

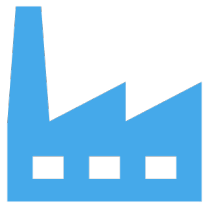


# **IMPROVING WORKER SAFETY WITH COMPUTER VISION AND AI**

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# AGENDA



## WORKPLACE SAFETY

Trends in Singapore and across the world



## COMPUTER VISION AND AI

Current state and challenges



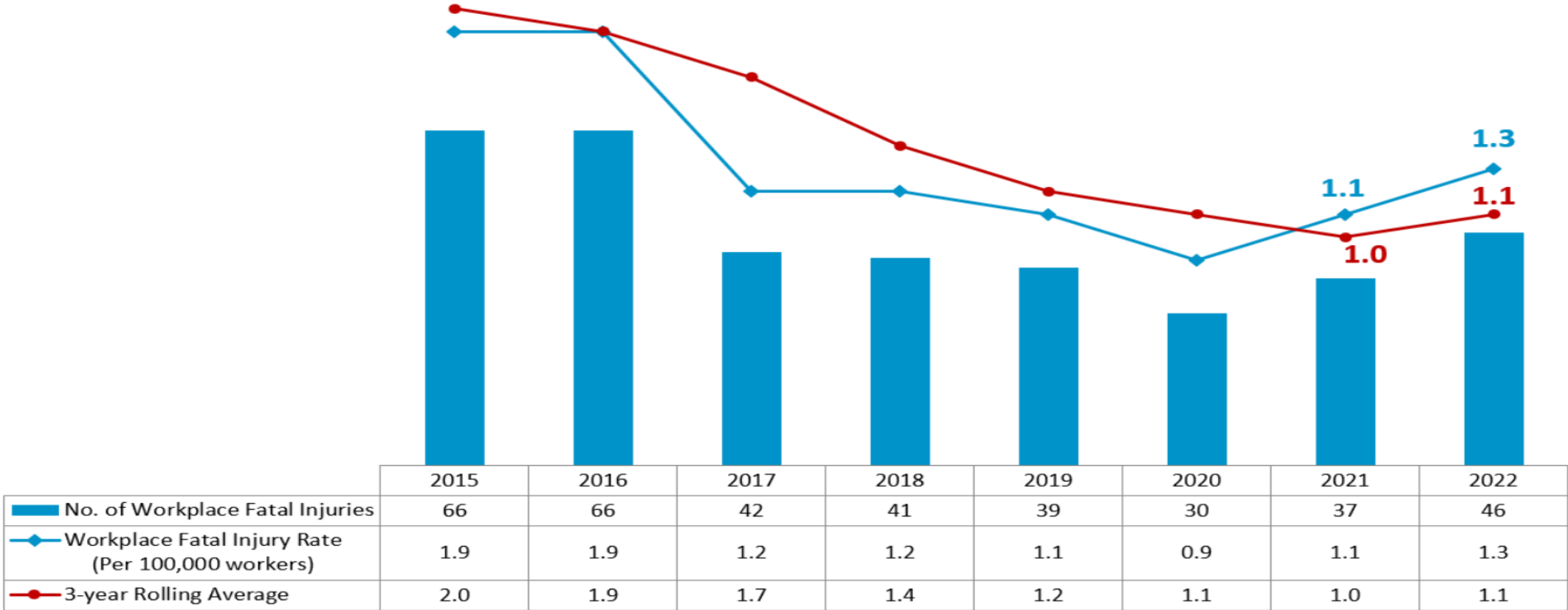
## A BETTER SOLUTION

Generative AI and people centric approach

# **WORKPLACE SAFETY**

**Trends in Singapore and across the world**

# WORKPLACE FATALITIES



# HEIGHTENED SAFETY PERIOD

| Industry                          | Number of Fatal and Major Injuries, 2022 | Change in Monthly Average (Pre-HSP versus HSP) |   |  |
|-----------------------------------|--|--|---|--|
|                                   |  | Fatal  | Major - Type A<br><i>(higher fatality risk)</i> | Major - Type B<br><i>(lower fatality risk)</i> |
| Overall                           | 660                                      | -2.0   | +1.8  | +4.4   |
| Construction                      | 171                                      | -1.4   | -1.0  | -1.0   |
| Manufacturing                     | 129                                      | +0.3   | 0.0   | +0.9   |
| Transportation & Storage          | 70                                       | 0.0  | -0.3  | +2.0   |
| Administrative & Support Services | 57                                       | +0.5   | +1.8  | +1.9   |
| Accommodation & Food Services     | 57                                       | -0.3   | +0.3  | -1.5   |
| Wholesale & Retail Trade          | 41                                       | 0.0  | +0.3  | +1.4   |

