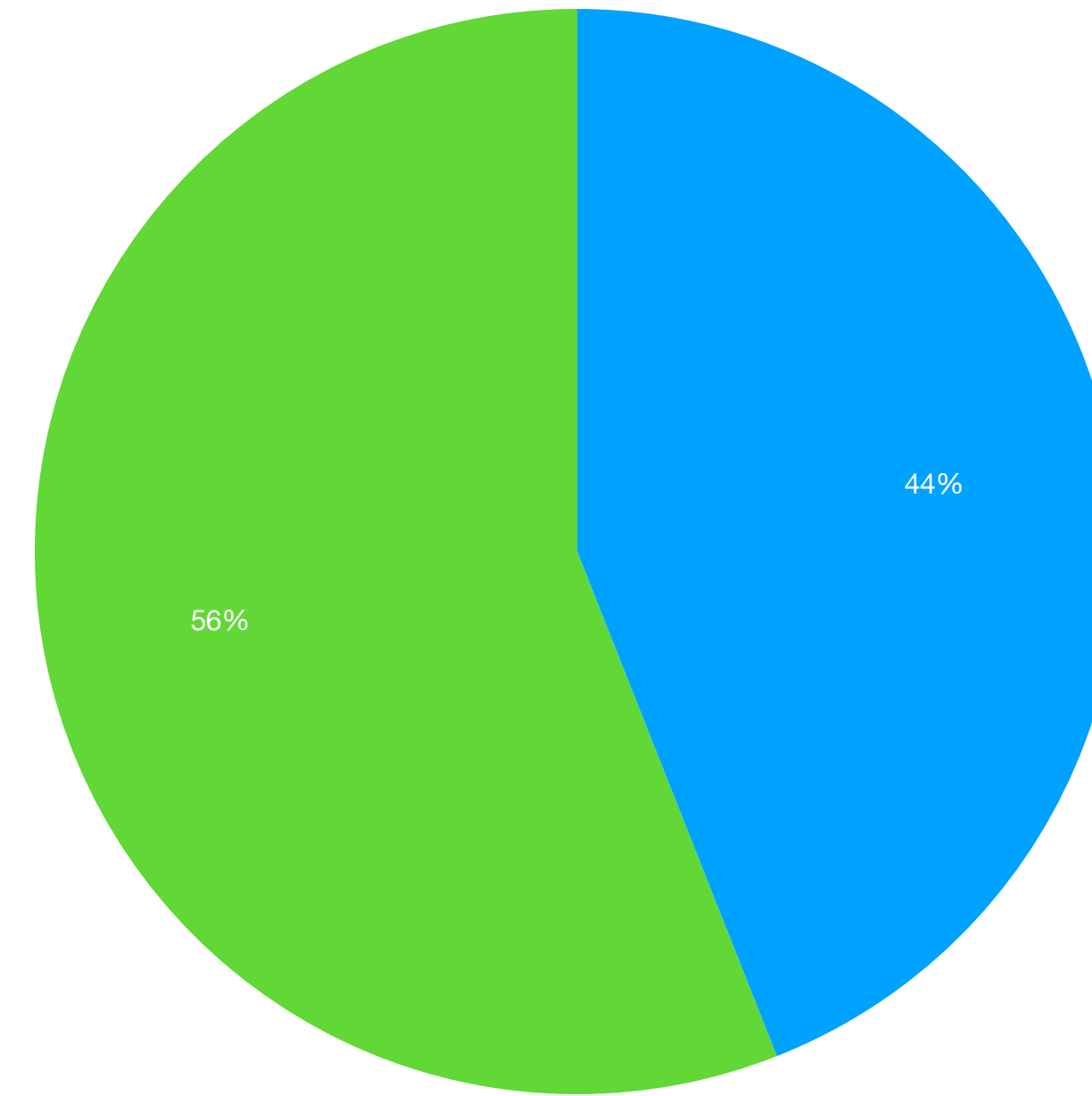
Data, Data & More Data

- Closed After 1 Attempt
- Closed After 2 Attempts
- Closed After 3 Attempts



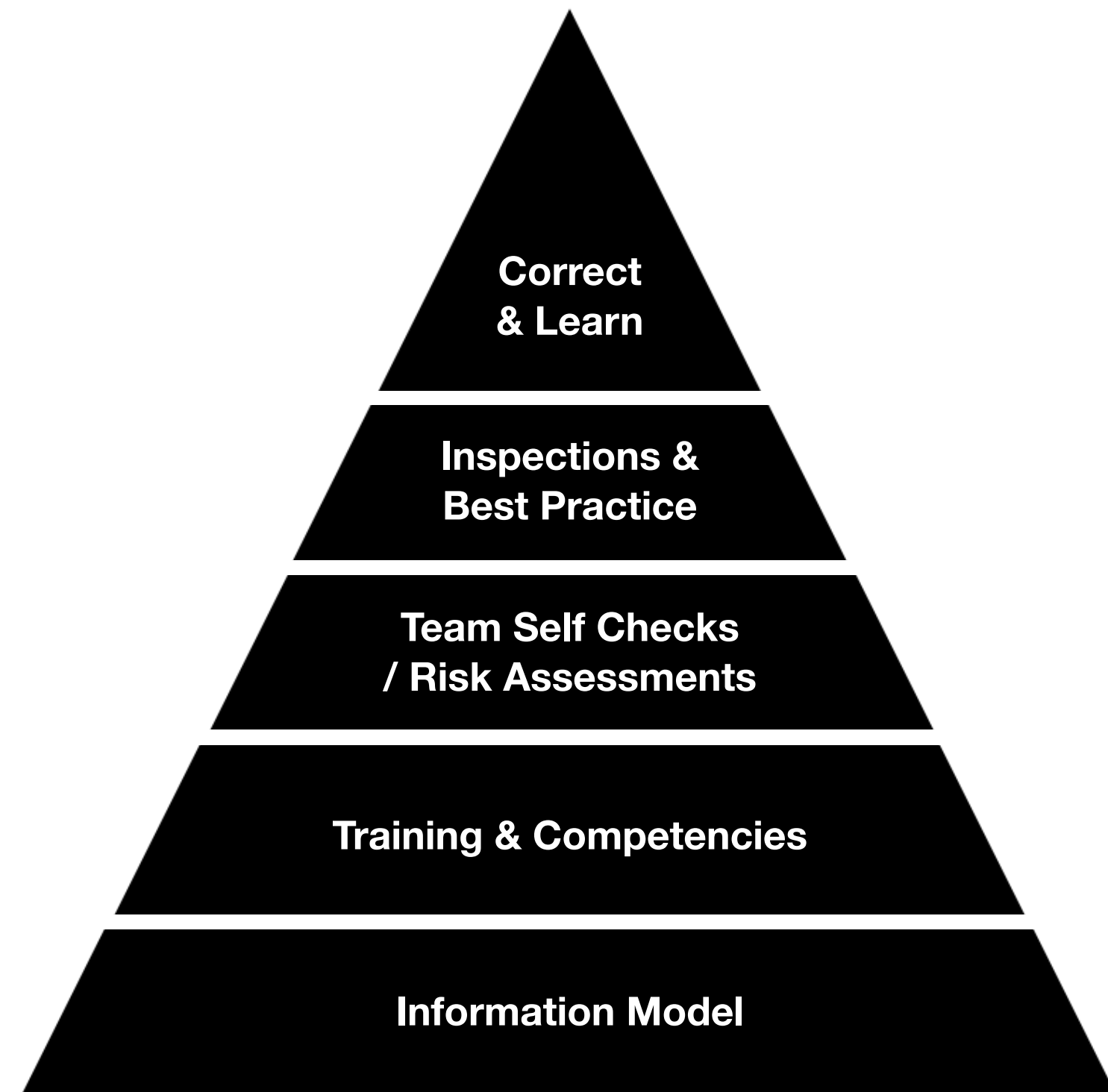
Number of Close Out Follow Ups

- Direct Labour
- Contractor



Labour Type

The Acumen Safety Model



The Acumen Safety Model



This model can have a direct impact on how we all can:

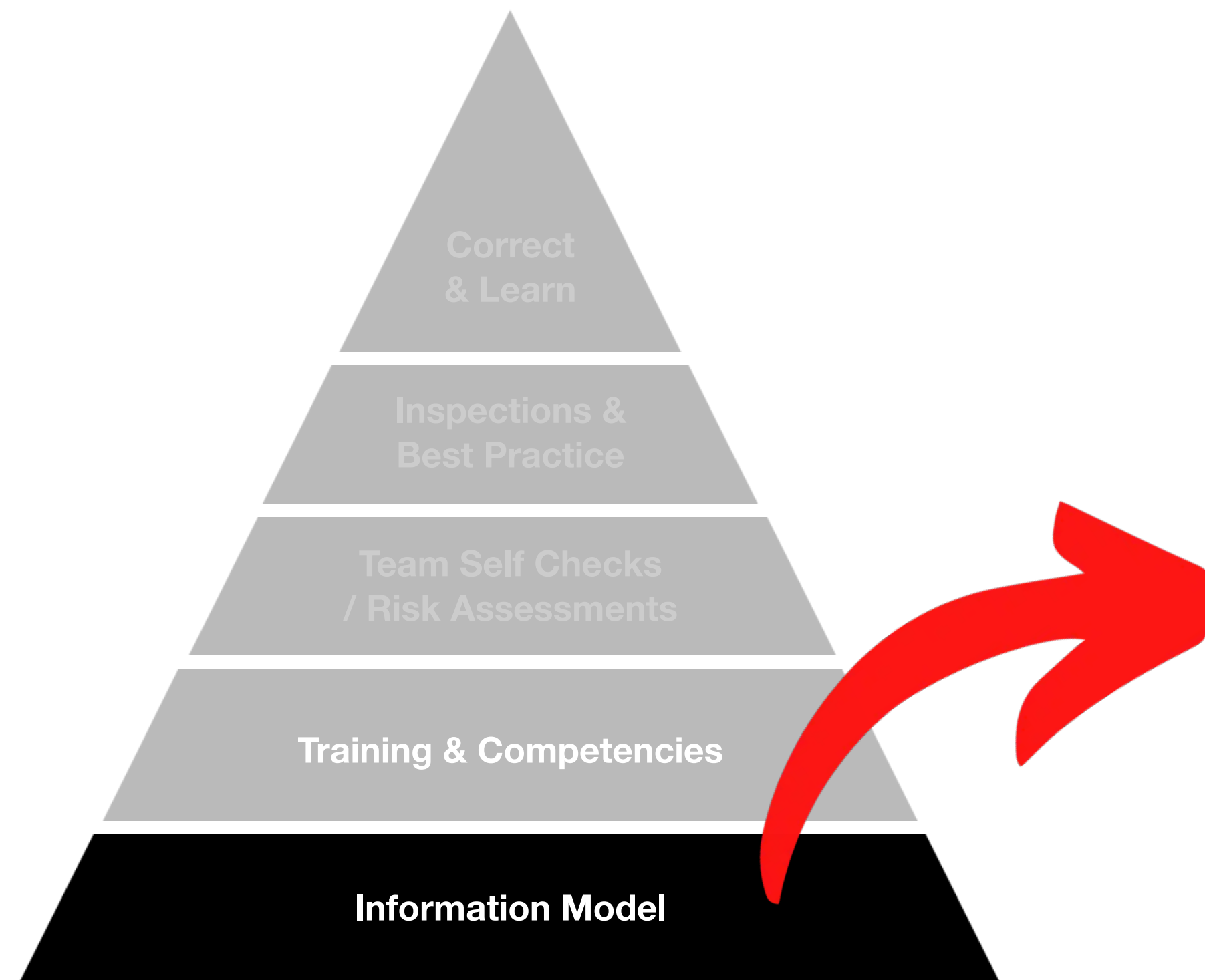
- Improve heat stress & awareness by reducing injuries caused by weather.
- Improve labour welfare conditions by complying to regulations & laws

