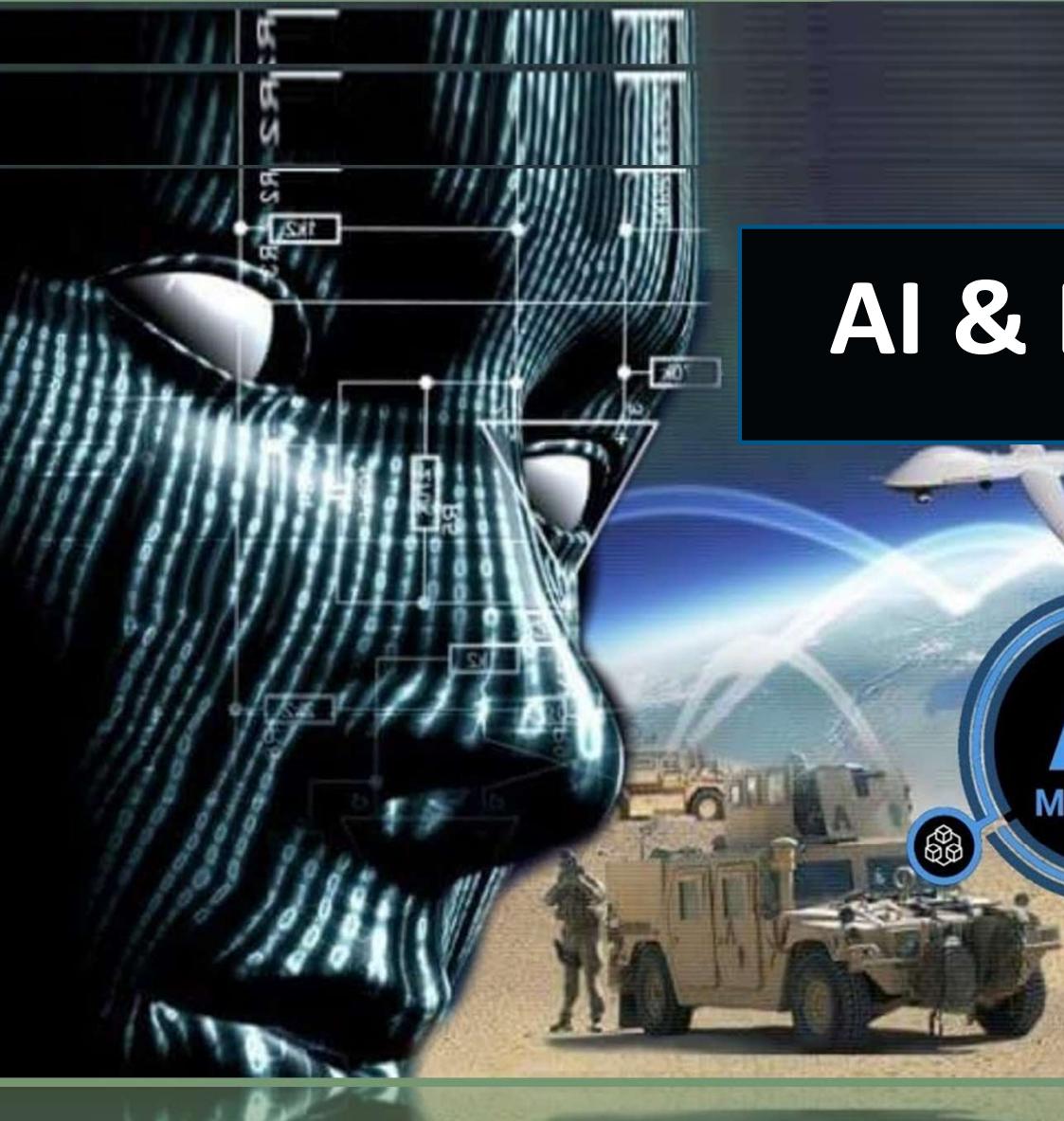




AI & DRONE SOLUTIONS

For
INDIAN ARMY
by
INDIAN ARMY

Prepared by:
Maj Jai Upadhyaya



AGENDA

S. No	TOPIC
1.	Why - Introduction
2.	What - Projects/Systems
3.	How - Way Forward



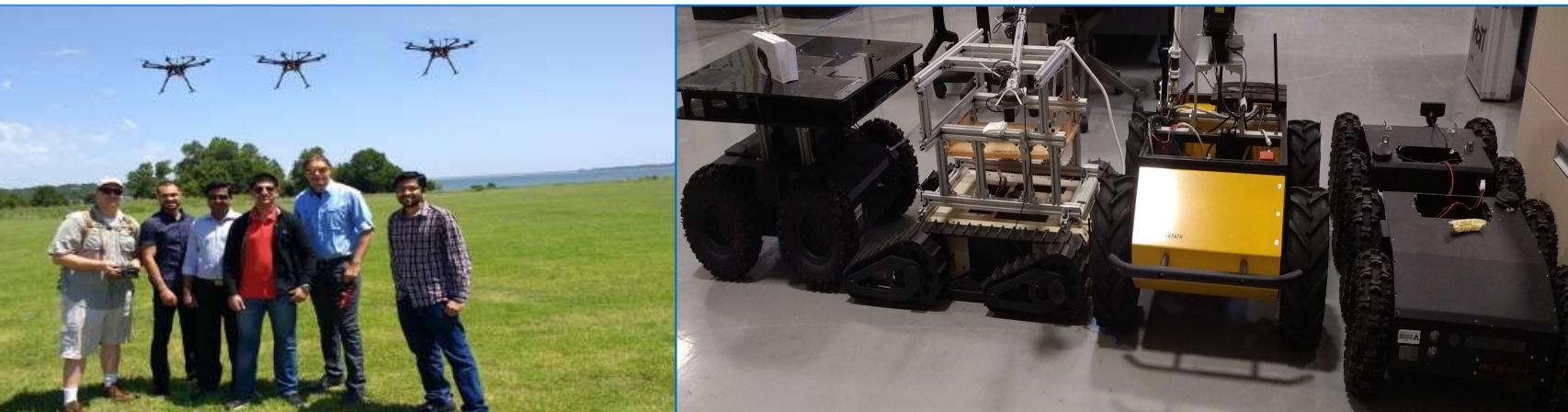


A black and white photograph of a soldier in full combat gear, including a helmet and goggles, crouching in a field of tall grass. He is holding a rifle with both hands, pointing it downwards. The background shows a line of trees under a clear sky.

WHY - INTRODUCTION

INTRO - CIV

- 1. Education :** Masters in MIS & Unmanned Systems from University of Texas, USA
- 2. R&D Lead :** AI & Drone at UTARI, USA. Foremost institute for Def & dual-use research in partnership with Lockheed Martin
- 3. Awards :**
 - (a) 2nd position at AI image analysis challenge, Kaggle (Google) - 2021
 - (b) Awarded best unmanned system at International Robotics Conclave - 2019
 - (c) Represented India at International Mechanical Engineering Seminar - 2017



INTRO - CIV

1. R&D Expertise : 13+ Years of R&D experience at top global research labs



2. Projs : Successfully impl proj for various mil/def establishments



INTRO - 4th GENERATION



BRITISH INDIAN ARMY



INDIAN AIRFORCE



INDIAN ARMY
(6 JAK RIF)



INDIAN ARMY
(116 PARA TA)



WHY - CHALLENGE

- India is the largest def importer in the world*
- 50-55% of foreign eqpt profile
- IA 85-90% SW devp externally

The Cavalry Aint Coming, You Can Only Depend on Yourself.



