

URBAN SOLUTIONS AND SUSTAINABILITY R&D CONGRESS 2023

BUILDING SUSTAINABLE, RESILIENT, AND LIVEABLE CITIES OF TOMORROW

4TH - 5TH OCTOBER 2023



FROM RESEARCH TO REAL-LIFE IMPACT - ADVANCED VIDEO ANALYTICS FOR CONSTRUCTION SAFETY AND PRODUCTIVITY

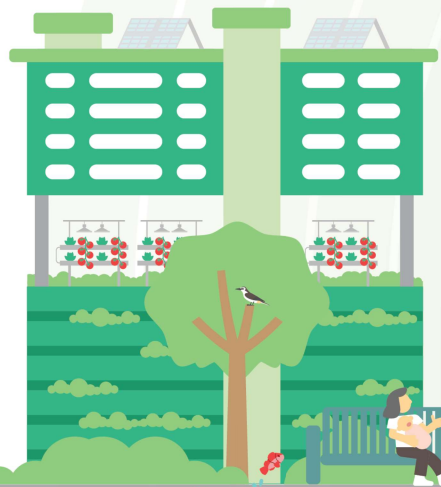
Mr Lenard Tan

Chief Executive Officer
Ailytics



From Research to Real-life Impact

Advanced Video Analytics Solutions for
Construction Safety and Productivity



How can we leverage on existing CCTVs to enhance site monitoring?



Many challenges to overcome



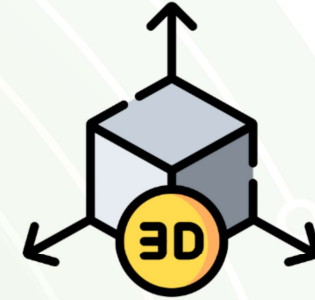
**Lower
Specped
Cameras**



**Outdoor
Conditions**



**Low
Connectivity**



**3D Space
Understanding**

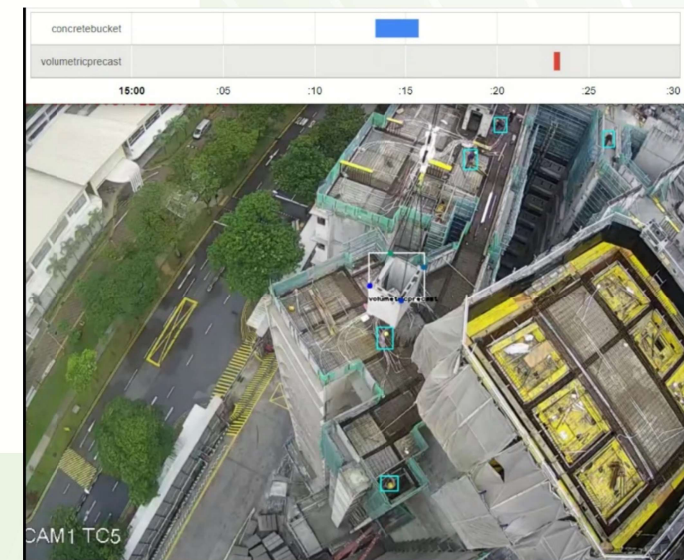


Decent Results, considering to spin off as a startup

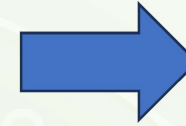
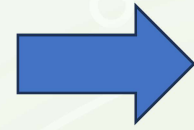
4 Successful testbeds sites with the intention to eventually mandate this as a requirement