Legend: (improved during HSP) -  + (worsened during HSP)

# **GLOBALLY**

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**7,500 workers die on the job every day**

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**3 million lives are lost due to unsafe and unhealthy working conditions**

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**374 million people suffer injuries or health complications**



# WHY

Migrant worker groups urge Government for timeline to stop transporting workers in lorries



Business groups cite 'complexities' in letter to Govt after calls to ban lorries ferrying workers

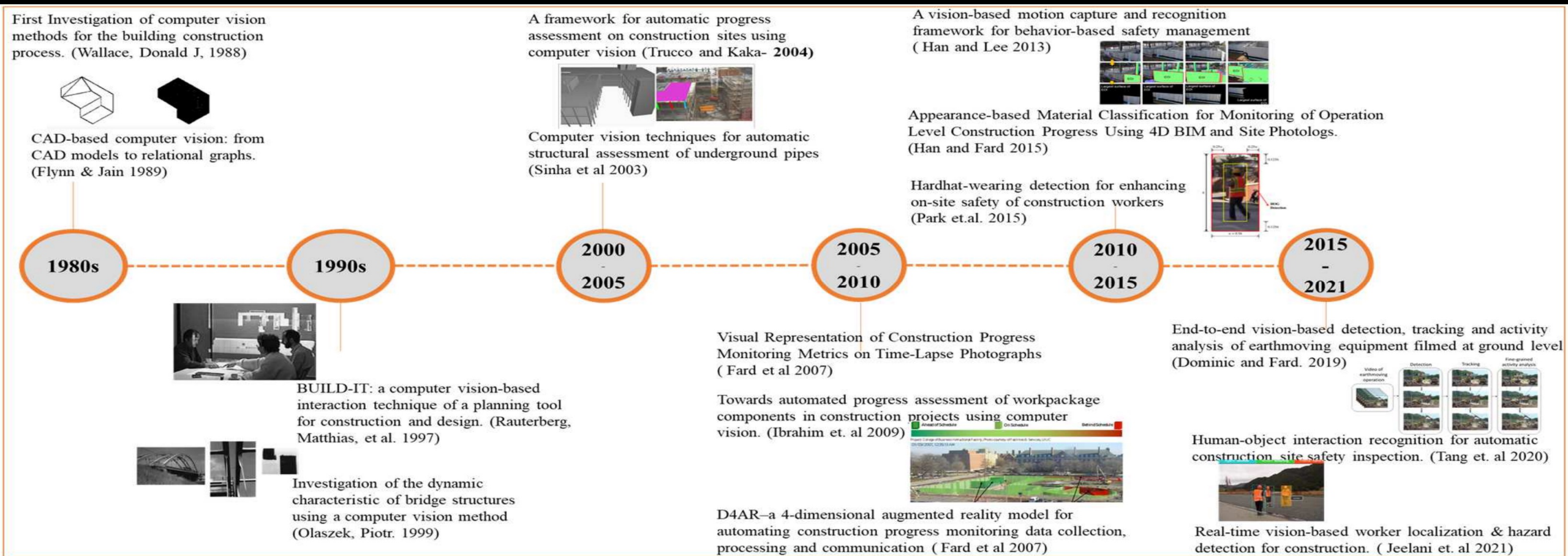


# **COMPUTER VISION AND AI**

**Current state and challenges**



# A BRIEF HISTORY



# MARKET MAP

 intenseye

 Protex AI

 **GOARC**

 viAct

 **INVIGILO**

 **VOXEL**

 **Surveily**<sup>®</sup>



Ailytics

 **NEWMETRIX**

# MYTH OF EXPECTATIONS

## SAFETY PYRAMID

It is far better to be reporting and learning from Near Misses, Minor Incidents and Hazards, where there is little or no loss, than to be reporting actual serious losses.