Sundar
Pichai

Google



Satya
Nadella

Microsoft



Shantanu
Narayen

Adobe



Arvind
Krishna

IBM



Ajaypal Singh
Banga

Mastercard

START



PROG



PROG



KEY PRESENTATIONS/DEMONSTRATIONS 2023

CCC, Bhopal
28 Mar - 01 Apr 2023



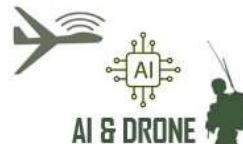
Army Commanders' Conference 2023



COMBINED COMMANDERS' CONFERENCE 2023

READY RESURGENT RELEVANT

ACC, Delhi
15 Apr - 18 Apr 2023



VIPs ARMY



VIPs AIR FORCE



DEFENCE MINISTER



DEFENCE AI INITIATIVE



Union Defence Minister **Rajnath Singh** launched
75 newly-developed
AI-enabled defence products

PRIME MINISTER



PRIME MINISTER



PRESIDENTIAL AUDIENCE

- Prime Minister
- Defence Minister
- Governor, Uttarakhand
- NSA
- Chief Minister, M.P
- CDS
- COAS
- CAS
- CNS
- CnC, SFC
- DCIDS
- DGMO
- GOC-in-C, NC
- GOC-in-C, WC
- GOC-in-C, CC
- GOC-in-C, SWC
- GOC, 2 Corps
- GOC, 16 Corps
- GOC, 15 Corps
- GOC, 21 Corps
- ADG, ADB
- Director, DRDO

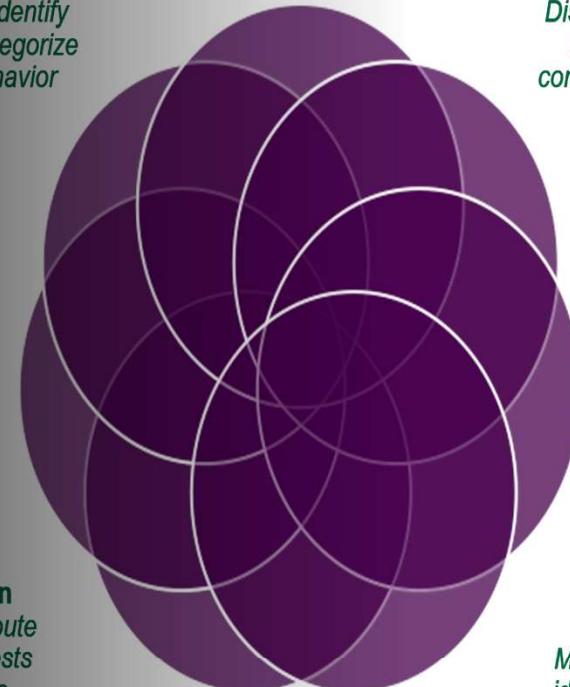




WHAT - PROJ/SYS

AI & DATA OVERVIEW

Machine Learning



Clustering

Detect fraud, identify risk factors, categorize customer behavior

Inferred Relationships

Automatically discover implicit facts in your data

Auto-Classification

Automatically route incoming requests to appropriate channels

Predictive Analytics

Customer retention, risk modeling, predictive maintenance

Recommendation Engine

Discover new content and information based on context at the point of need

Natural Language Processing

Simplify user experience, bring data closer to business users

Image & Shape Recognition

Digital Asset Management, product identification, security, intelligence

AI OVERVIEW

Artificial Intelligence

- Alexa, Facial & Speech Recog

Generative AI

- Chat GPT, Bard

Artificial General Intelligence

- IBM's Watson/Terminator

Past : AI is a system that can perform specific/one tasks well, it is aimed at creating predictive AI that is focused on analyzing data and making predictions about future events within rules. **Narrow AI.**

Present : Generative AI generate outputs from **prompts in simple language** that resemble human-created content. Designed to learn from training data that includes examples of the desired output.

Future : AGI is intelligence of machines that allows them to comprehend, learn, and perform intellectual tasks much like humans and beyond domains.

AI & DATA FLOW – FRONT END

AI Engine:

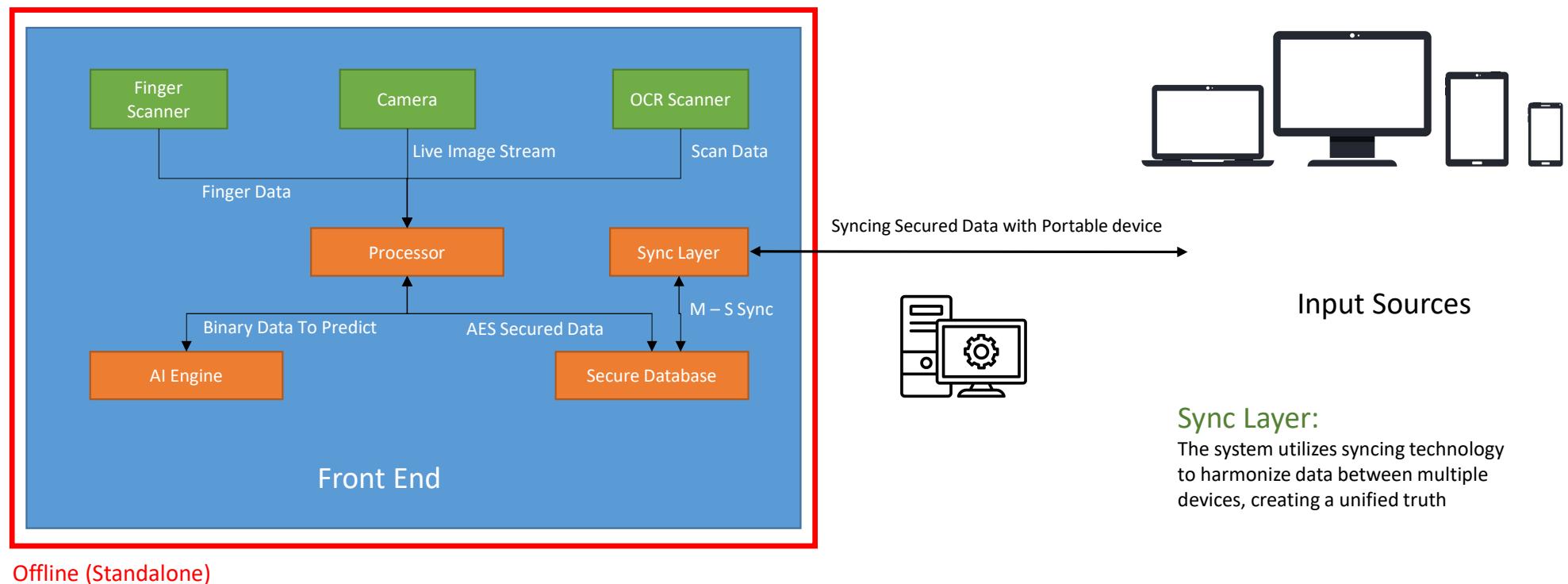
The system's intelligent core that identifies individuals through face image, fingerprint, or both, seamlessly integrating data intake and processing

Processor:

The hub of the system, executing the main code to manage inputs from various components, and providing the user with a Graphical User Interface.

Secure Database:

The system features a serverless standalone database, storing AES 256-Bit Encrypted data, with the capacity to securely hold a large amount of data.