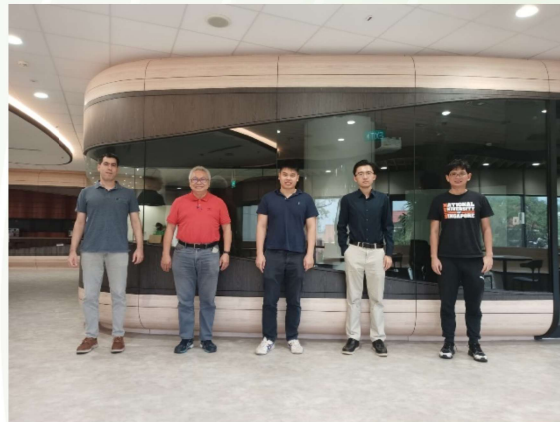
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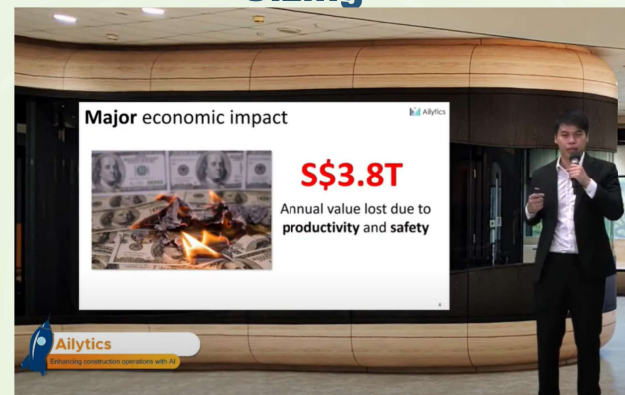
Transition from research to commercialization



**Joined the NUS
Accelerator
3 Months**



**Business
Model
Pricing
Market
Sizing**



**First
Customer**





Things are about to get exciting...



Market, Mishaps, Malfunction



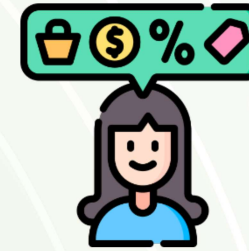
**Non
Production
Or Scalable
code**



**Deployment
issues**



Pricing



**Customer
Expectations**

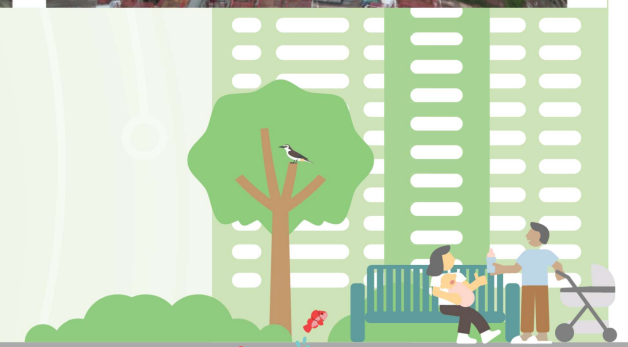
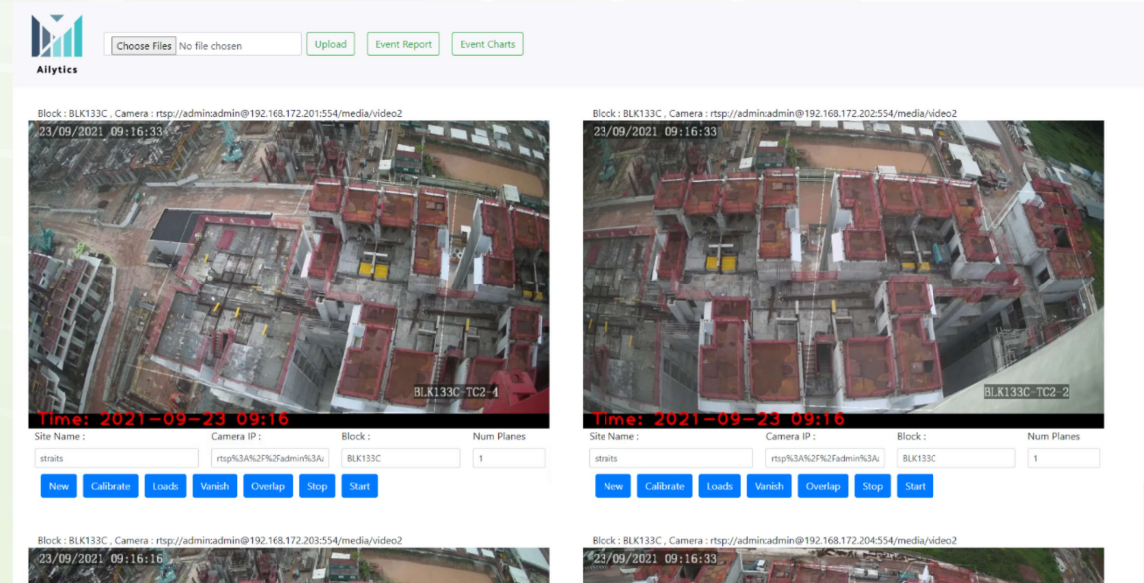




When your wife asks you if you have been up coding all night...