Reduce injury & deaths

Reduce fines

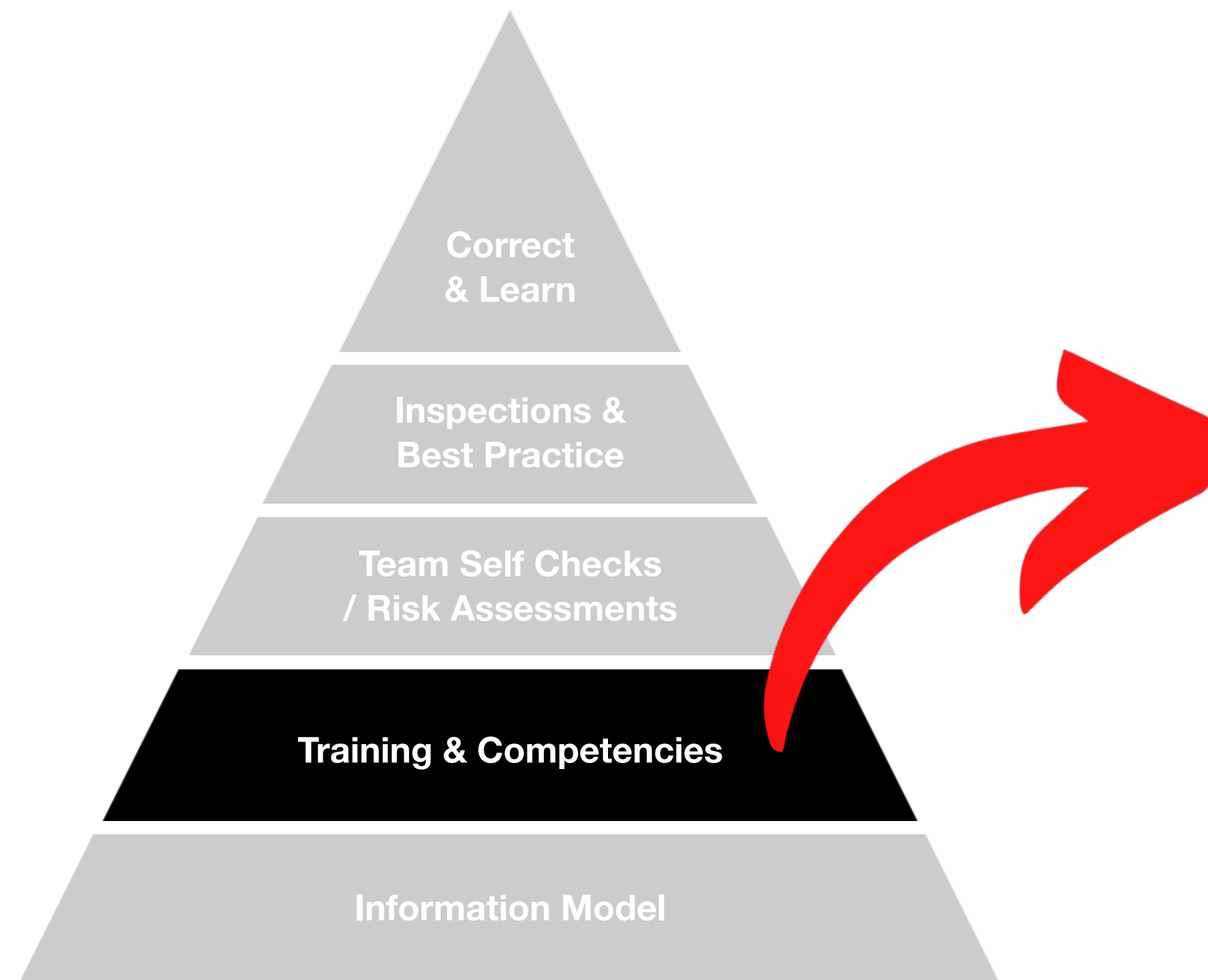
Reduce possibility of bad PR

The Acumen Safety Model



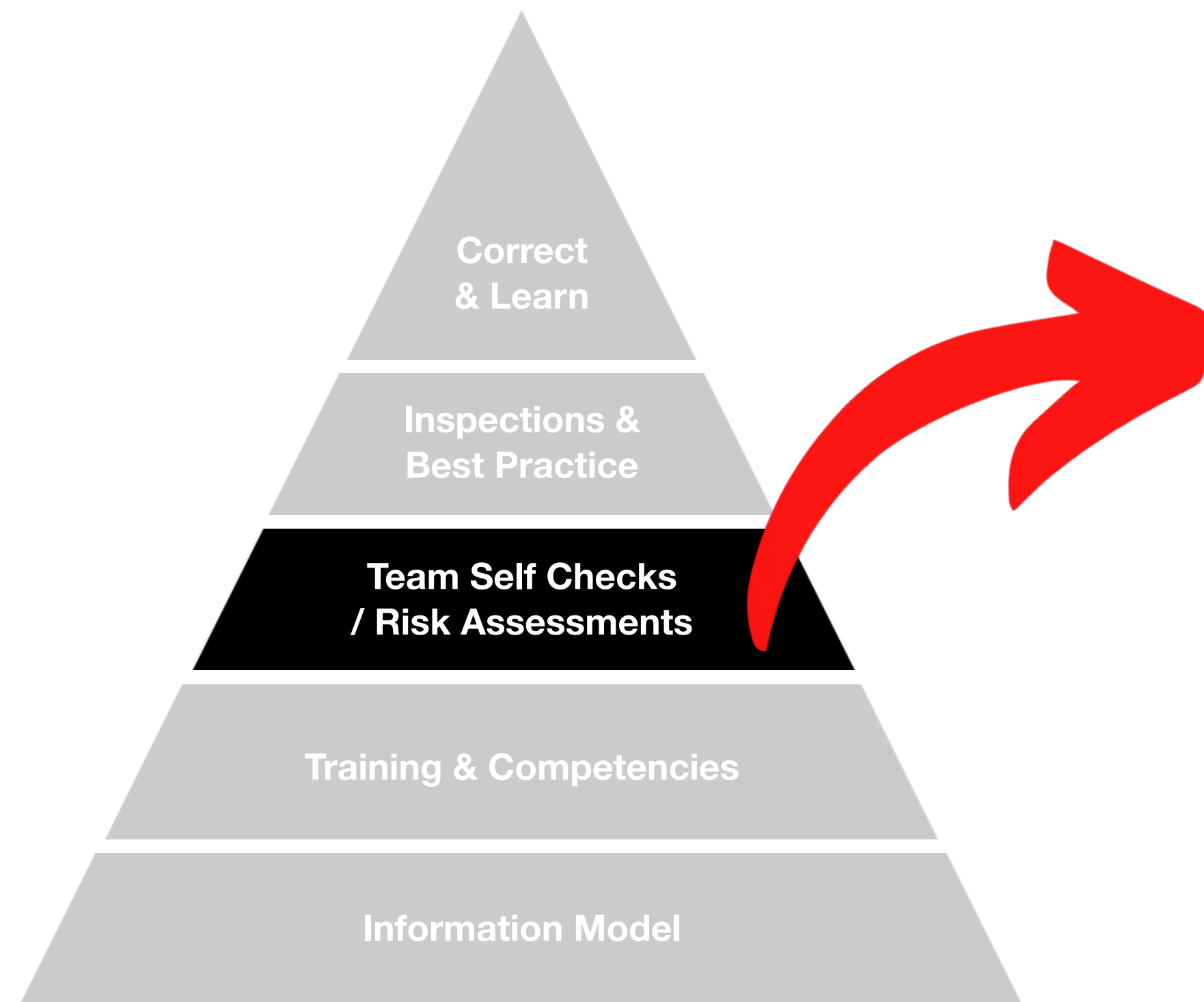
- Information creation
- Message forming and payload contents
- Message transmission
- Ability to disambiguate information
- Reception and internalisation of information
- Avoidance of competing information forces
- Information tacitness

The Acumen Safety Model



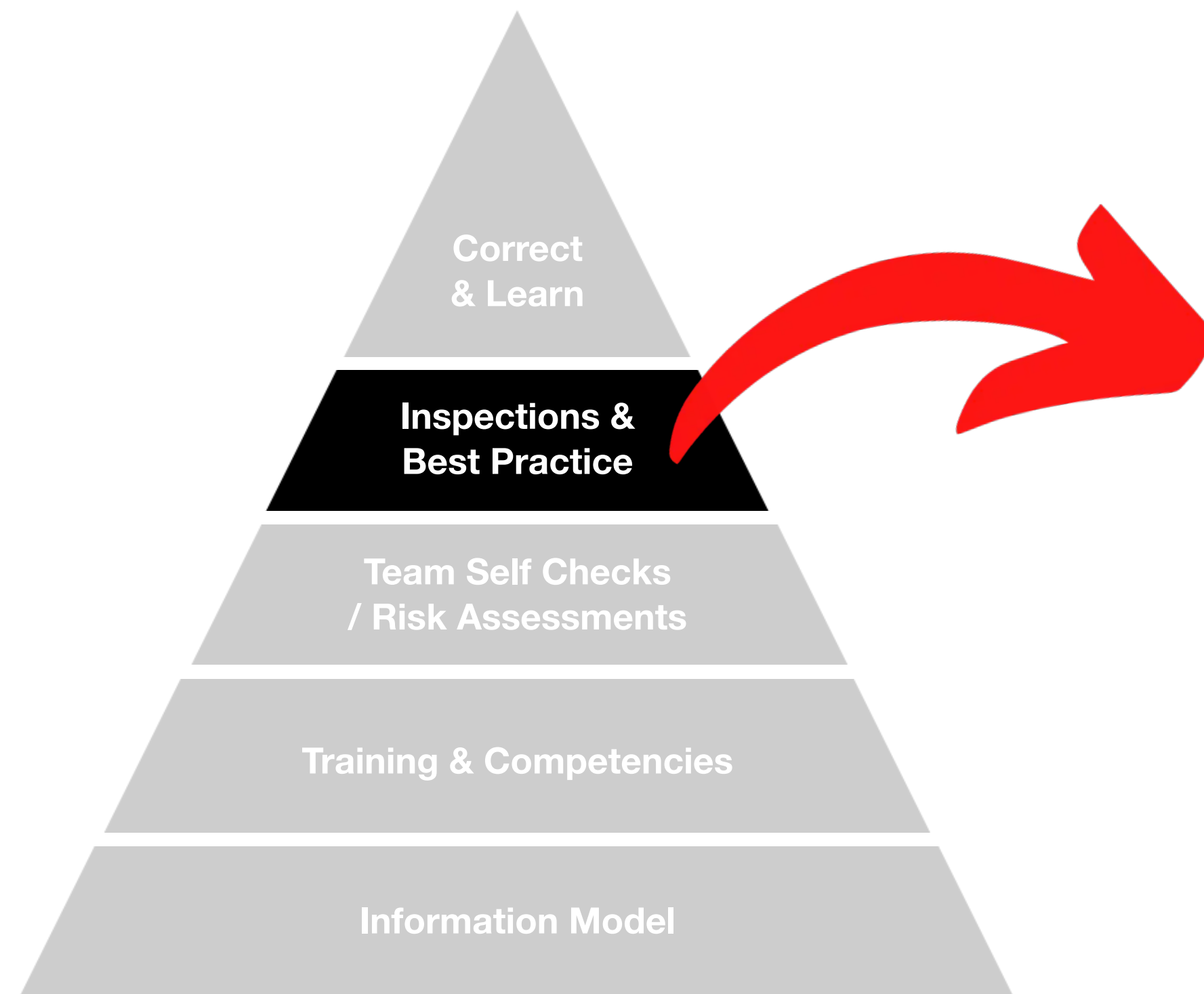
- The need to embed the correct competences in individuals through knowledge retention, training.
- Through the information model, culture and training we can embed the correct competencies to ensure team members undertake their tasks in a safe and secure manner.
- If we can embed and continually reinforce the correct behaviours and actions, we can make safety part of every activity each individual does.

The Acumen Safety Model



- As work tasks are under taken or team members attend work locations, we have the opportunity to again reinforce the correct behaviours and ensure that tasks, facilities and equipment is safe.
- Continuously checking and re-checking the current safety situation through risk assessments and self checks,
- Identify issues and create an early warning system that can flag potential concerns or issues showing early signs of realisation.

The Acumen Safety Model

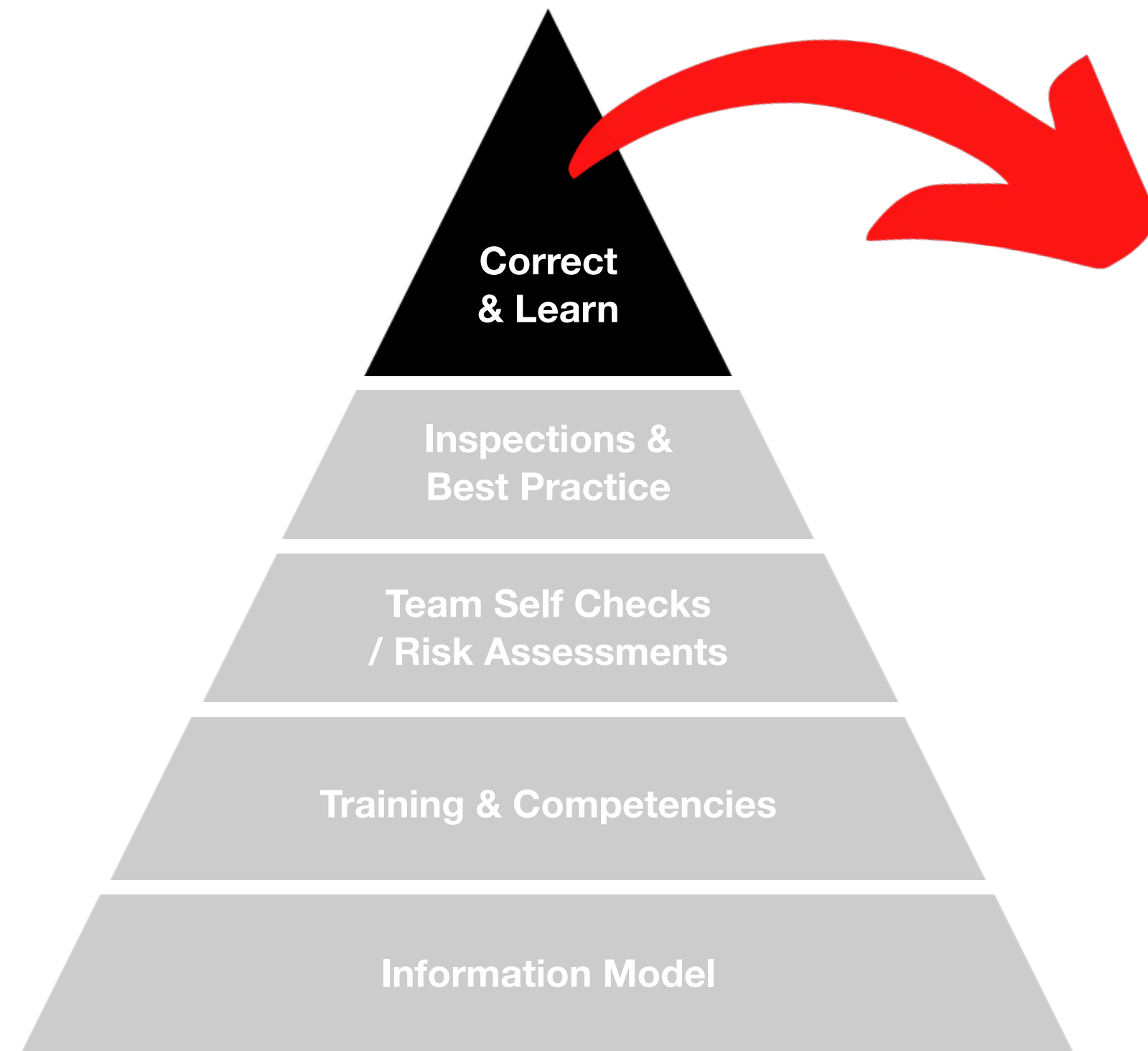


The organisation has a duty of care to review and check compliance to ensure that what they believe is occurring is actually occurring and what the people involved in conducting self checks / risk assessments are presenting the real world scenarios.