Sync Layer:

The system utilizes syncing technology to harmonize data between multiple devices, creating a unified truth

AI & DATA FLOW – BACK END

AI Engine:

The system's brain, intaking data from marts to predict, analyze, and generate comprehensive reports

Processor:

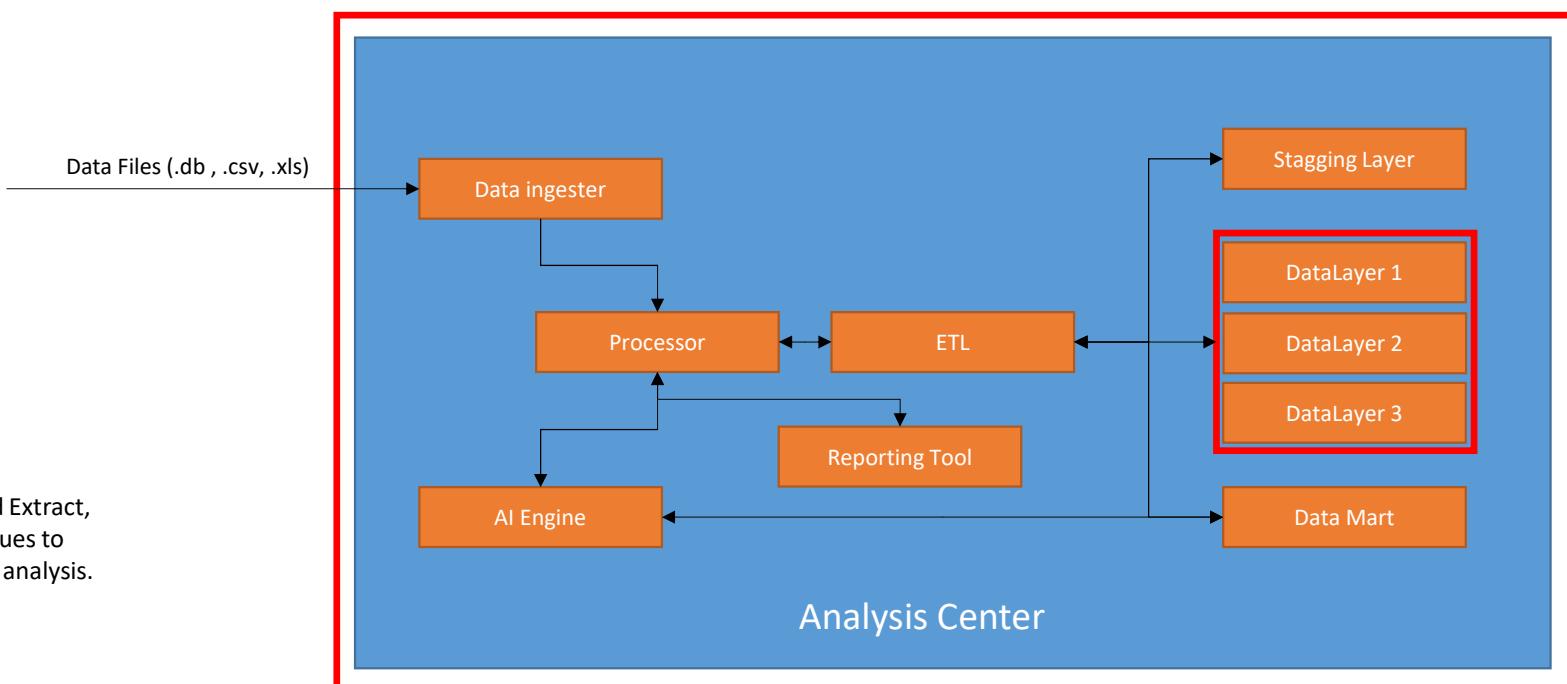
The central hub housing the main code to process inputs from various components and facilitating a Graphical User Interface for users

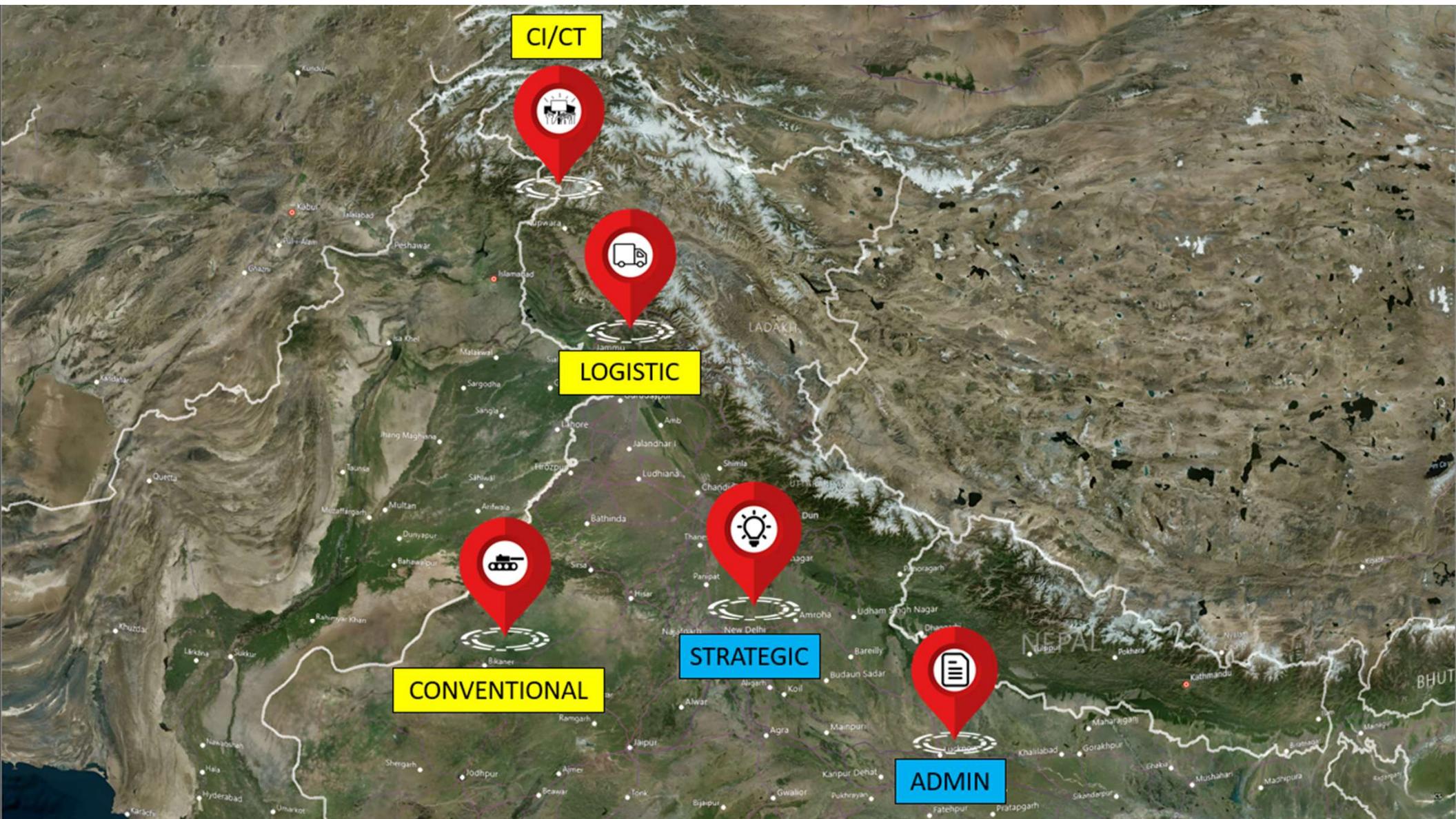
Secure Data Mart:

The system includes a standalone data mart, storing AES 256-Bit Encrypted data, with the capacity to accumulate and hold a large amount of data over the years.

ETL Layer:

The system integrates advanced Extract, Transform, and Loading techniques to optimize data warehousing and analysis.







CI/AREA SECURITY

A dark background featuring several translucent, wireframe-style geometric shapes, including spheres and cubes, which appear to be composed of numerous thin lines. These shapes overlap and are positioned in the upper half of the frame.

SEEKER SECURITY SYSTEM

SEEKER

1. Overview “Seeker” - Self-contained AI & facial recognition, svl & population monitoring sys. That creates a movement and contact map for tracking ANEs

2. Advantages/Impact -

- (a) **Expose targets** - Limits the ability of trts and OGWs to hide amongst civ
- (b) **Psy ops** - Fear of discovery, constant svl & restricts use of social media by trts for propaganda
- (c) **AI Int analysis** - AI enabled analysis of historic & mapping of mov/contacts
- (d) **Continuity of data** - Digital data repository for institutional memory

3. Status - Pilot sys trial at CP KM28, 16 RR, CIF (R) **successfully operating** since Sept 2022.

- 27 sys approved for estb of **comprehensive svl grid** in CIF (R), 16 Corps.