Customer Obsessed , Innovation Driven, Product Focus

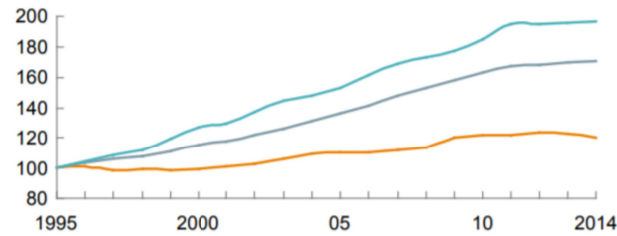


Construction Industry is ripe for disruption

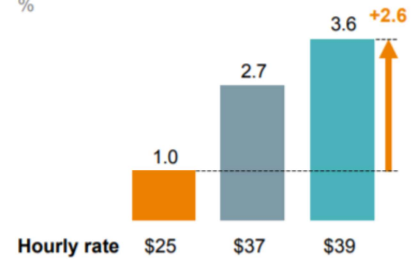
Globally, labor-productivity growth lags behind that of manufacturing and the total economy

Global productivity growth trends¹ — Construction — Total economy — Manufacturing

Real gross value added per hour worked by persons engaged, 2005 \$
Index: 100 = 1995



Compound annual growth rate, 1995–2014 %



¹ Based on a sample of 41 countries that generate 96% of global GDP.

SOURCE: OECD; WIOD; GGCD-10, World Bank; BEA; BLS; national statistical agencies of Turkey, Malaysia, and Singapore; Rosstat; McKinsey Global Institute analysis



1 fatality every 10 minutes



35% of time is spent on non-productive activities

McKinsey Report on Construction Productivity

\$2.8T

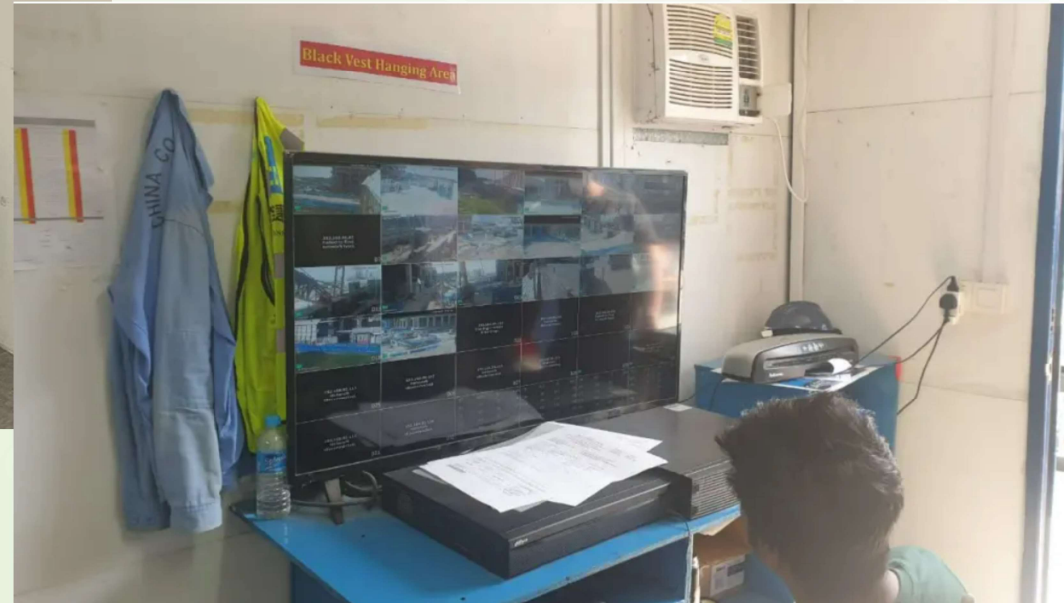
Annual value lost due to operational lapses

Monitoring of Operations is **tedious, costly, and prone to human errors**

What is happening on the ground when no one is looking?