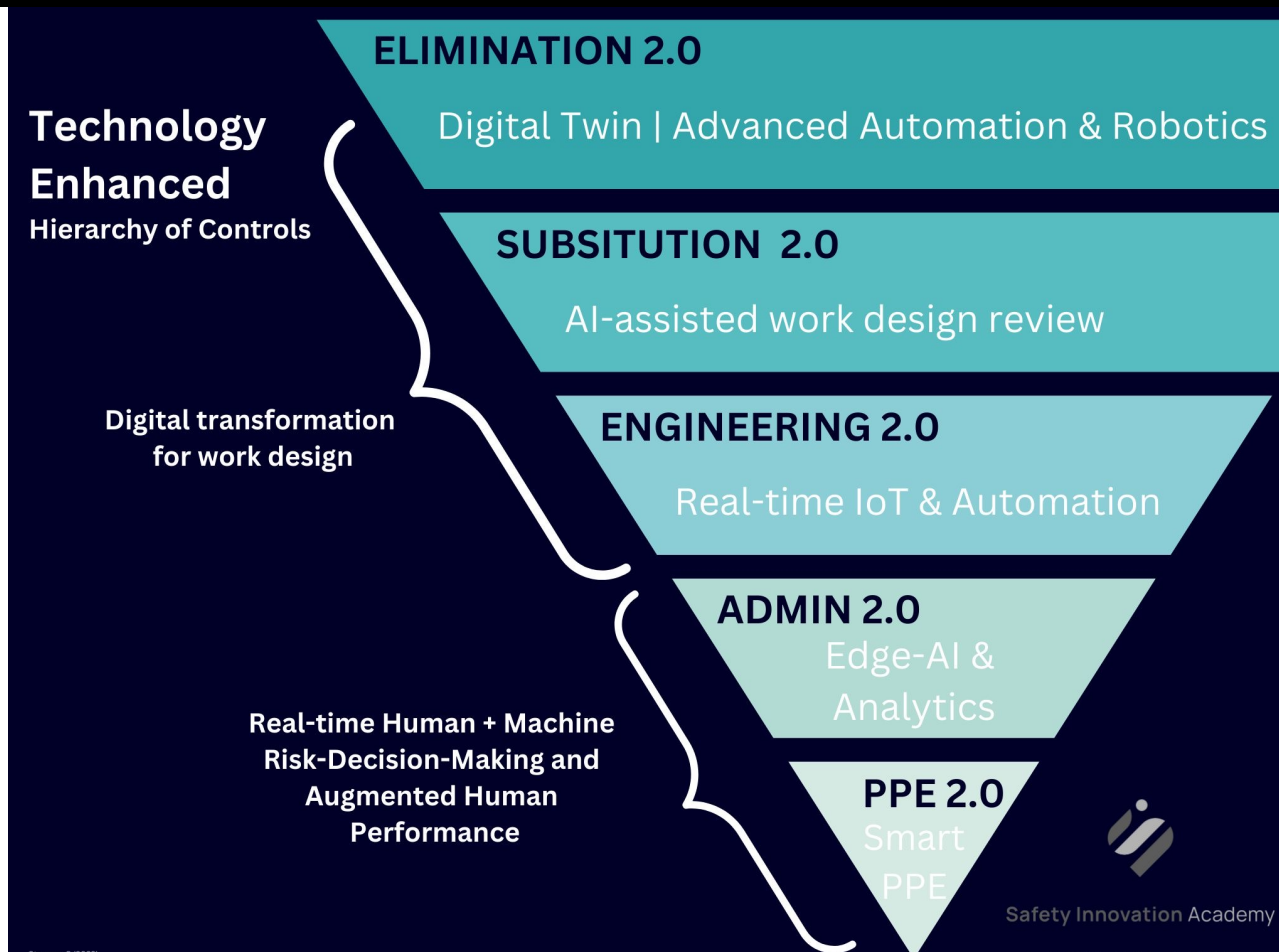


Prevent fatalities without dealing with unsafe acts

Highly accurate alerts without dealing with false positives

Single implementation without dealing with changes

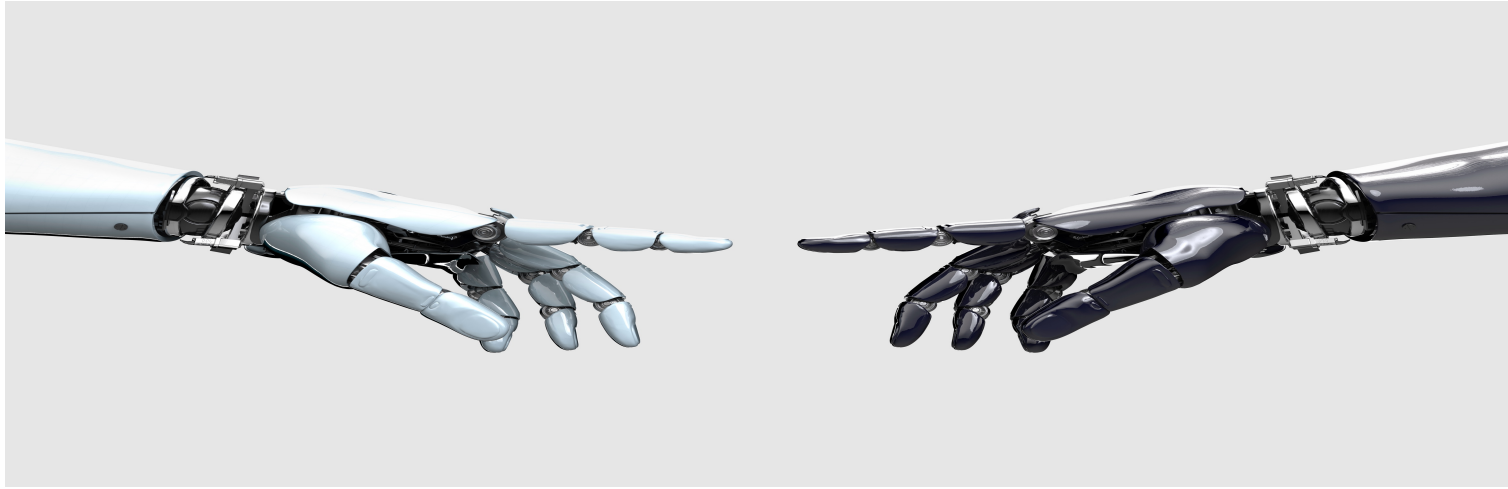
# HIERARCHY OF CONTROLS



Video analytics is just one of the controls