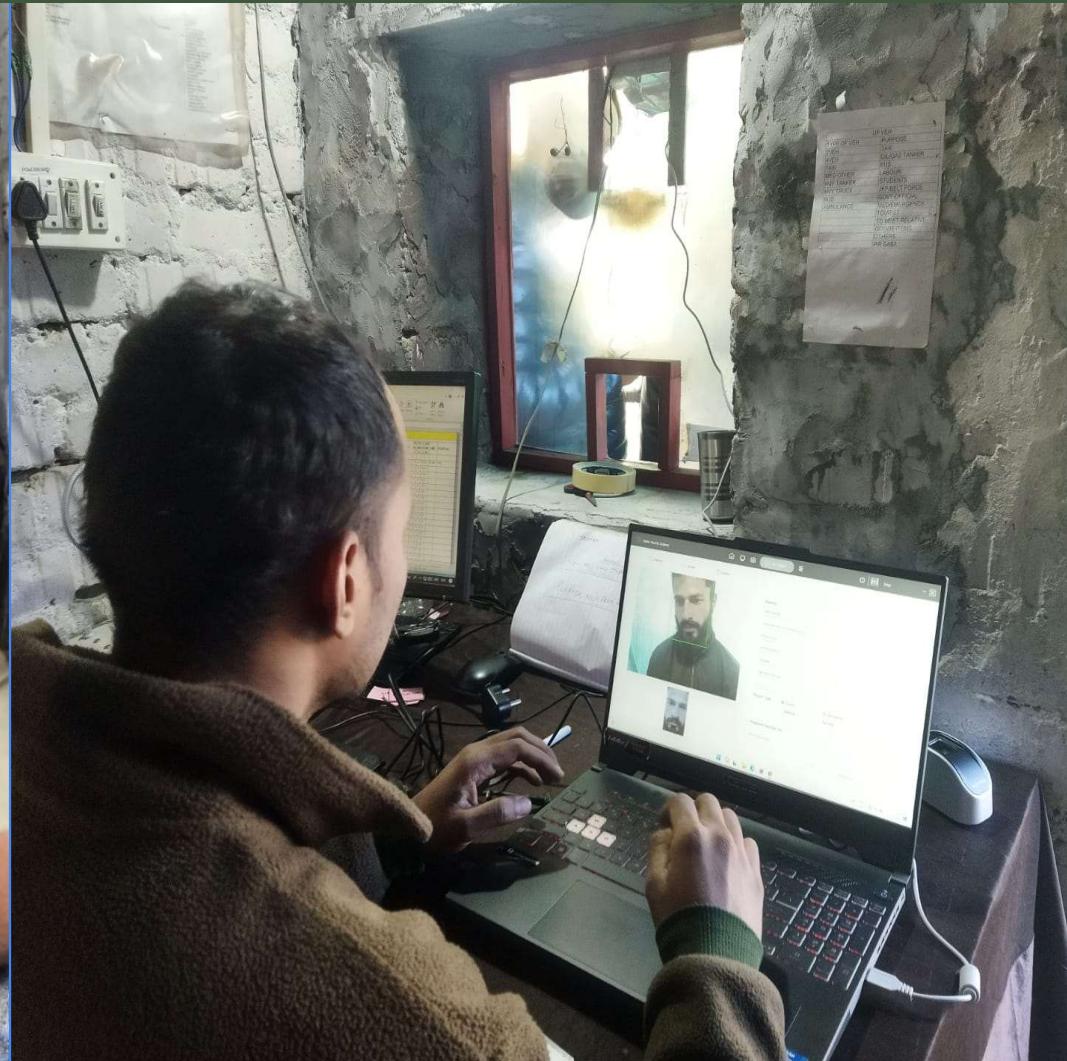
Automated Integrated Threat Monitoring



SUCCESSFULLY IMPLEMENTED SYS



SUCCESSFULLY IMPLEMENTED SYS



SUCCESSFULLY IMPLEMENTED SYS



SUCCESSFULLY IMPLEMENTED SYS





AREA DOMINATION & TRACKING



DATA ANALYSIS : AI ENABLED SOFTWARE

INT ANALYSIS Alert

Steve Jection Steve

1 Input Screen 2 Call Record Analysis 3 Check With REF Module 4 Possible Identification of POI 5 Analytics

Search Criteria

```
graph TD; Shahzad[Shahzad  
Mob No:9541716709] --> Aamir[Aamir  
Mob No:9876543212]; Shahzad --> Mryam[Mryam Begum  
Mob No:9541716701]; Shahzad --> Mudassir[Mudassir Teli  
Mob No:9541170770]; Aamir --> Ravi[Ravi  
Mob No:9876543212  
Ravi vs Siraj > 5 Calls]; Aamir --> Samir[Samir  
Mob No:9876543210  
Samir vs Varun > 10 Calls]; Mryam --> Ali[Ali  
Mob No:9876543210  
Ali vs Alam > 5 Calls]; Ali --> Alam[Alam  
Mob No:9876543210  
Alam vs Ali > 5 Calls]; Ali --> Sharma[Sharma  
Mob No:9876543210  
Sharma vs Ali > 2 Calls]; Ali --> Ajmal[Ajmal  
Mob No:9876543210  
Sharma vs Ali > 2 Calls]
```

Aamir
Mob No:9876543212

Ravi
Mob No:9876543212
Ravi vs Siraj > 5 Calls

Samir
Mob No:9876543210
Samir vs Varun > 10 Calls

Mryam Begum
Mob No:9541716701

Ali
Mob No:9876543210
Ali vs Alam > 5 Calls

Alam
Mob No:9876543210
Alam vs Ali > 5 Calls

Sharma
Mob No:9876543210
Sharma vs Ali > 2 Calls

Ajmal
Mob No:9876543210
Sharma vs Ali > 2 Calls

Mudassir Teli
Mob No:9541170770

AI & DRONE

DATA ANALYSIS : AI ENABLED SOFTWARE

INT ANALYSIS

Steve Jection

Dashboard

Input Screen

Manage People

Manage Vehicles

Documentation

Log Out

FAQs

Alert

Steve

5 Analytics

Brief Background

X

AOI	Past Activity	Recent Trace	Police Station	Detls	DOI
Kupwada	Involved in gun fight at Bandipura	Seen at Handwara	Sopore	S 12 10 01 02 x PTs UI mov reported near Ground No.1 Ampur (MT2341) (HG 2398) at 1134 h on 21 Jan	21 Jan

Possible Area

Close

Umar Farooq
Outfit: Al badr
Cat: A++
Reliability of Source - B
Credibility of Int - 1