Manual Monitoring At Sites Are Still A Common Theme

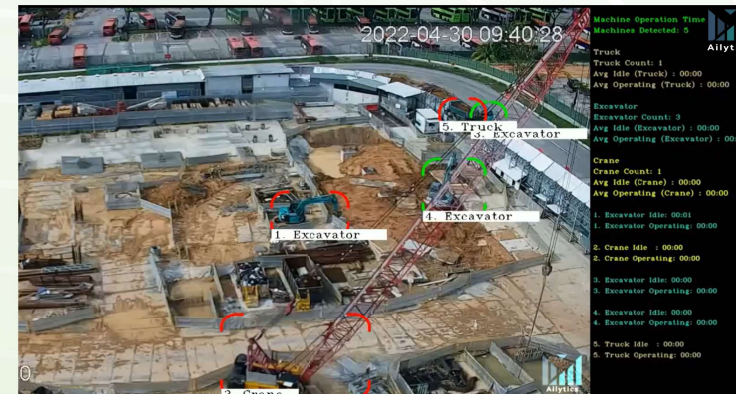


More than 20+ Pre-Built AI modules

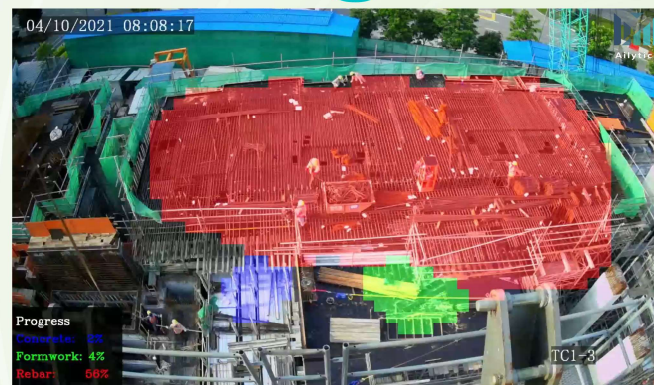
Safety