This formal process also allows organisations to share best practice - this ensures continuous learning and reinforcement of safety practice for all.

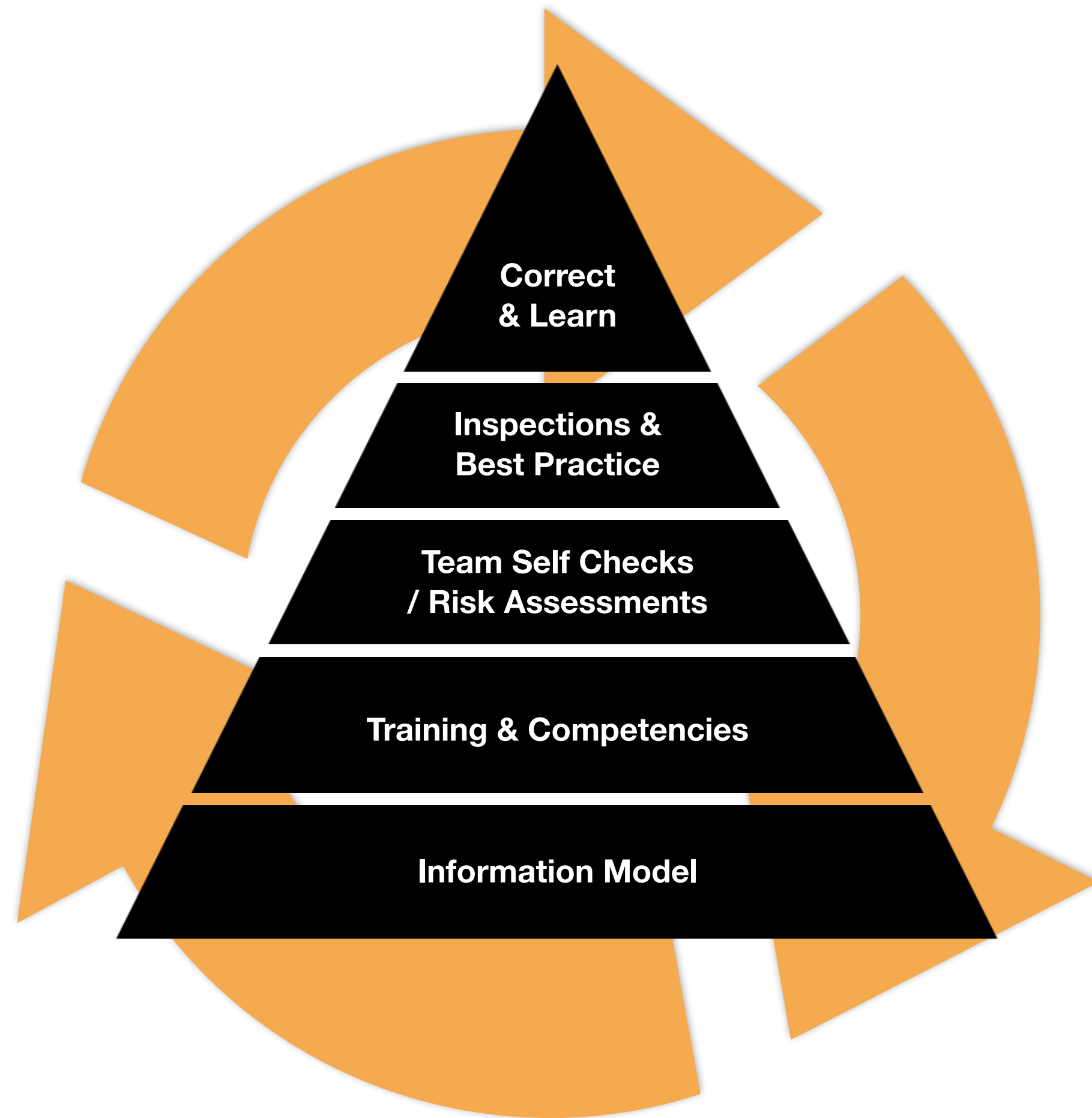
Constant reinforcement of the correct behaviours, culture and practice.

The Acumen Safety Model



- A need to learn and take action to correct issues.
- Openness to correction and learning must be embedded in all elements. Not only the culture, people and processes but also in the work tasks, deliverables and physical artefacts (such as building fabric, tools and equipment) must be part of this learning model.

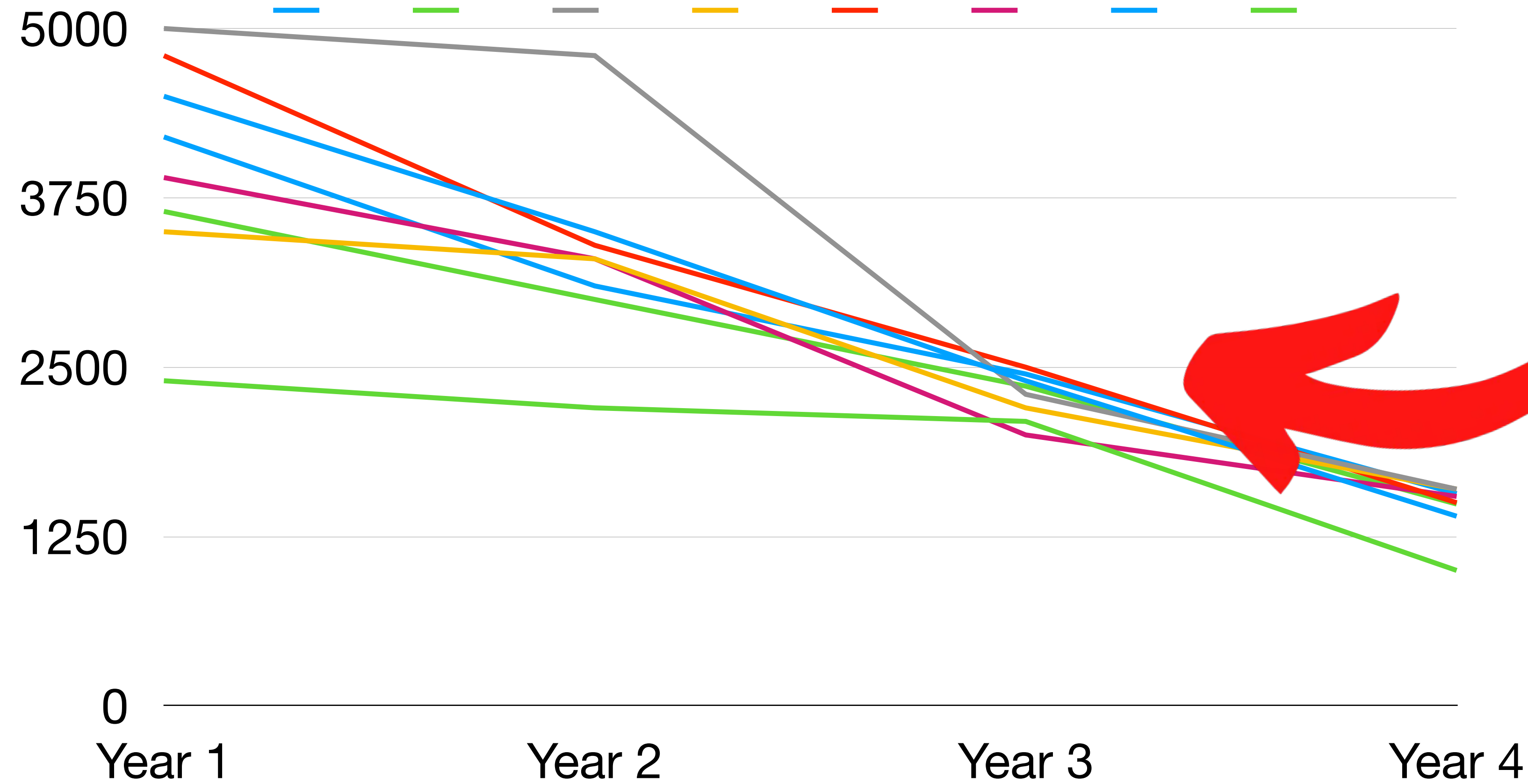
The Acumen Safety Model



- Give everyone the tools
- Correct, Learn, Learn and Learn Again
- Adapt and Change with Focus
- Proactive & Reactive
- Celebrate best practice

It is a model we have used and developed over many years to support organisations wishing to improve their health, safety and wellbeing outcomes.

Change Can Happen

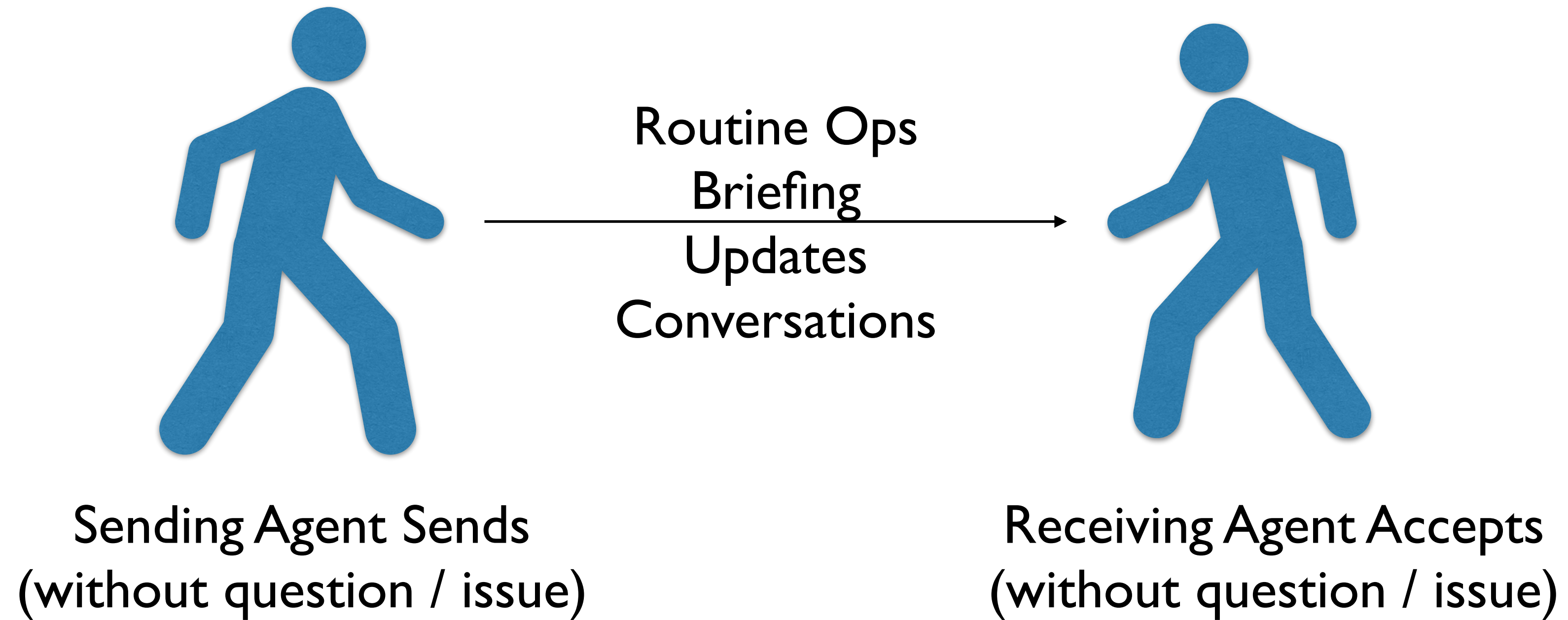


Implement the right model and you can make a difference to safety.

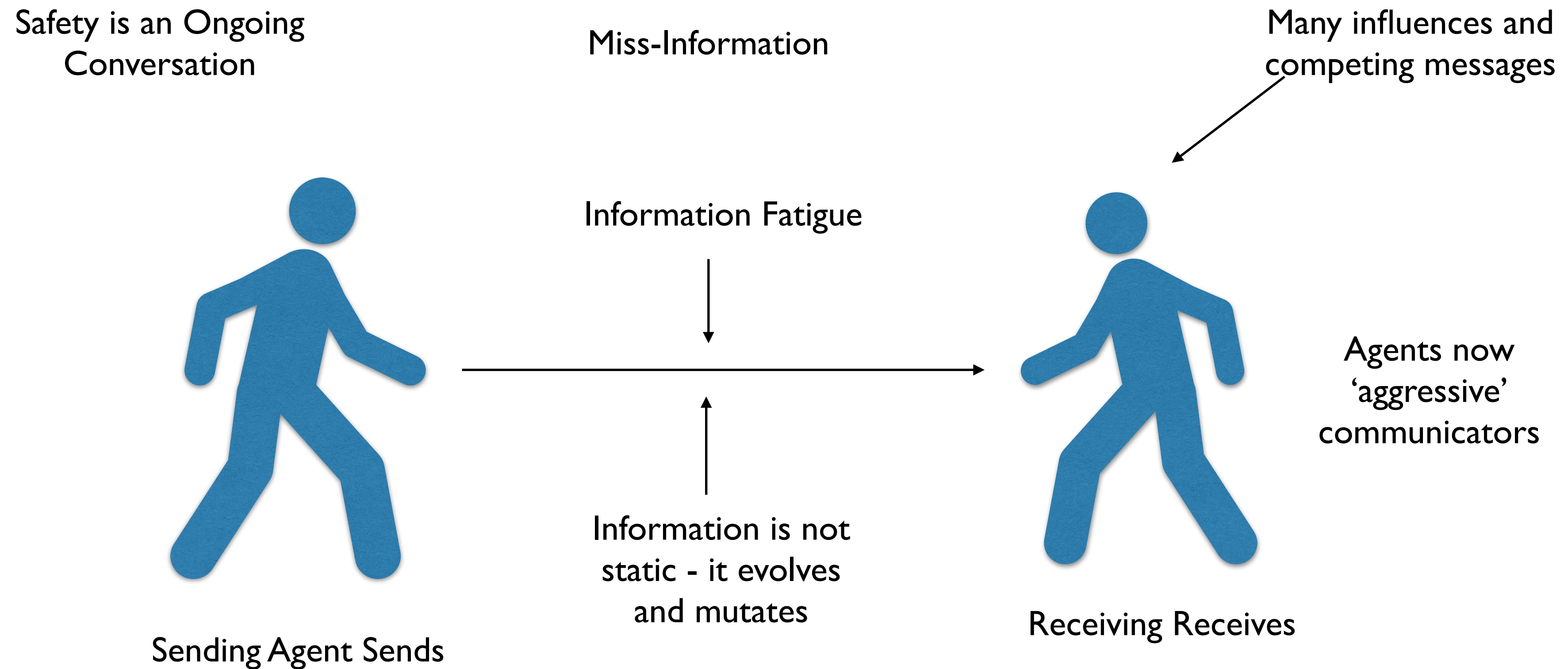
Safety Incident Progression After Acumen