Kupwara

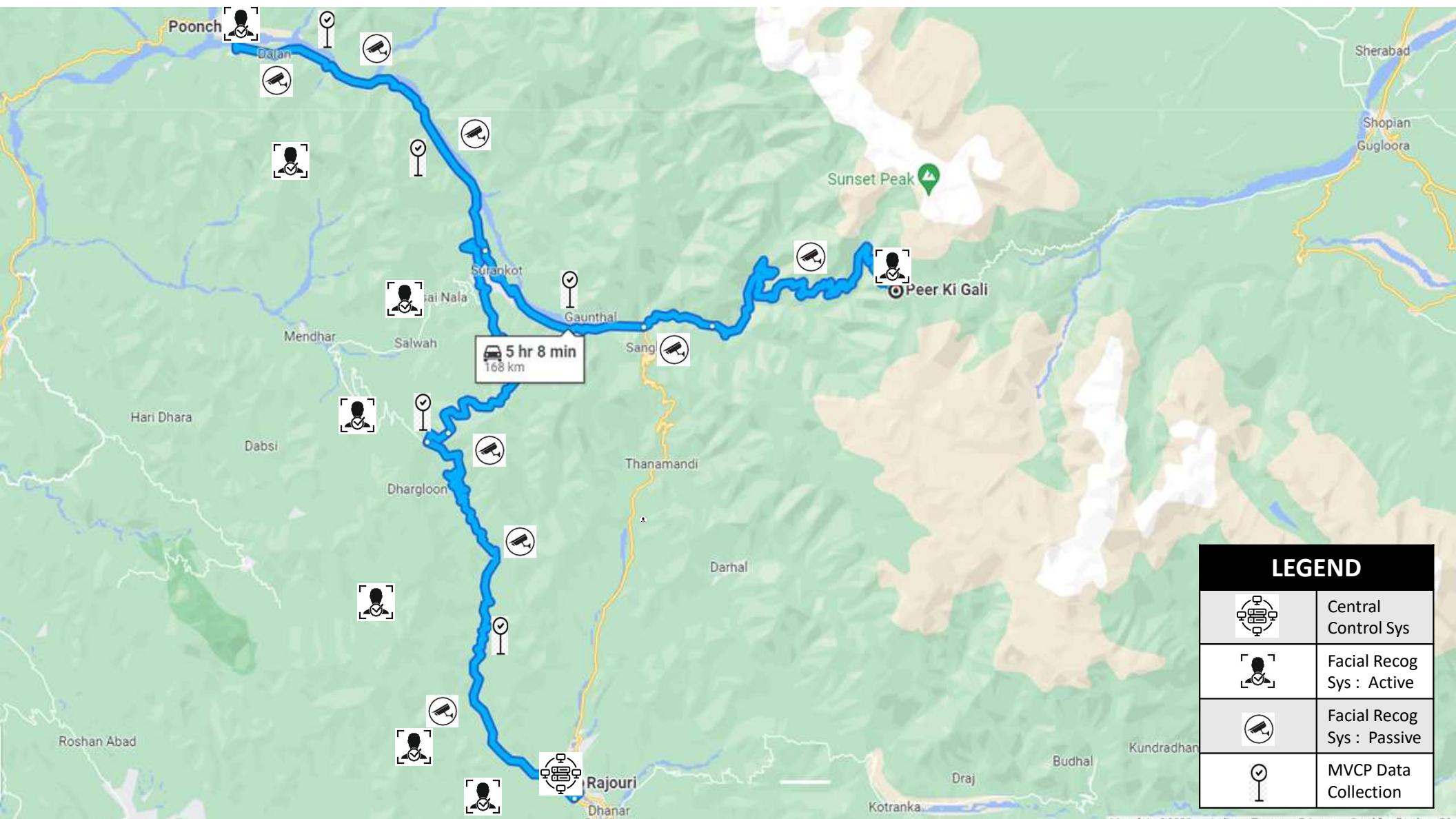
Abdul Dar
Outfit: Al badr
Cat: A
Reliability of Source - A
Credibility of Int - 1

ITI Kupwara

JAMIA QADEEM

Previous

Save And Continue





STORM DRONE



STORM DRONE

- 1. Overview “STORM DRONE”** - AI assisted drone for iden and neutralization of targets during RI/building clearance ops and svl in BUA.
- 2. Advantages/Impact -**
 - (a) **Op in GPS denied areas** - BUA(bldgs & basements), forested areas, valleys etc.
 - (b) **Single iden & kill sys** - Able to iden & eliminate treats with both lethal and nonlethal payload
 - (c) **Multi feed** - Provides all cdrs and assault teams with simultaneous live feed for svl and decision making
 - (d) **AI room mapping** - Creates 2D room layout for planning ops
- 3. Status** - Successful user trials with 9 PARA (SF) & under procurement through ACSFP

Automated Room Intervention



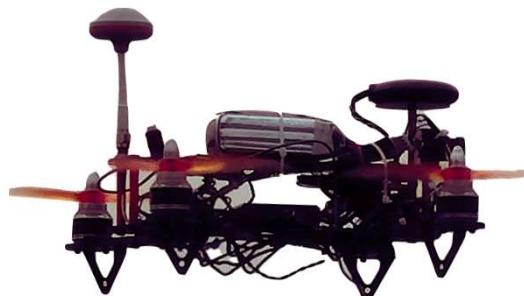


Storm Drone

Autonomous Room Intervention Drone

AUSTRA HIND 22

INDIA'S STORM DRONE COMPETING WITH BLACK HORNET



STORM-DRONE

Storm Drone had been invited to participate in the Austra-Hind 2022, India-Australia Joint Military Exercise in Rajasthan, and is proving to be a worthy competitor to the acclaimed Black Hornet, delivering better capabilities in **indoor operations**



BLACK HORNET

12,000+ Black Hornet drones (developed by Prox Dynamics AS of Norway) have been delivered to NATO and its Allies.

The banner features the Defence Daily logo, social media icons, and the text "India-Aus Is Gearing Up For Joint Military Exercise" and "AUSTRA HIND 22". It also includes a "MAKE IN INDIA" slogan with a wrench and gear icon, and a small PBNS logo in the top right corner. Below the banner is a graphic featuring the Indian and Australian flags and silhouettes of soldiers, with the text "EX AUSTRAHIND 2022" at the bottom.



UTC: 14JUL23 06:35:55

⌚ FLT: 00:03:19

UAV Mode: RTL

RUDRA RAKSHAK

SMART COB



ZOOM(0): 1x ZOOM(D): 1x
PAN: -7° TILT: -63° HFOV: 63.7°

UVAV 33.50709 N 74.24991 E SPEED 001kmph DTH 0.0k TGT: 33.50720 N 74.24984 E
AMSL 1267m HDG 338 BRG: --- AGL 33m AHL 67m AMSL: 1234m SR: 0030m

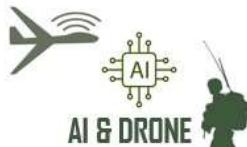
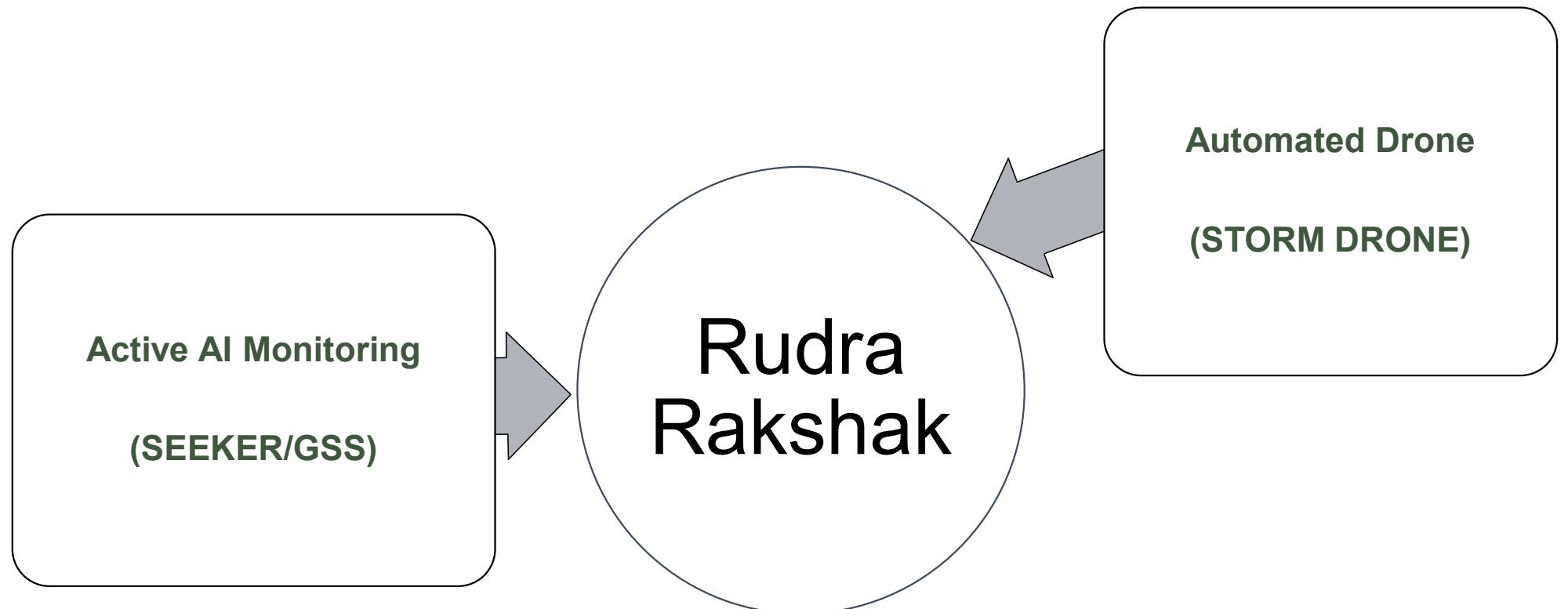
RUDRA RAKSHAK