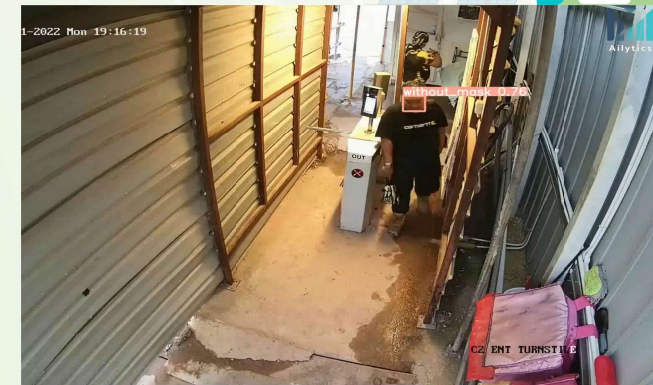
Productivity



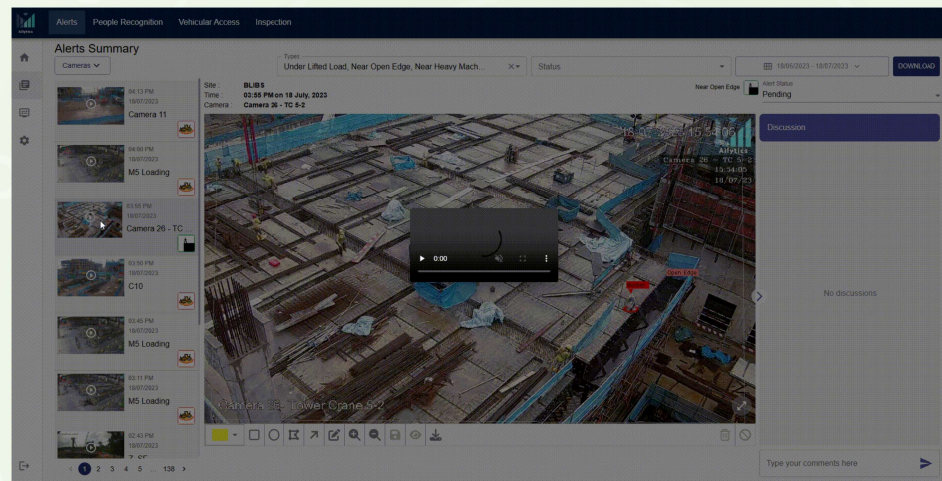
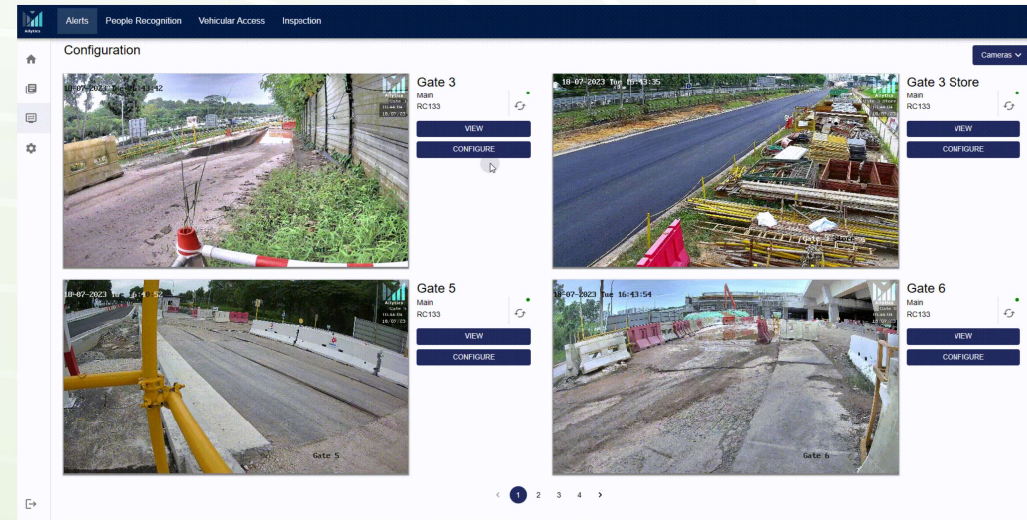
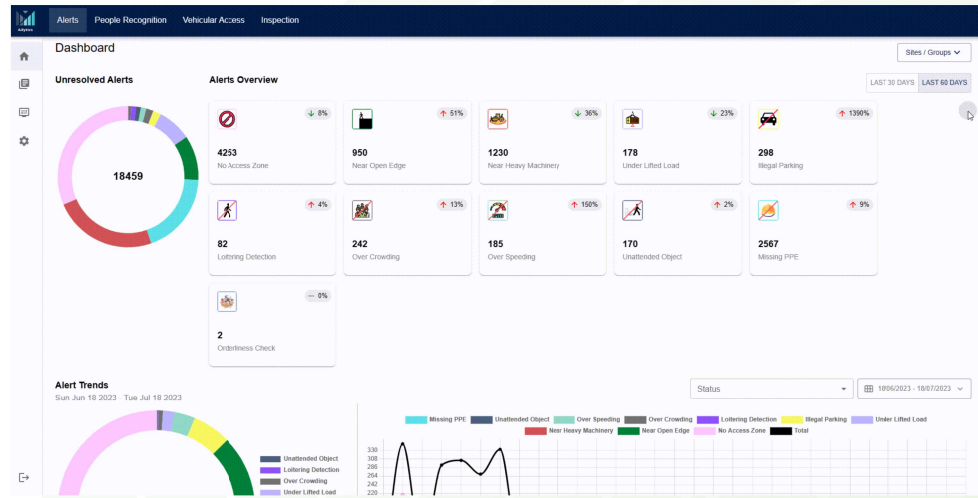
Progress