Role of Information in Safety

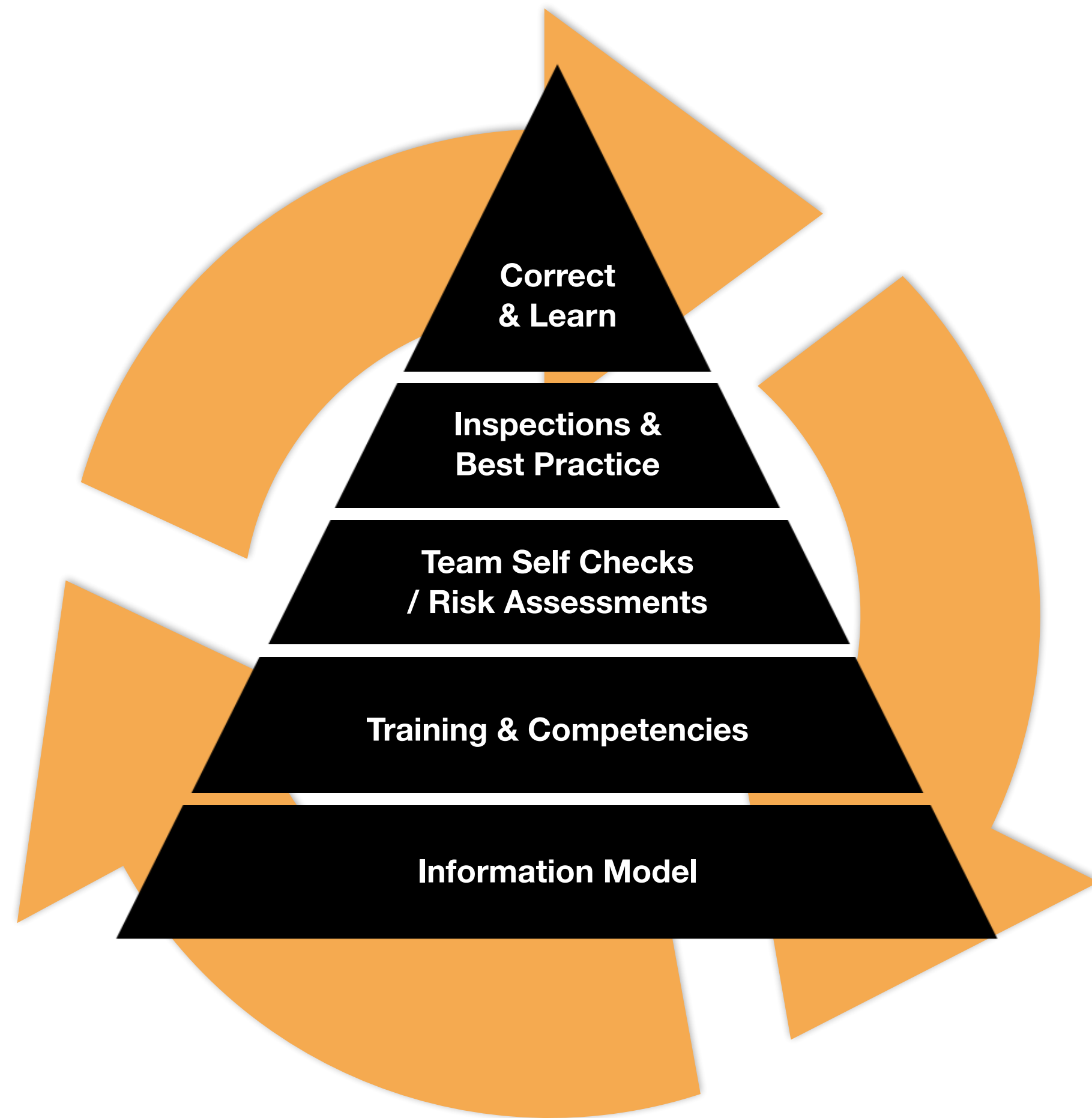
Communication of information is linear



Role of Information in Safety

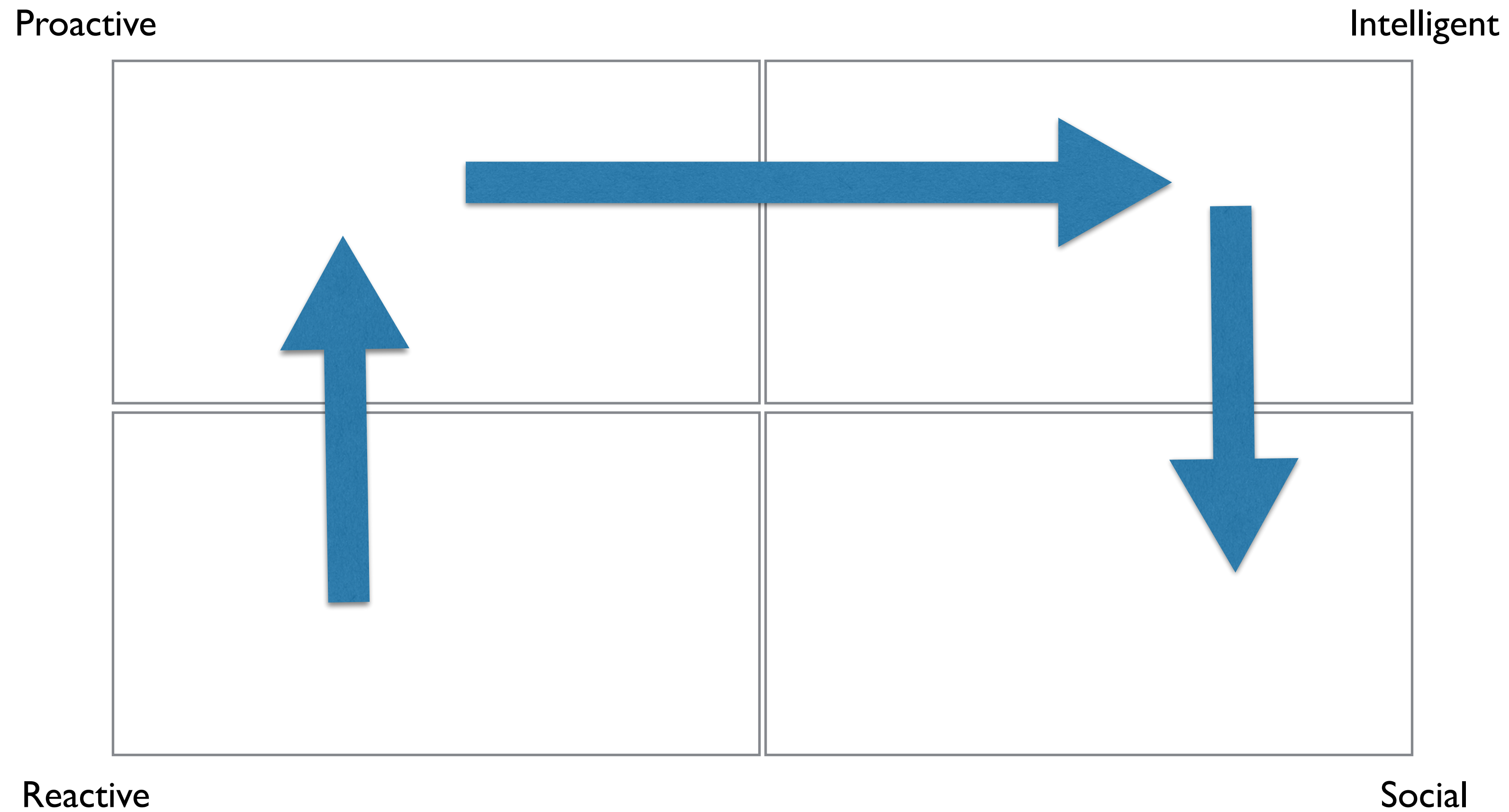


The Acumen Safety Model - Removing Information Barriers

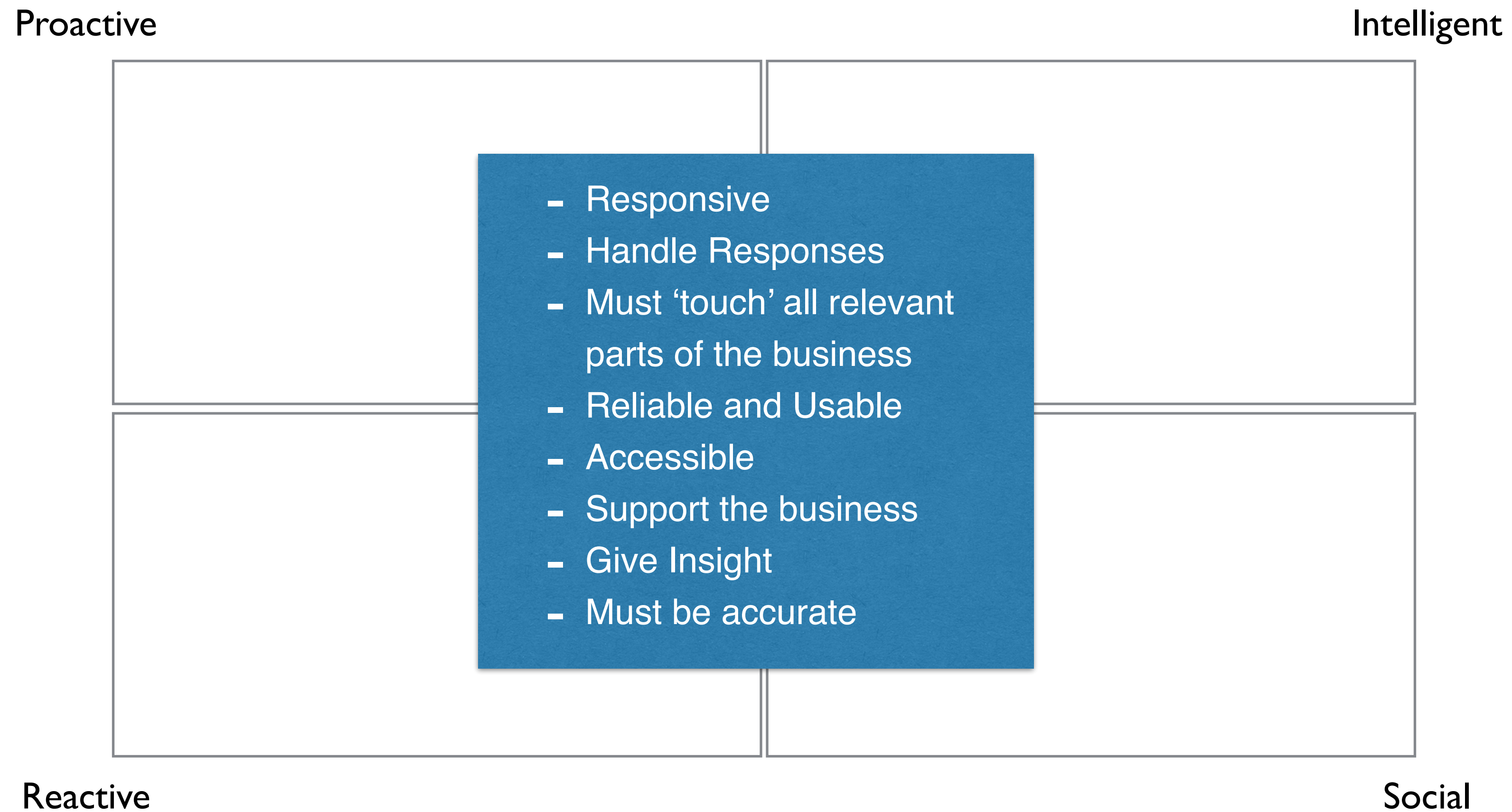


- People are Multi-Dimensional
- Communication is not Flat
- People are not Isolated Islands
- Information is not Static
- Value of Information
- Information Fatigue
- Information Overload
- Miss Information + Miss-Trust
- Message Overload
- Lack of Processing Mechanisms
- Too Complex
- Missing Information