Need to integrate with existing processes and systems

Empower the humans and not replace them



# CHALLENGES

- Lack of customization
- Slow implementation
- High cost



# **A BETTER SOLUTION**

**Generative AI and people centric approach**

# PEOPLE CENTRIC APPROACH



**Worker Will**

**Safer**



**Supervisor Sally**

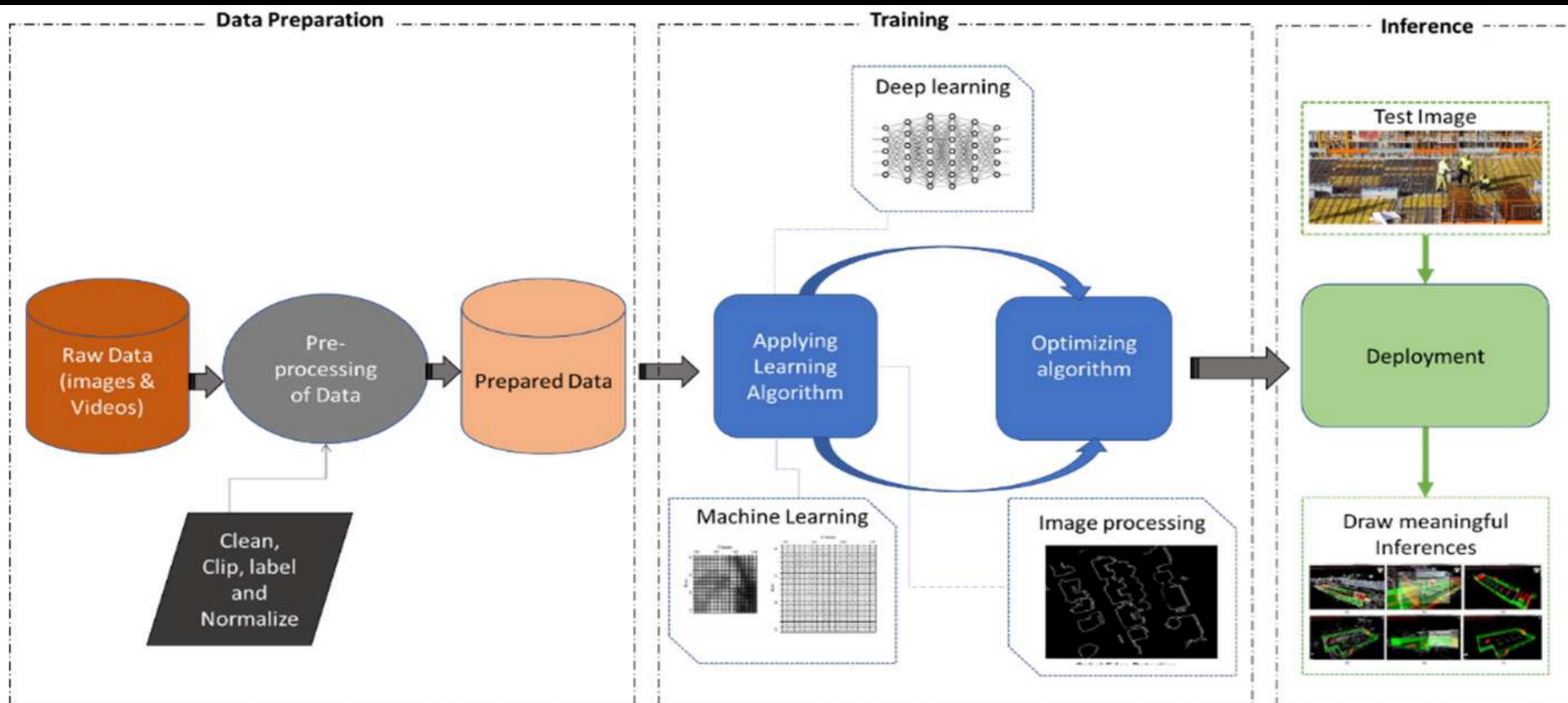
**More productive**



**Manager Mike**

**More efficient**

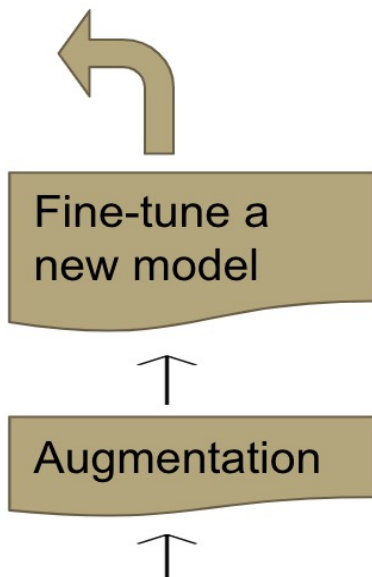
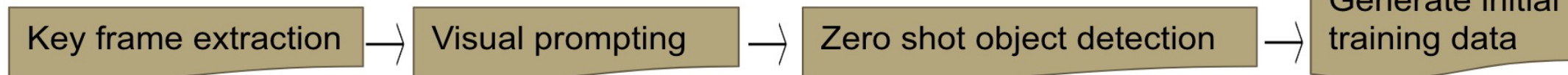
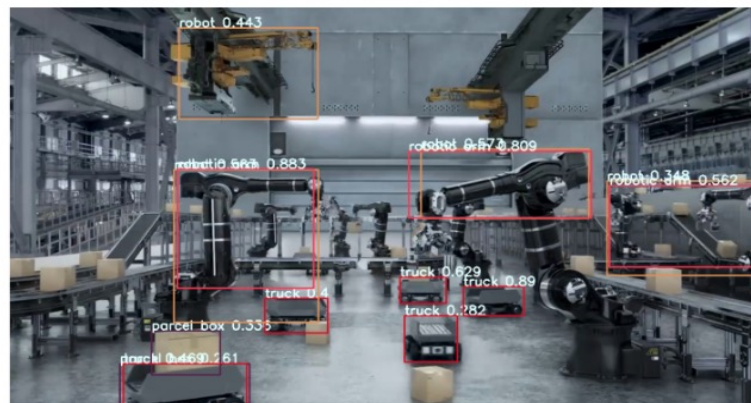
# TYPICAL MODEL TRAINING