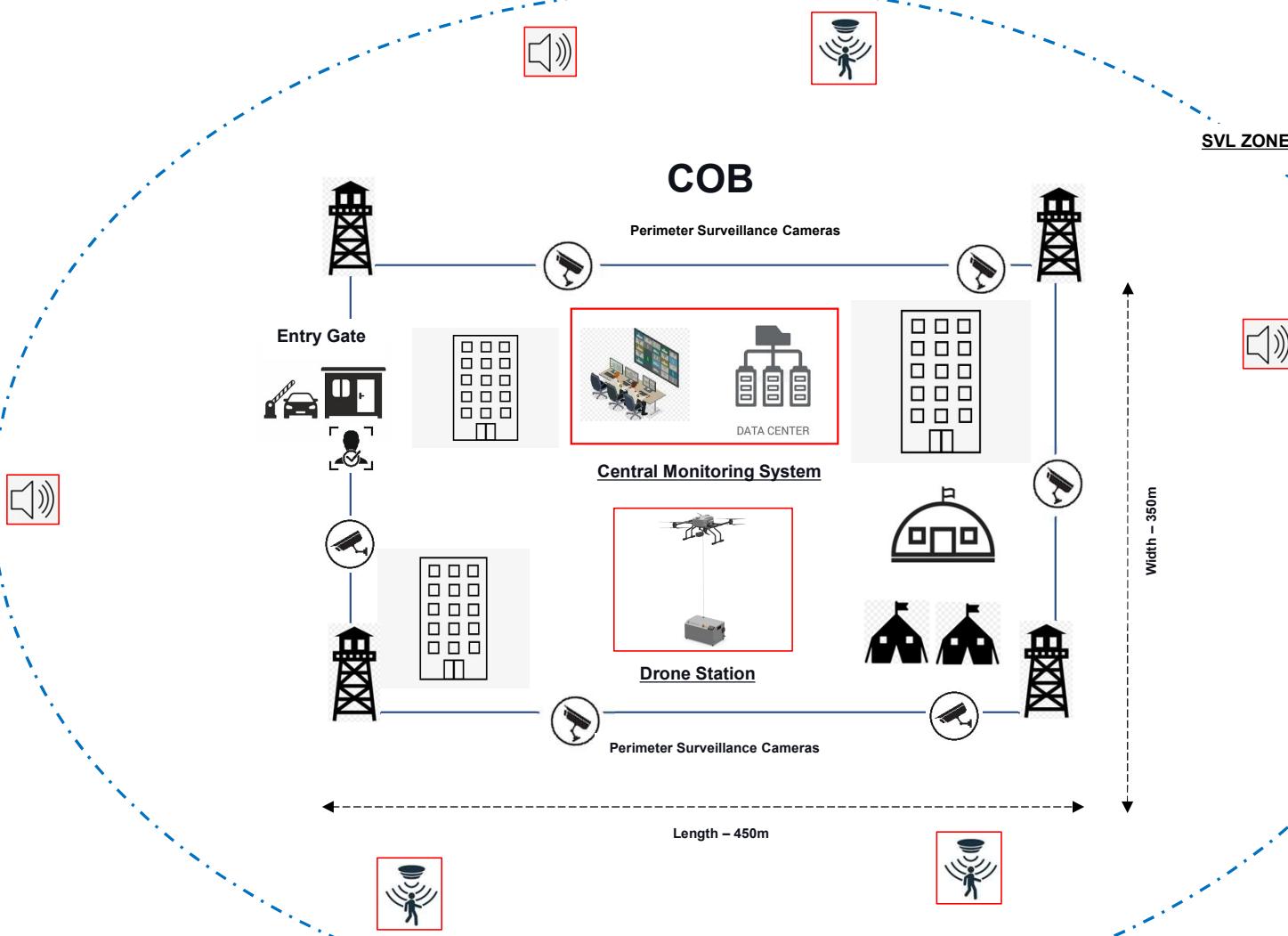
- 1. Overview “RUDRA RAKSHAK”** - “One who drives away evil” – Is an integrated Proactive Security System that uses AI to monitor inputs from various svl eqpt, identify threats, issue alerts and carry out automated response by drones.
- 2. Advantages/Impact -**
 - (a) Continues Automated Monitoring** – AI continuously carries out monitoring of all inputs from svl eqpt.
 - (b) Integrated Action** - Alerts sent to all teams (QRT, Post, GD Cdr) and Drone system
 - (c) Automated Quick Response** – Automated Drone team reaches loc to track and provide situational awareness
- 3. Status – Awaiting AON**

Integrated COB Security & Response



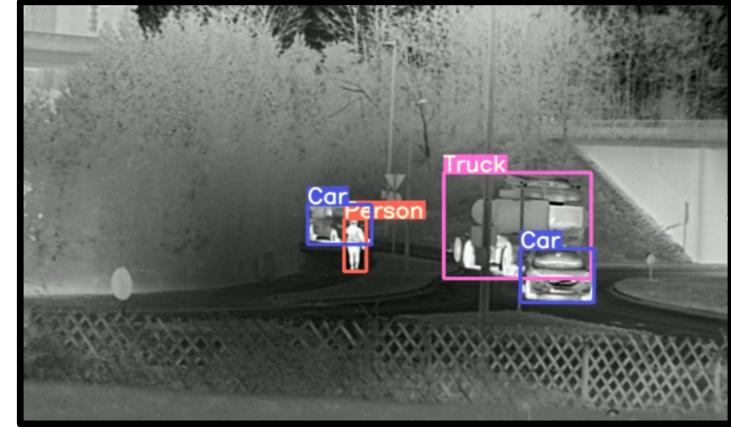
RUDRA RAKSHAK OVERVIEW





LEGEND	
	Svl Camera
	UGS/Beam/ Light
	Acoustic Sensor
	Facial Recog Sys

CONCEPT OVERVIEW



Alarm Time	Gateway-Unit	Alarm Type
05/03/2020 12:56:43	HUB 3-Unit3	Intruder Walk
05/03/2020 12:56:20	HUB 3-Unit3	Intruder Walk

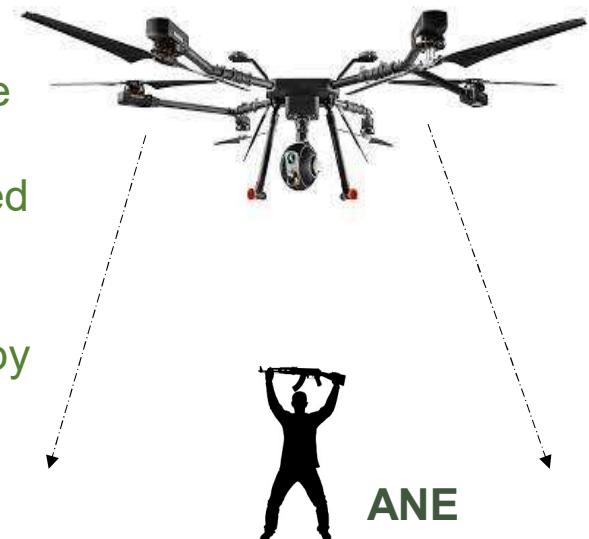
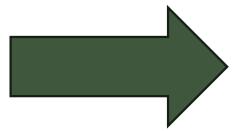
- Inputs received from all sensors
- Identification of threats by AI
- Alert sent to Drone station and QRT