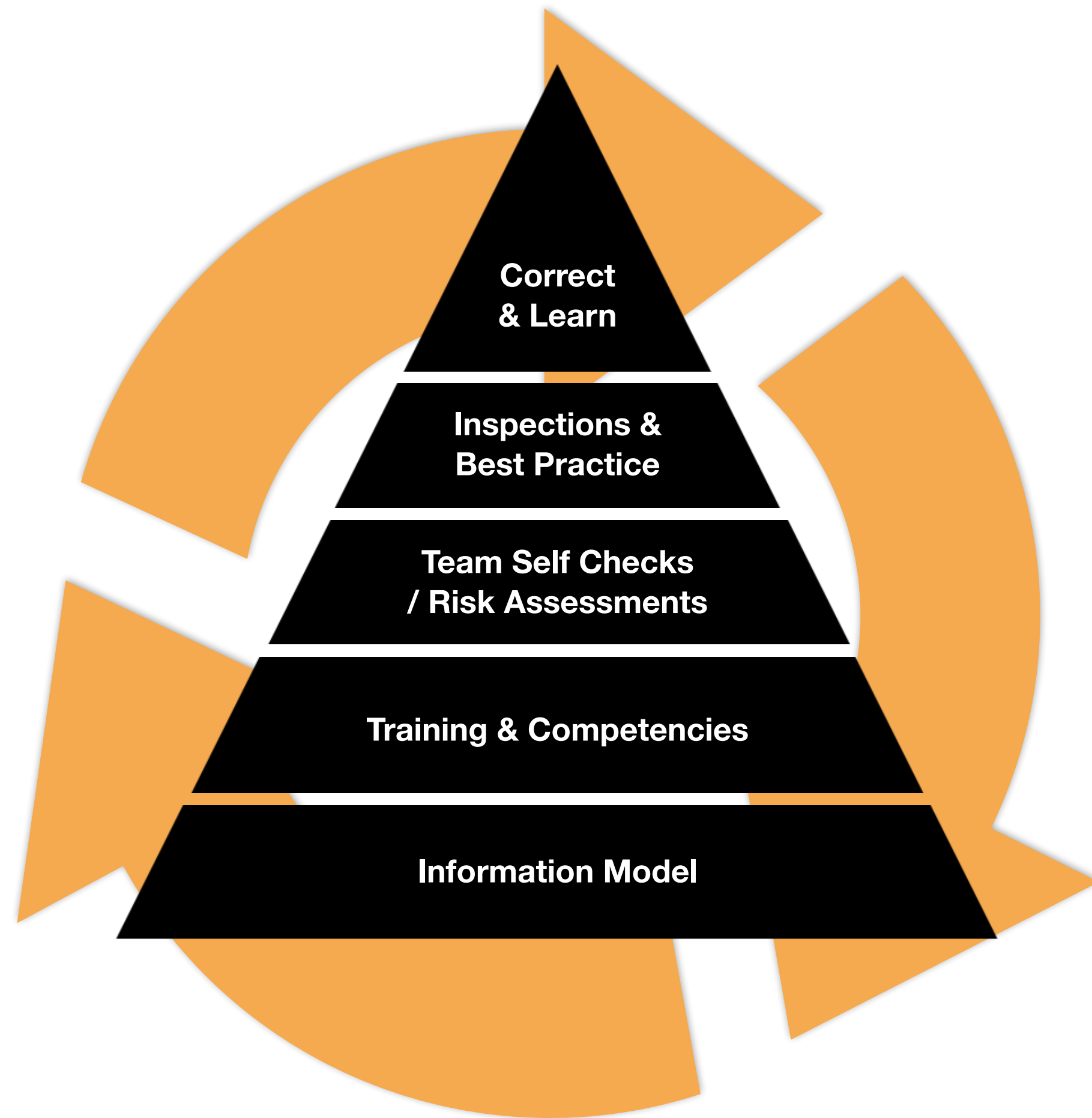
Conceptual Model - Technology Adoption



Conceptual Model - Technology Adoption



The Acumen Safety Model - Removing Technology Barriers



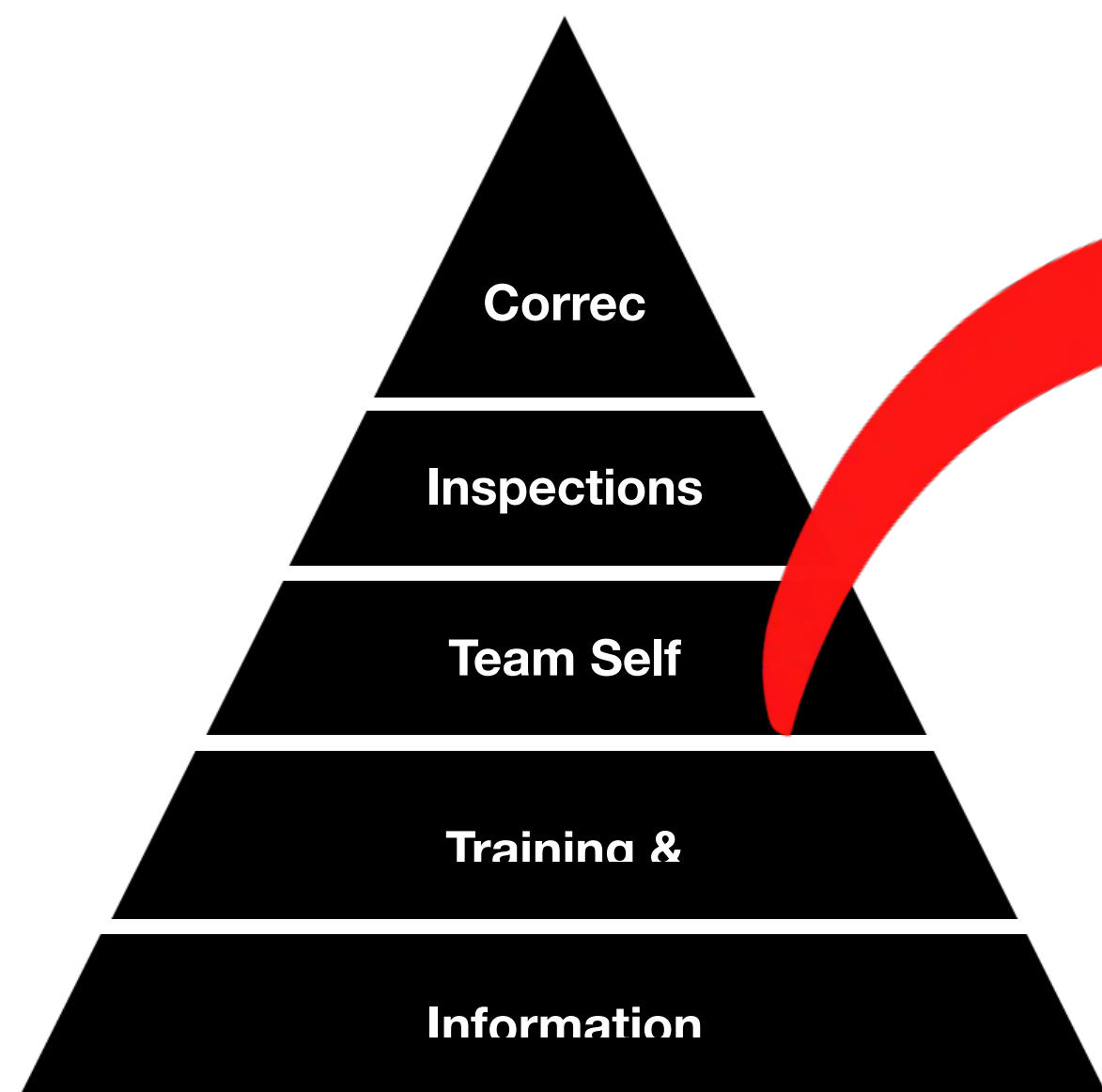
- Lack of Technology Familiarity
- Differing Approaches
- Restrictive Platforms
- Miss-match to Information Norms
- Inability to Support Cultural Change
- Lack of Intelligence
- Rapidity of Technology to Inform

Part 2: Applying the Acumen Safety Model

Heat Stress & Weather Awareness

Heat Stress & Weather Awareness - The Challenge

- Heat Stress & Weather can cause serious harm.
- Need a mix of formal & informal information.
- Information can evolve rapidly as conditions change
- Need to inform quickly and give direction / guidance
- Need to reach a potentially large group of people

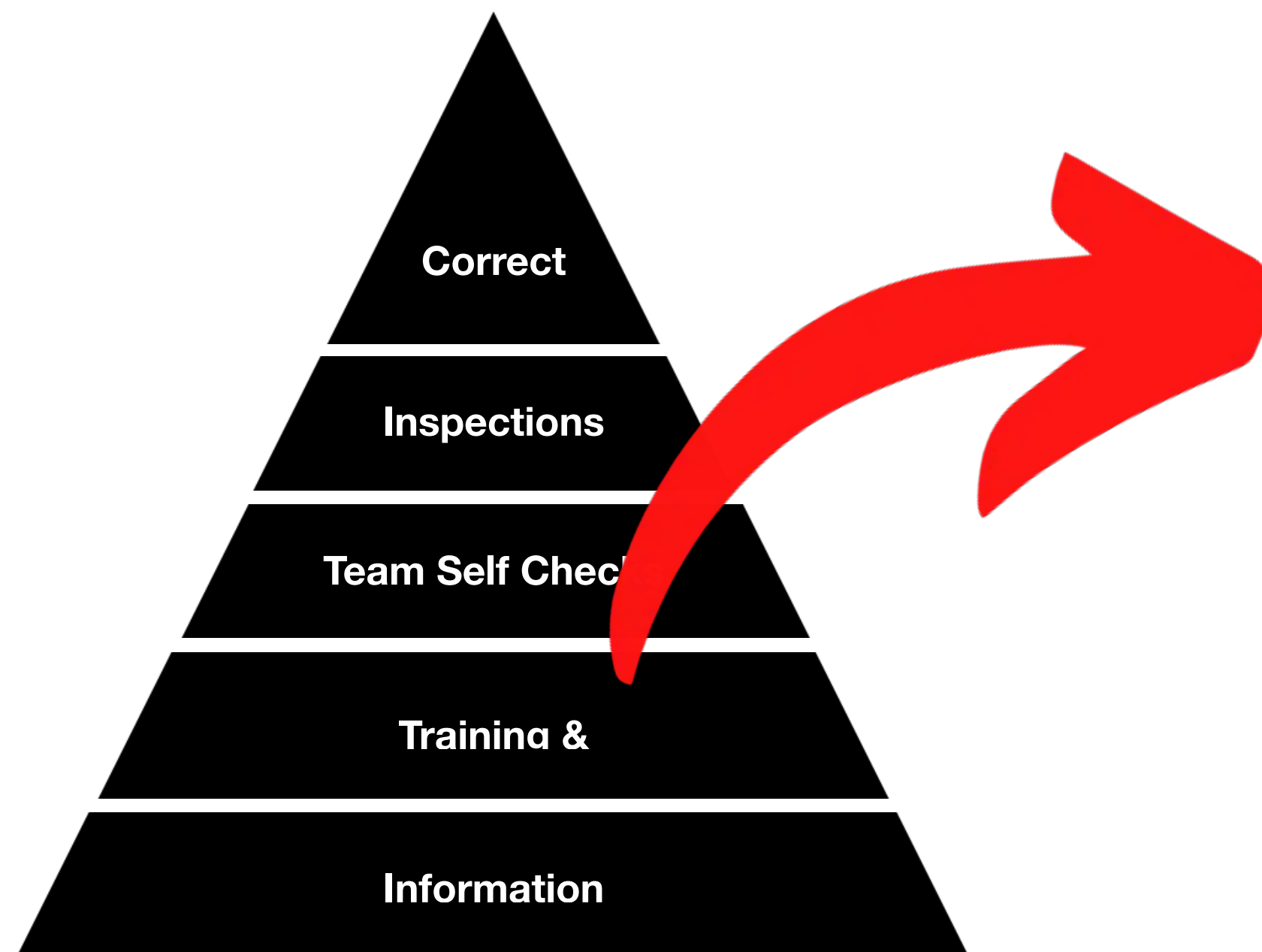


- What is guidance OR directive
- What is the known true single source of information
- What technology?
- It must be usable and robust

Heat Stress & Weather Awareness - Applying the Model

- Information model used must be readily available
- Information must be timely
- Information must be DIRECTIVE
- Information must be TRUSTWORTHY

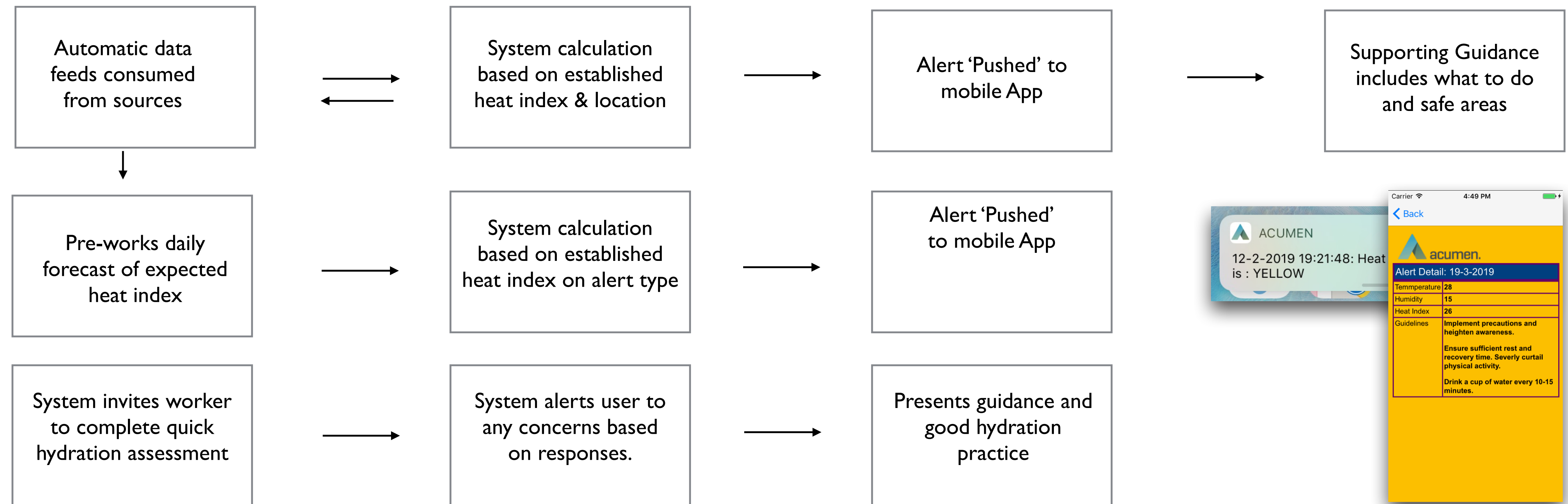
- Technology must allow continuous data flows
- Technology must allow for localisation
- Technology must allow for short cut and override
- Technology must be ubiquitous
- Technology and information model needs to allow for self checks and preparedness