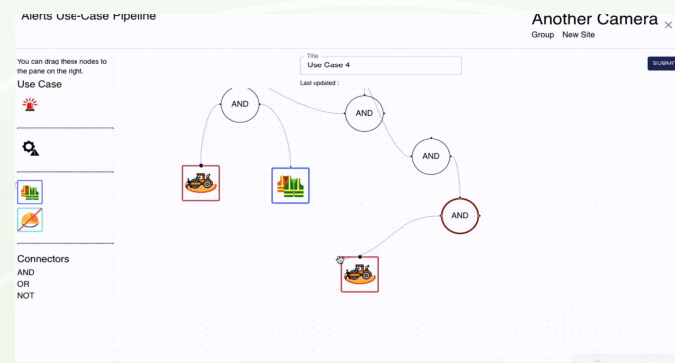
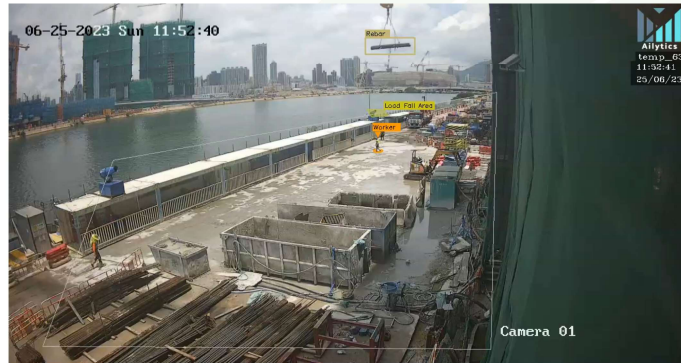
Security



Analyze and Monitor Operations



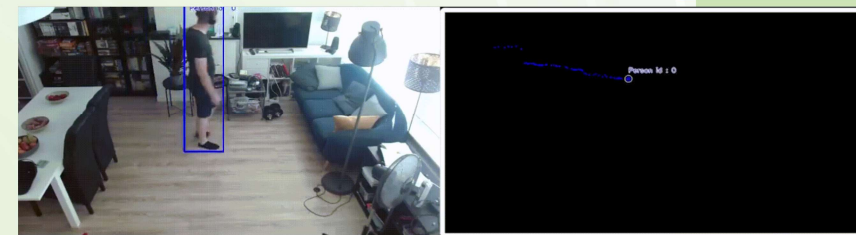
Next Generation Video Analytics



2D to 3D projection from any single camera

Custom Scenario Pipelines

Real-time, Multi Object Tracking through occlusion



Long Range, Harsh, and Dynamic Environment with Low Specped Cameras

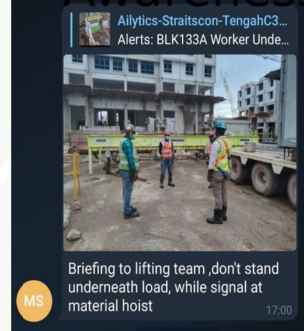
Trajectory and Localization mapping

User Benefits And Usage Of System

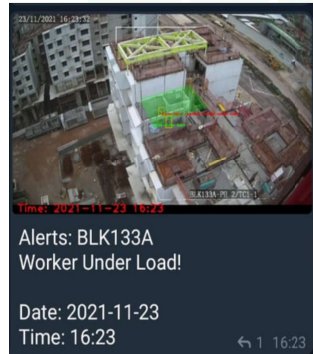
Reinforcement

Loop

Awareness



Alert



Action



Benefits

7x increased hazard detection
20% more efficient

24/7 automated site monitoring and alerts



Outcomes

Subcontractor Performance, Claims, Disputes

Reduction of manual monitoring

Worker onboarding and retraining

Early Identification of risks

Positive operational culture change from the ground up

We have come a long way from then

>40 Active Deployments
in Singapore and Hong Kong

Deployments in
Construction,
Manufacturing, Military

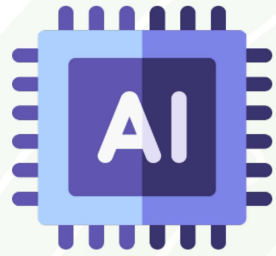
Team of **8 People**



**Statistics show that
only 2% of startups
survive after 5 years.**



Survived the valley of death, time to scale



Product

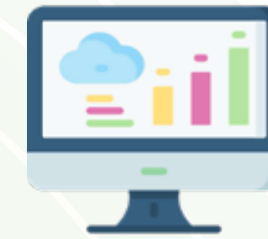
Development

Geographical
Localization, Edge AI
solution, Productivity
Solutions



Expansion

To industrial sectors
and Asia



Integration

Integration with
industry-leading
systems to bring
more value to our
customers



Thank You



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