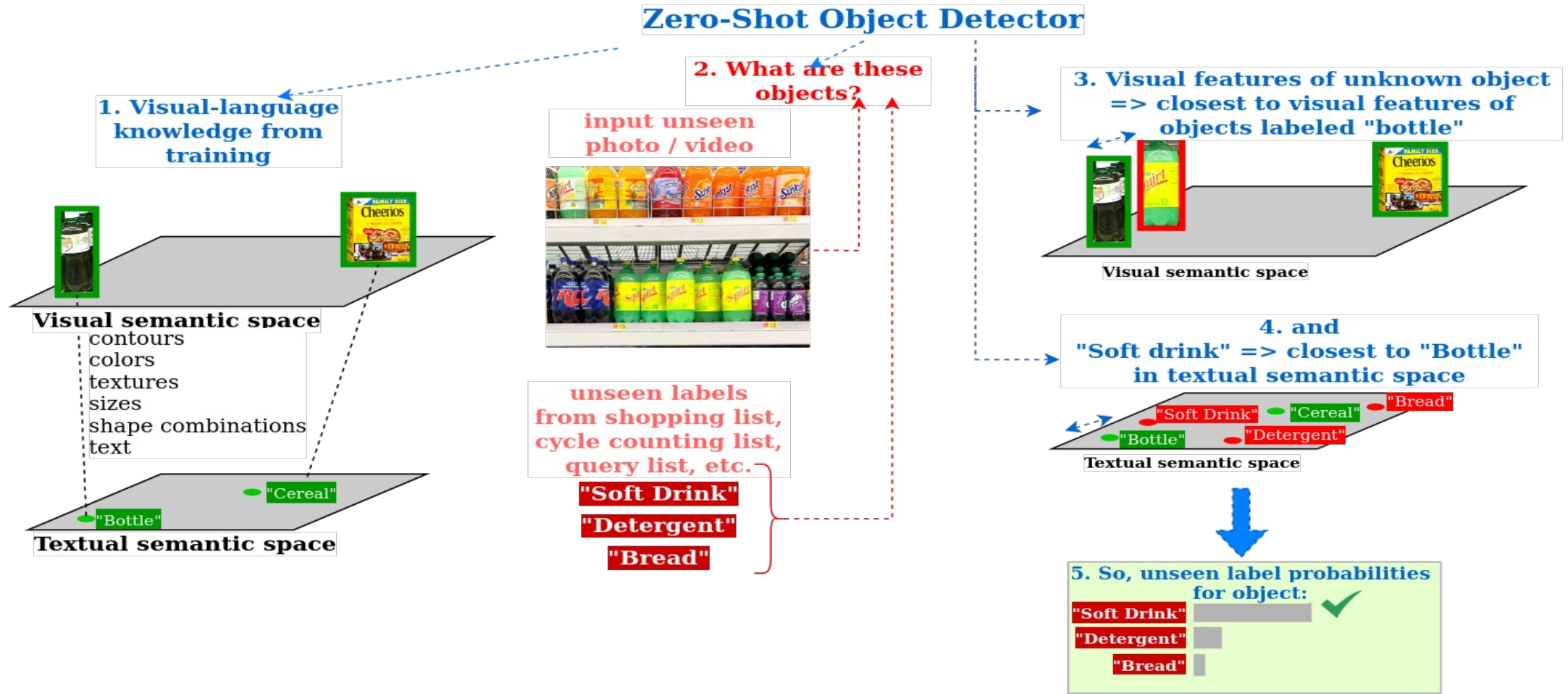
# GENERATIVE AI



Camera/Video



# ZERO SHOT OBJECT DETECTION







**Securade.ai**

# **BENEFITS**

- **Easier Customization (a unique model per camera feed)**
- **Faster Implementation (days instead of weeks)**
- **Lower Cost (> 500% ROI)**

# THANK YOU



**Questions**



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