Heat Stress & Weather Awareness - The Solution

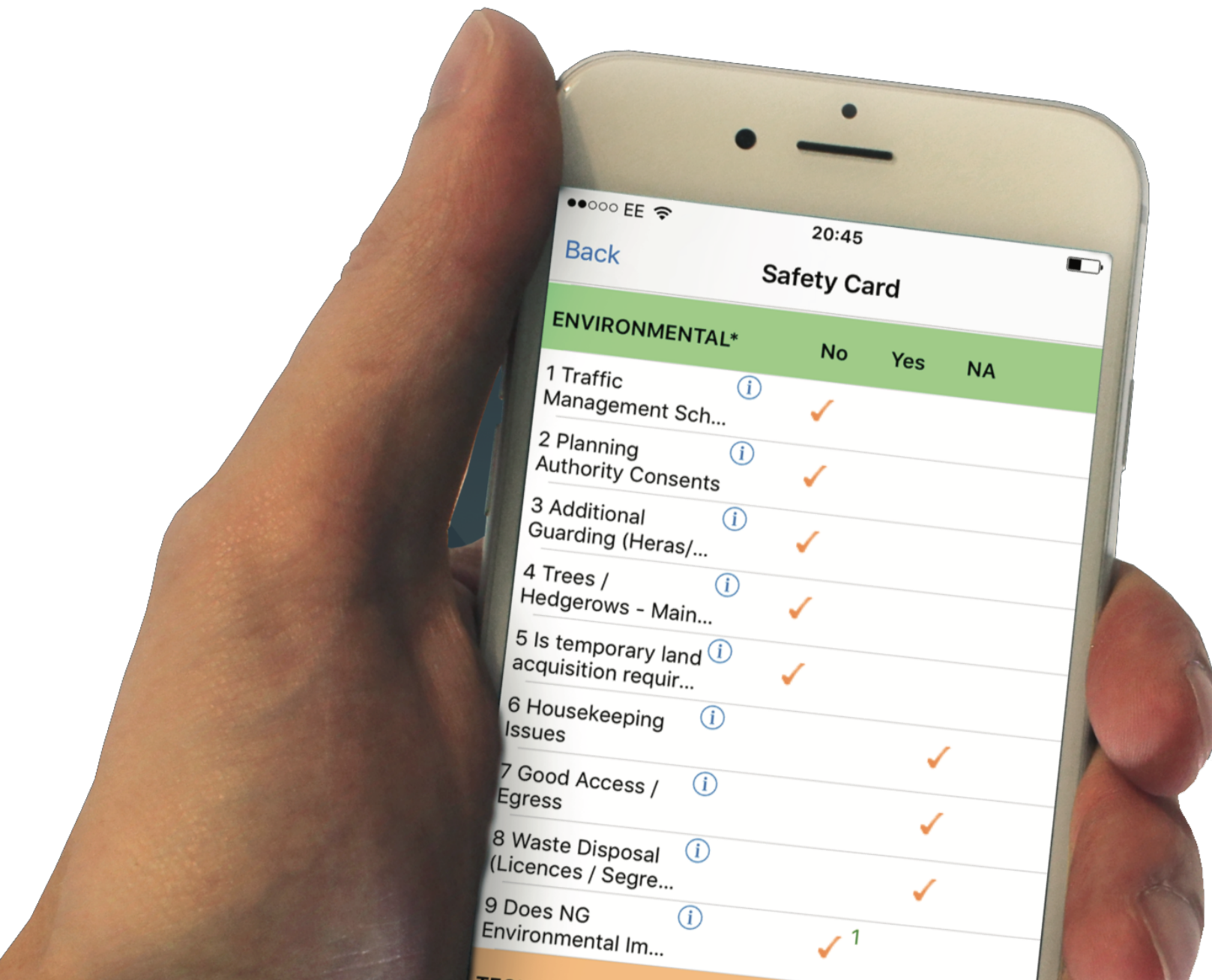
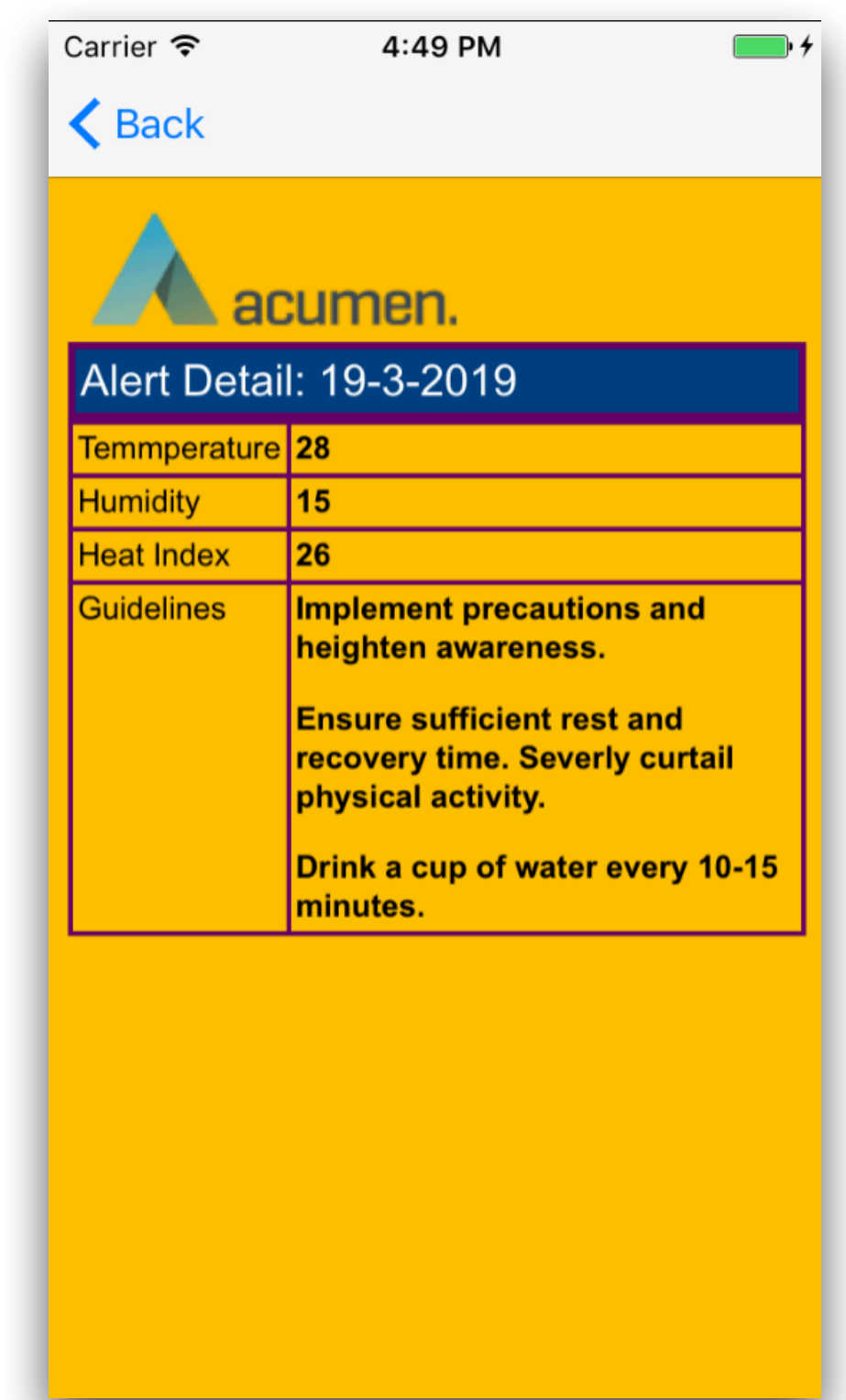
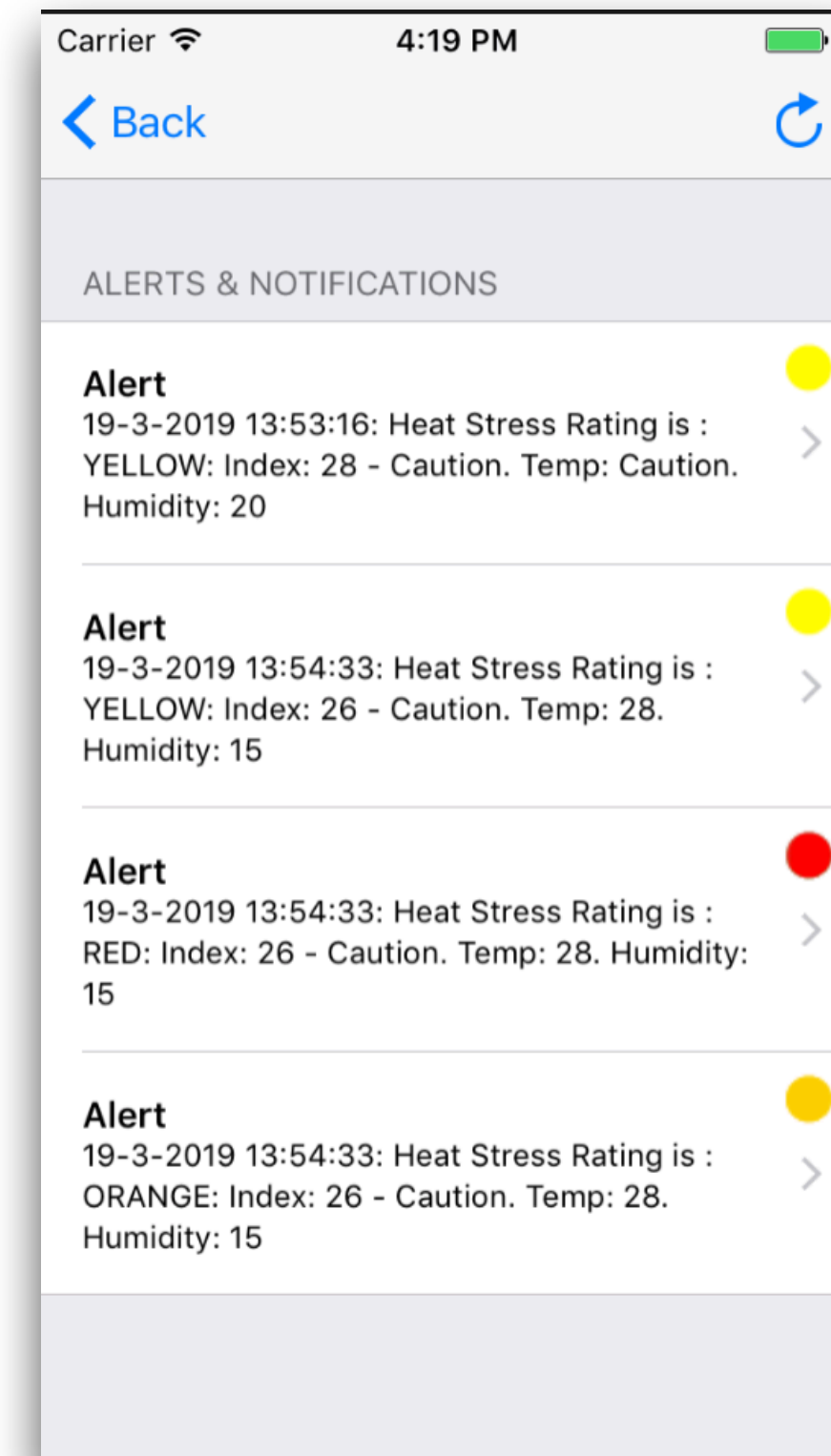
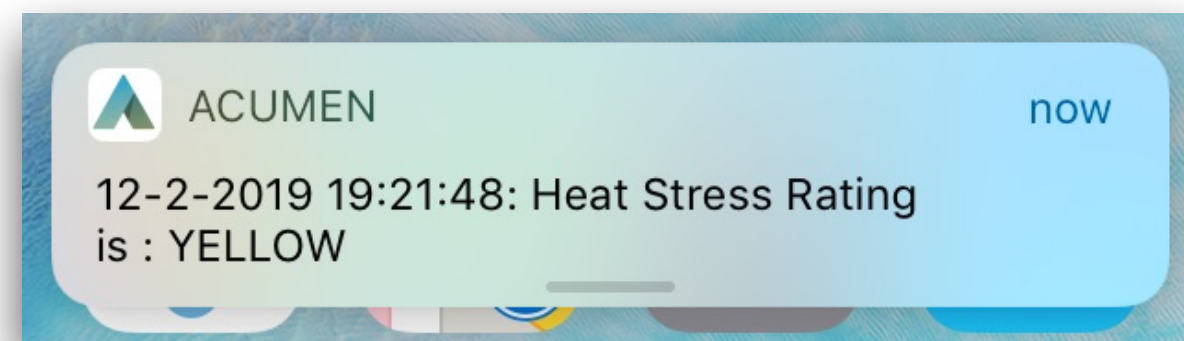
- Providing real-time heat stress data
- Providing location specific awareness
- Providing ability to conduct self heat checks
- Providing improved guidance and location data
- Providing meta data that can inform decisions

Data & Information Available to inform future initiatives



Heat Stress & Weather Awareness - The Solution

- Technology available to ALL



Heat Stress & Weather Awareness - Steps to Take

1. Establish the guidance & directives
2. Provide training on outcomes
3. Connect with continuous weather data
4. Enable location specific data
5. Allow localisation over ride