CONCEPT OVERVIEW



- Auto takeoff by drone
- Geofenced automated flight to alert location
- Monitoring of threat by drone



DRONE SYSTEM



Ground Control Station



Drone Station

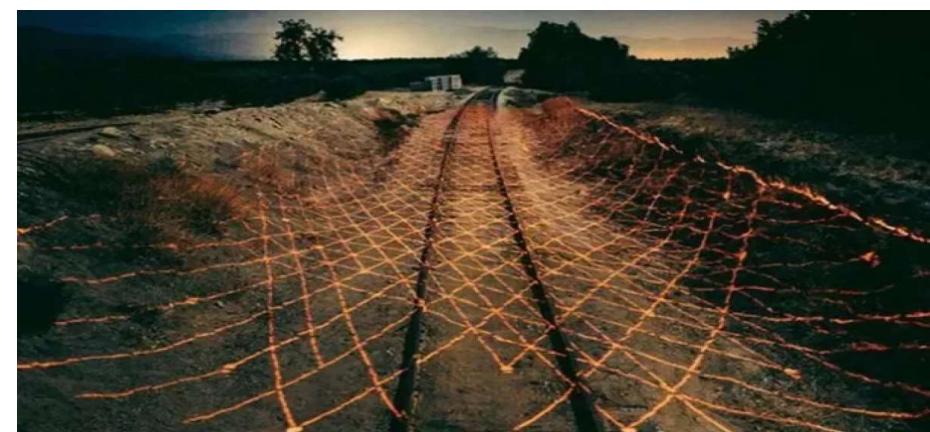
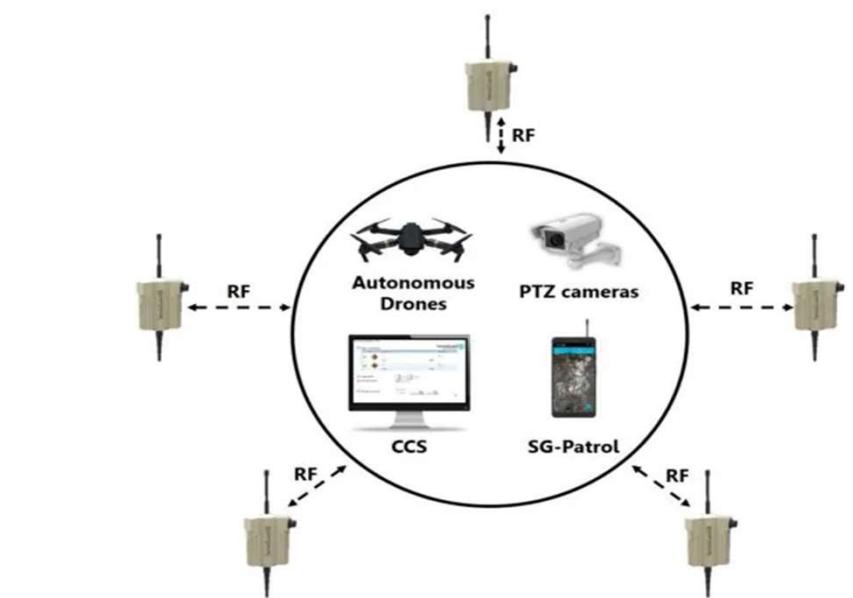
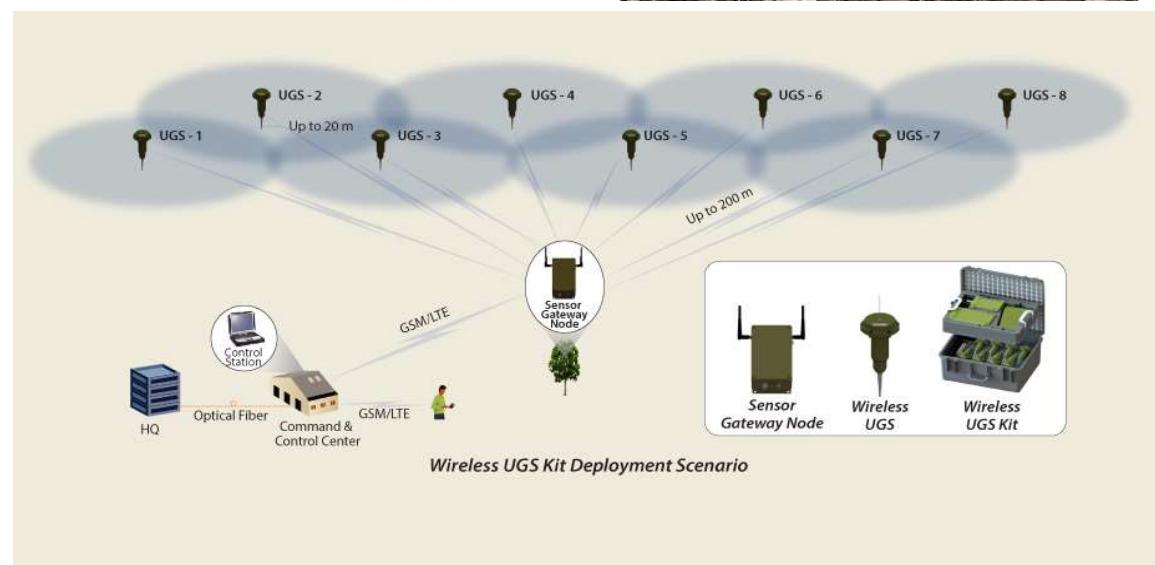
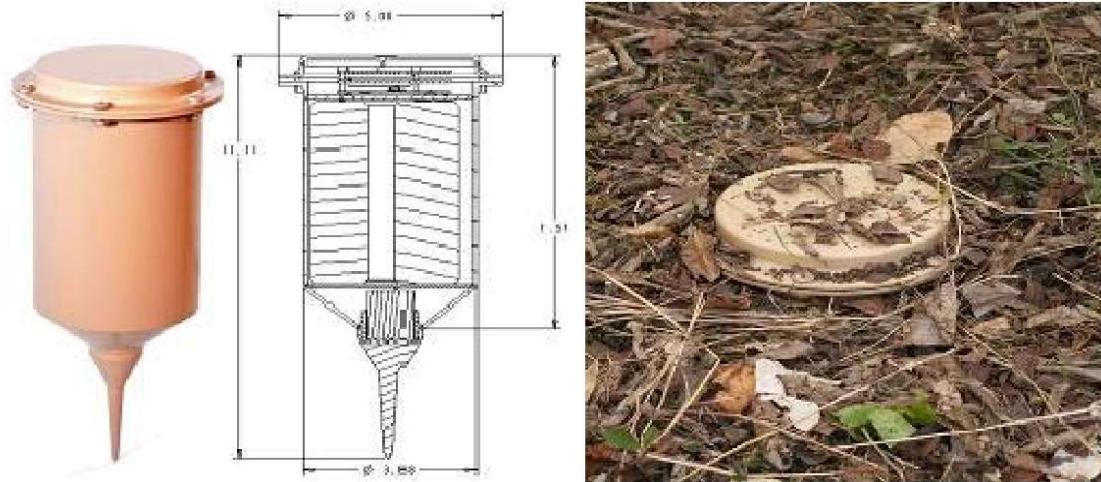


Drones



Drones Monitoring Alert

UNATTENDED GROUND SENSOR



TACTICAL MISSILE^X SYSTEM

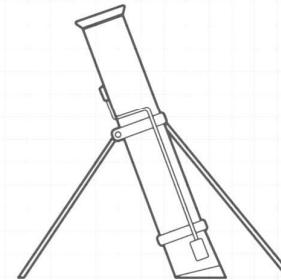
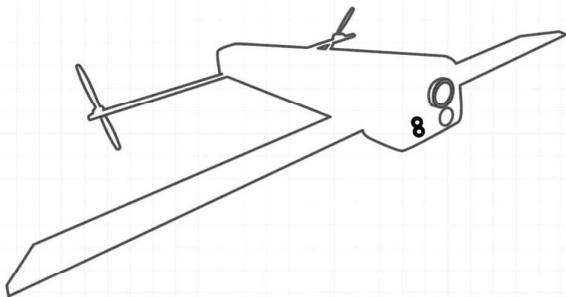
⁺**TMS**

SHOORA, the tactical missile systems (TMS) closes the gap between observation and action, giving troops the ability to identify threats and precisely deliver a lethal payload with minimal collateral damage. Their small size and low acoustic, visual and thermal signature make them difficult to detect or track, even at close range.