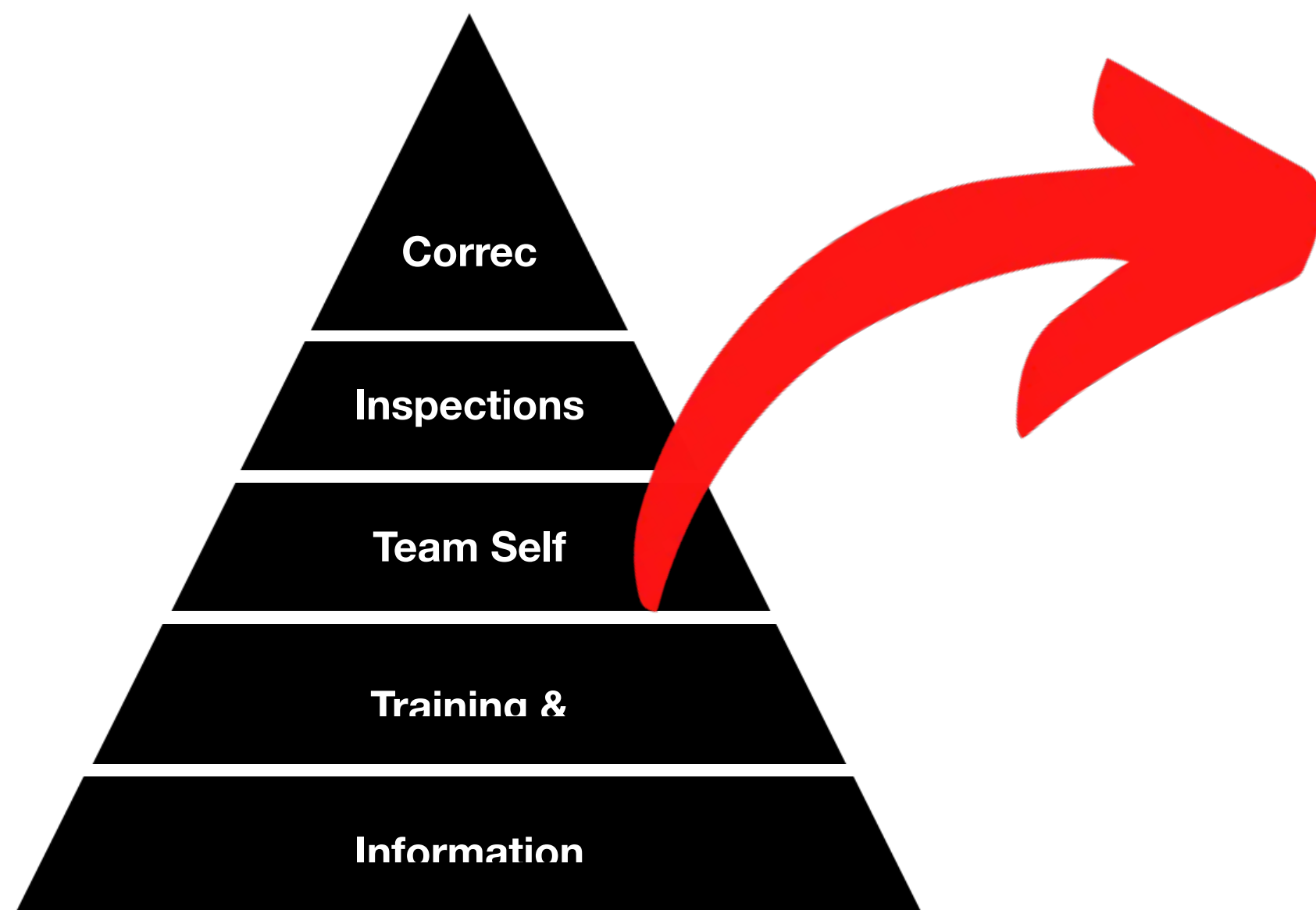


Part 3: Applying the Acumen Safety Model

Labour Welfare & Site Visibility

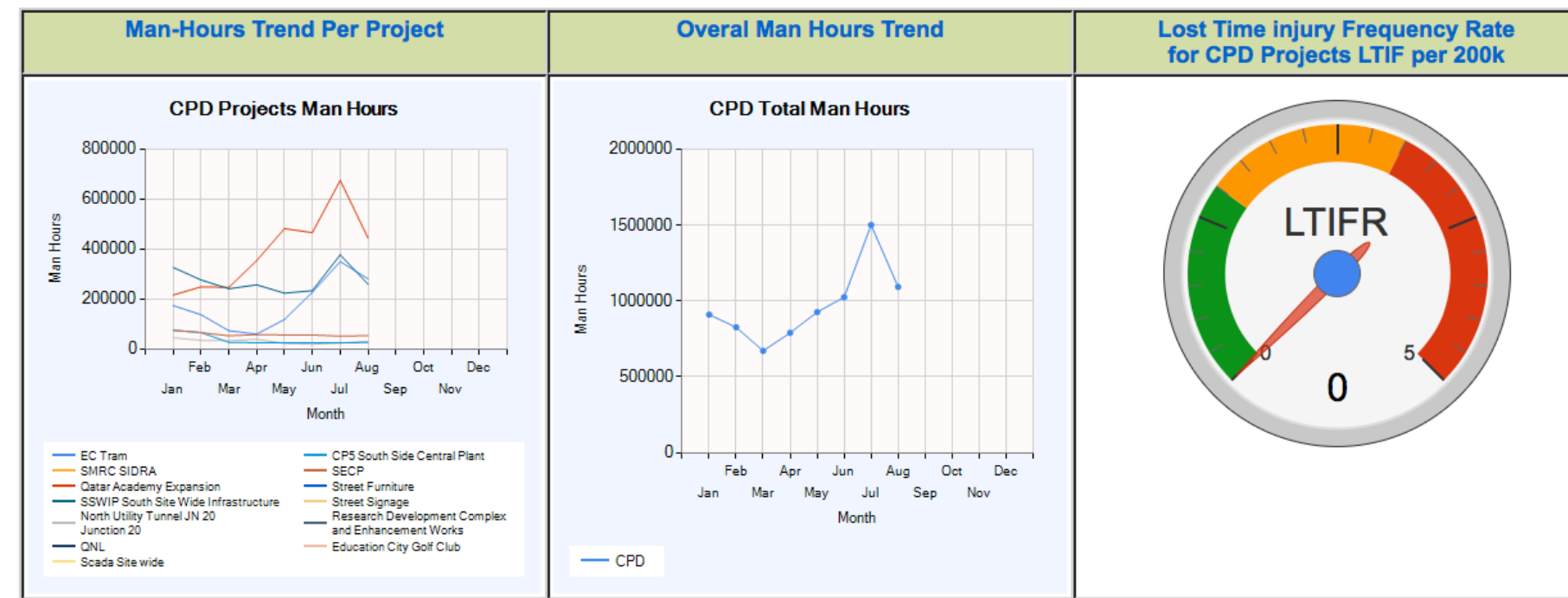
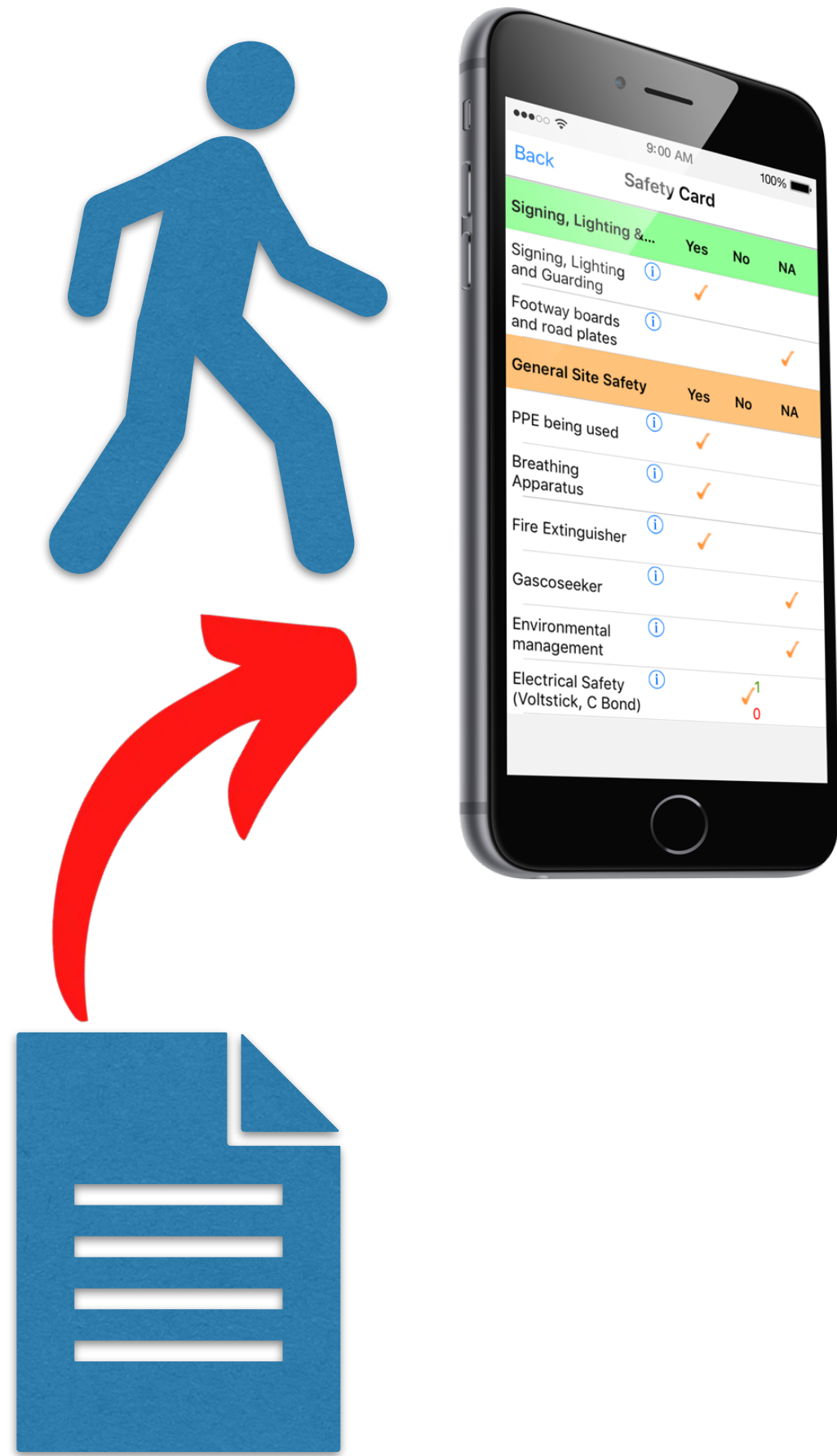
Visibility of Compliance to Labour & Welfare Laws

- Huge work force from local and overseas
- Fast moving construction and development across the region
- Strict labour and welfare laws in most countries
- Penalties for not complying to labour and welfare laws
- Government documentation is extensive and difficult to use



- Who is checking compliance
- Can we get real-time 'eyes' on issues
- Regulations are written as regulations & laws
- Labour & welfare requirements are widespread

Visibility of Compliance to Labour & Welfare Laws

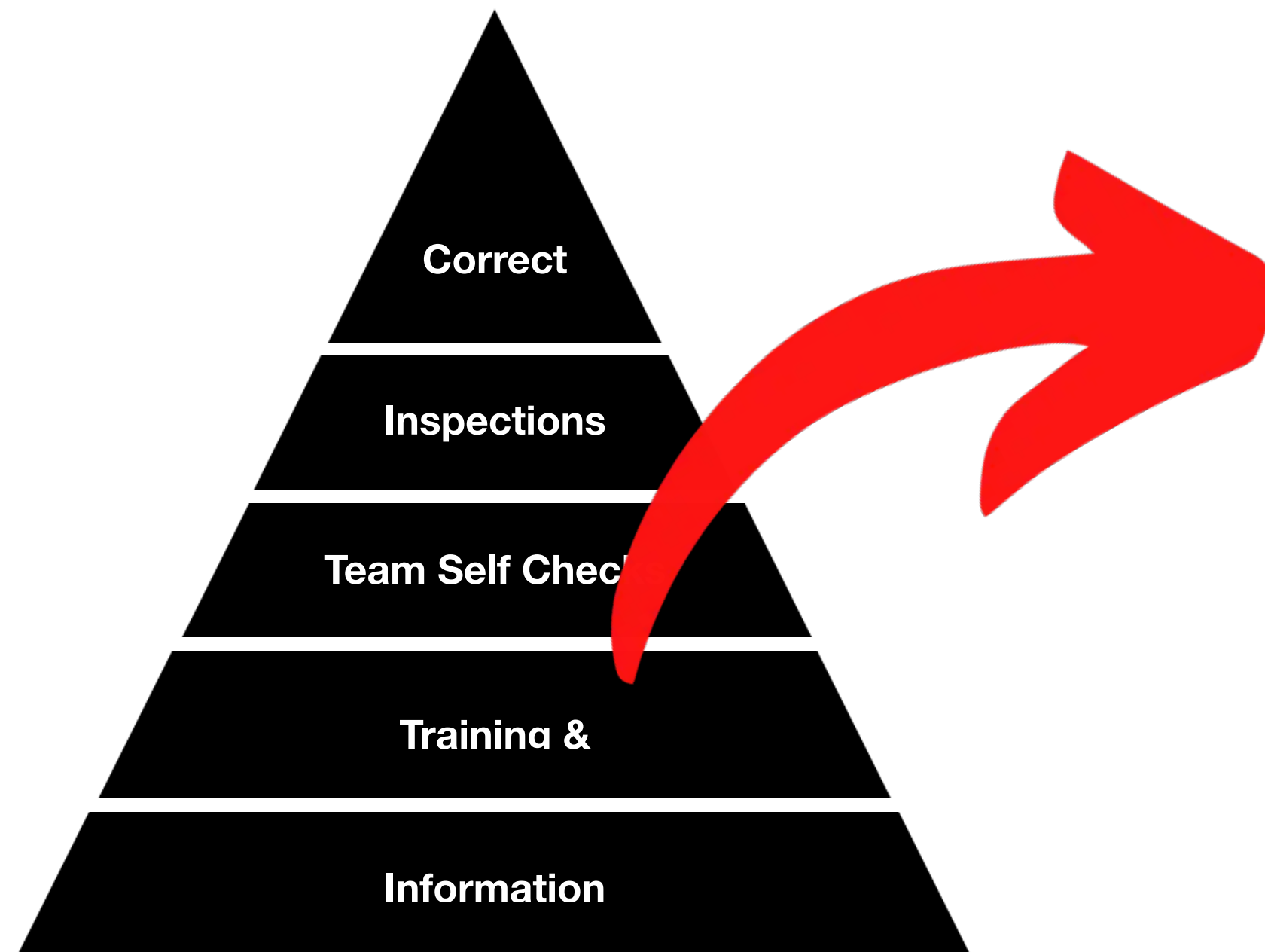


Scoreboard												
Project	TRIR	LTIR	Near Miss	LTI of High Potential Incident	Contractor Req'd HSE Staff	Lesson Learned	Observations	SVRs / CARs	TBTs	Senior Management Safety Walk	Senior Management Safety Meeting	Final Score
EC Tram	●	●	●	●	●	●	●	●	●	●	●	●
SMRC SIDRA	●	●	●	●	●	●	●	●	●	●	●	●
Qatar Academy Expansion	●	●	●	●	●	●	●	●	●	●	●	●
SSWIP South Site Wide Infrastructure	●	●	●	●	●	●	●	●	●	●	●	●
North Utility Tunnel JN 20 Junction 20	●	●	●	●	●	●	●	●	●	●	●	●
QNL	●	●	●	●	●	●	●	●	●	●	●	●
Scada Site wide	●	●	●	●	●	●	●	●	●	●	●	●
CP5 South Side Central Plant	●	●	●	●	●	●	●	●	●	●	●	●
SECP	●	●	●	●	●	●	●	●	●	●	●	●
Street Furniture	●	●	●	●	●	●	●	●	●	●	●	●
Street Signage	●	●	●	●	●	●	●	●	●	●	●	●
Research Development Complex and Enhancement Works	●	●	●	●	●	●	●	●	●	●	●	●
Education City Golf Club	●	●	●	●	●	●	●	●	●	●	●	●

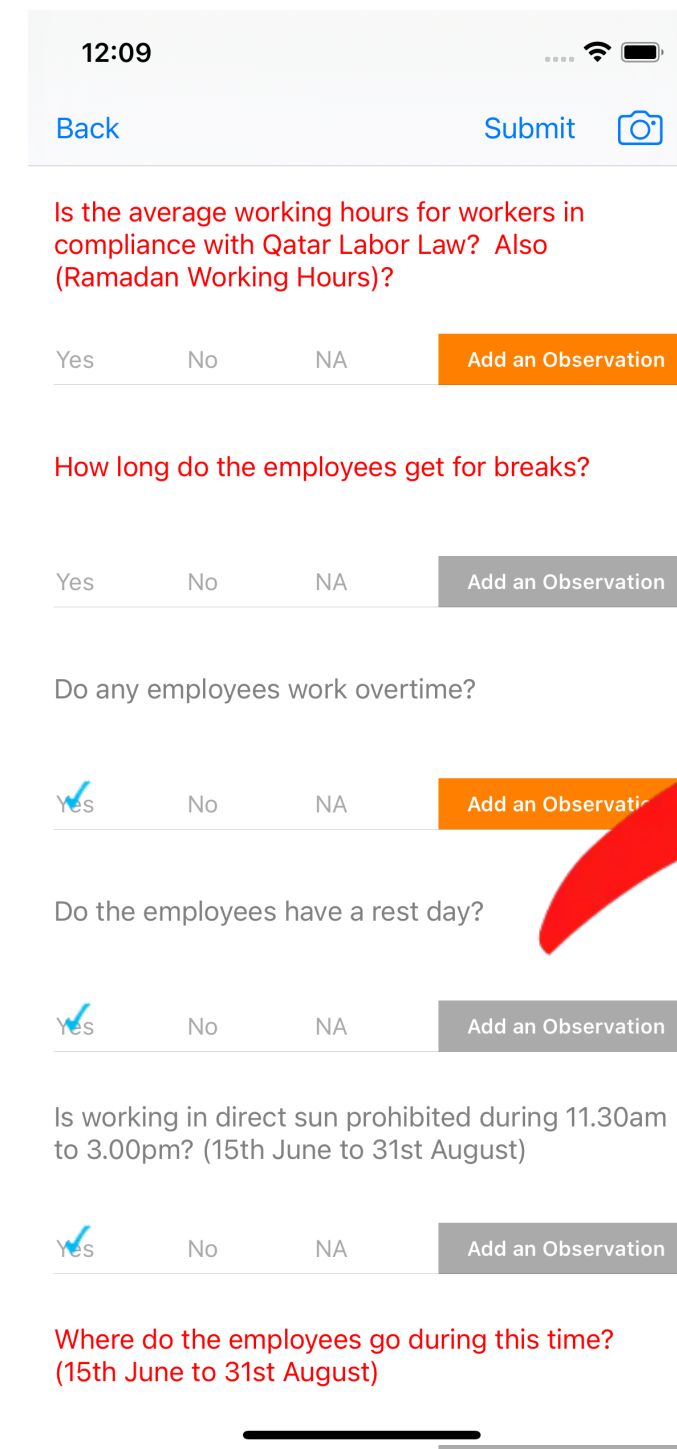
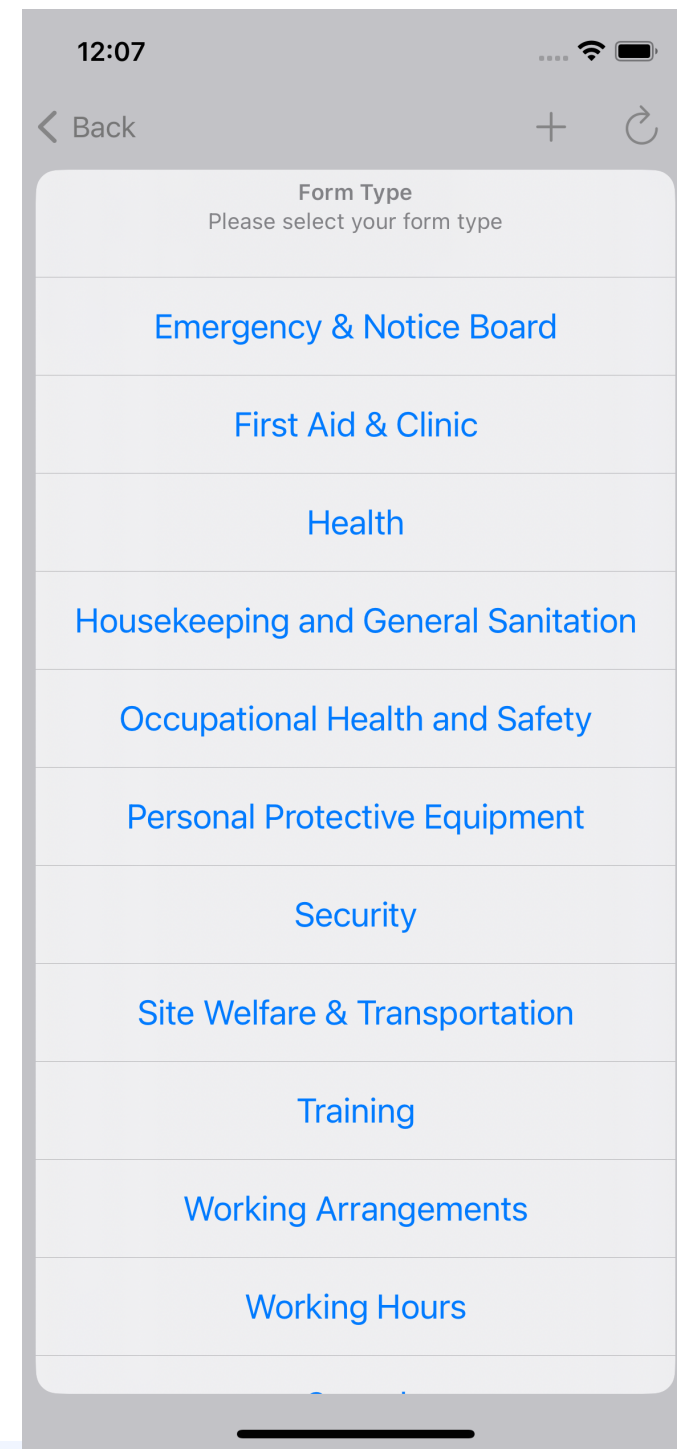
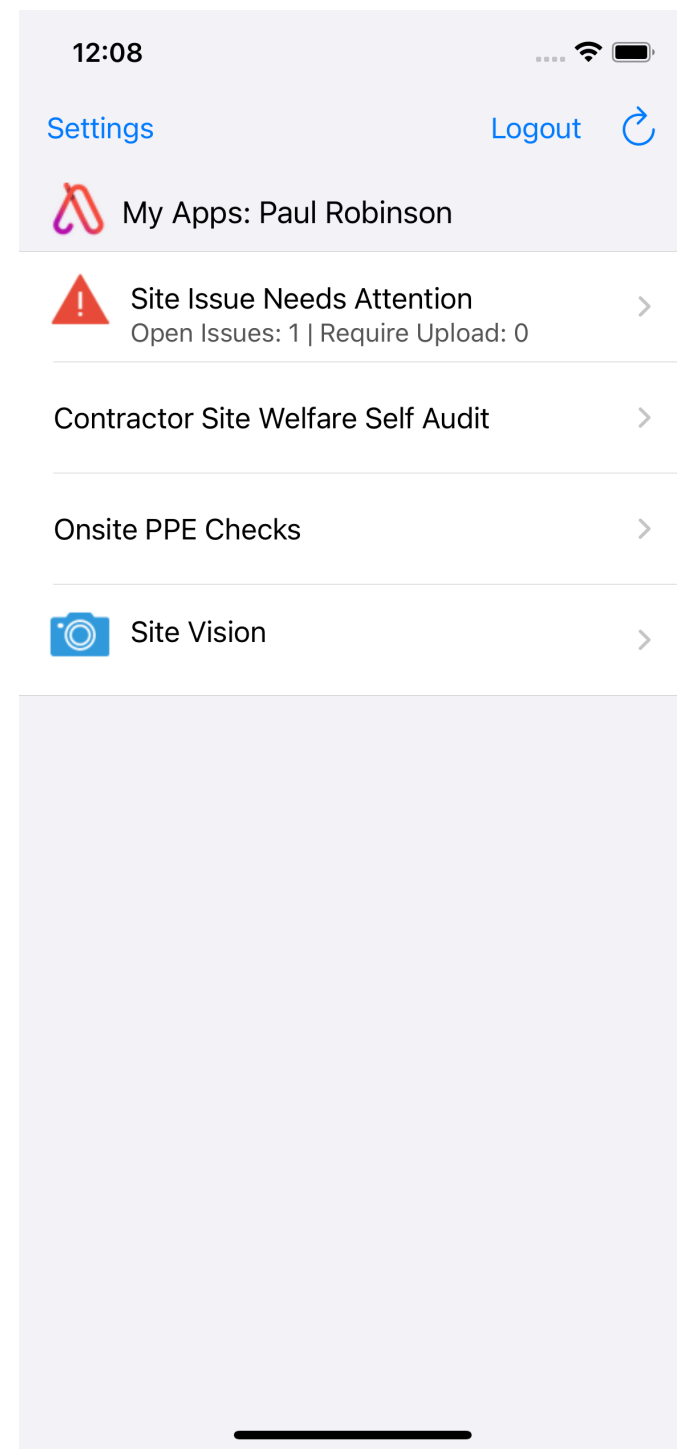
Law No (14) of the Year 2004 – Qatar Labor Law

Visibility of Compliance to Labour & Welfare Laws

- Information model needs provide easy access to regulations and laws
- Inclusive step checks & formal inspections
- Photos, Photos & Photos
- Technology needs to allow free flow of information
- Technology must connect the people at ANY time and ANY place
- Learning & Reviews
- Management Information at hand



Visibility of Compliance to Labour & Welfare Laws



Project	TRIR	LTIR	Near Miss	LTI of High Potential Incident	Contractor Req'd HSE Staff	Lesson Learned	Observations	SVRs / CARs	TBTS	Senior Management Safety Walk	Senior Management Safety Meeting	Final Score
EC Tram	●	●	●	●	●	●	●	●	●	●	●	●
SMRC SIDRA	●	●	●	●	●	●	●	●	●	●	●	●
Qatar Academy Expansion	●	●	●	●	●	●	●	●	●	●	●	●
SSWIP South Site Wide Infrastructure	●	●	●	●	●	●	●	●	●	●	●	●
North Utility Tunnel JN 20 Junction 20	●	●	●	●	●	●	●	●	●	●	●	●
QNL	●	●	●	●	●	●	●	●	●	●	●	●
Scada Site wide	●	●	●	●	●	●	●	●	●	●	●	●
CP5 South Side Central Plant	●	●	●	●	●	●	●	●	●	●	●	●
SECP	●	●	●	●	●	●	●	●	●	●	●	●
Street Furniture	●	●	●	●	●	●	●	●	●	●	●	●
Street Signage	●	●	●	●	●	●	●	●	●	●	●	●
Research Development Complex and Enhancement Works	●	●	●	●	●	●	●	●	●	●	●	●
Education City Golf Club	●	●	●	●	●	●	●	●	●	●	●	●

Visibility of Compliance to Labour & Welfare Laws

2019: All Contractors	Non Compliances
Site Welfare & Transportation	13
First Aid & Clinic	13
Housekeeping and General Sanitation	10
Health	9
Compliance Checks	3
Working Arrangements	2
Personal Protective Equipment	2
Security	1
Emergency & Notice Board	1

Apps Reporting Administration Briefings

Man Hours

Project

Carousel

Year

2019

Show Results Create PDF File Reset Search

2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Community Development												
Seero FI Alardh Carousel Art and Additional Works Package	0	0	0	0	0	0	15600	14500	1250	0	0	0



Steps to Take

1. Provide the technology for all
2. Disambiguate Laws & Regulations
3. Reactive & Proactive
4. Step checks in work flows
5. Alert & notify
6. Provide feedback and review
7. Provide 'Good' news stories



Part 4: Questions