Rapidly deployable and highly maneuverable with high-performance optics and scalable ammunition payloads, our loitering missile system enable warfighters to easily launch, track and engage beyond-line-of-sight targets including light armored vehicles across domains.

SHOORA

LOITERING MISSILE



KEY FEATURES

- » Quick dis-engage feature
- » Automated waypoint navigation
- » Backpackable
- » < 2 minute setup & launch
- » Precision strike
- » One-man operation—Tube launched
- » Effective against stationary and moving targets

DIMENSIONS

Wingspan: 27.5in (70cm)
Length: 19.5in (49.5cm)



RANGE

10 Km



ENDURANCE

15 Min



SPEED

CRUISE: 100 Kph
DASH: 140 Kph



EFFECTS ON TARGET

Anti-personnel effects

WEIGHTS

AUR: 2.5 Kg

GROUND CONTROL SYSTEM

INTERPOLABLE WITH COMMON GROUND CONTROL SYSTEM FOR SHOORA

TARGETING OPTICS

FRONT EO CAMERAS & IR NOISE CAMERA, STABILISED ELECTRONIC PAN-TILT ZOOM

OPERATING ALTITUDE

BELOW 500FT AGL

LAUNCH METHOD

SELF-CONTAINED GROUND LAUNCH & MULTIPACK



FIELD OPERATIONS AND CUSTOMER SUPPORT

❖ STATIONARY TARGET

» Affirmity Defence's **SHOORA** loitering missile locks stationary target with precision. Ready to take over the situation at any moment. SHOORA'S advance quick dis-engage technology allows total control over the air unit.

❖ MOVING TARGET

» SHOORA loitering missile gives an unfair advantage to the Indian army by destroying moving targets with an ease without putting the ground soldiers to risk. Our quick dis-engage feature allows the operator with a capability to attack the target at multiple angles and abort the mission in case required, leaving no way for the target to escape.

❖ TRAINING

» We'll impart special training programs under capacity building initiative to the Indian army to use and operate tactical missile system developed by Affirmity Defence.

A photograph of a large octocopter drone with eight propellers and a mounted camera, flying over a two-lane road. A silver SUV is driving away from the viewer on the road. The background consists of dense green trees under a cloudy sky.

SMARTIZATION of ROP

SMARTIZATION OF ROP

1. Overview “SMARTIZATION of ROP” – AI enabled mob coord sys driving synergy between drones, svl cameras & ROP elements to improve area under eff domination

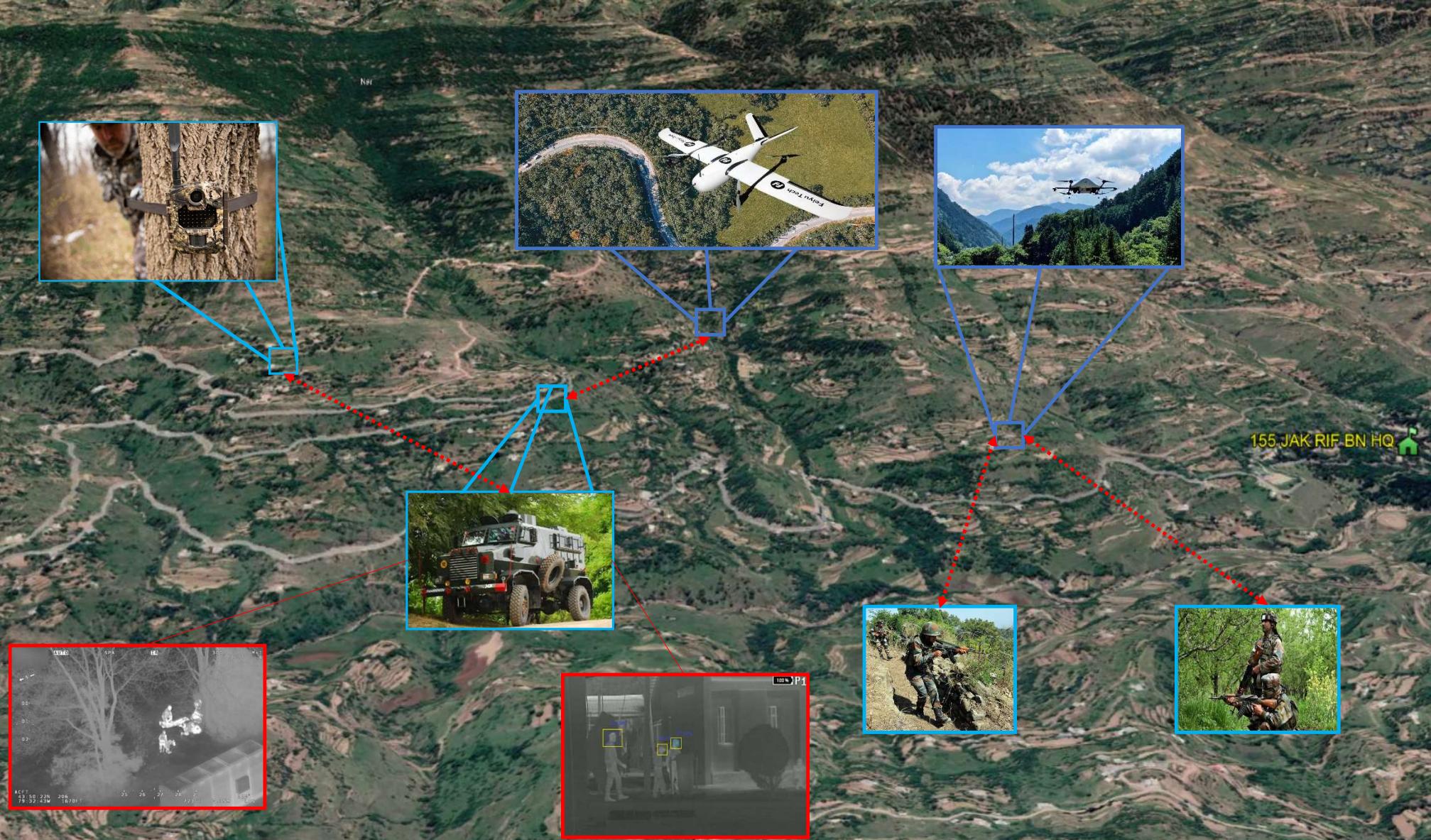
2. Advantages/Impact -

- (a) Reduction in manpower reqd
- (b) Analysis of major changes from previous day feed
- (c) Quick response to incidents
- (d) Continuous physical trn & psy dominance

3. Status - Approved for funding and devp sp by ADB

ROP Monitoring & Coord





CHALLENGES

1. Trn - ht & nala
2. Avenue for triggering of remote control IEDs
3. Comn dead zones due to mtn trn
4. Manpower intensive due to large rd stretch to be covered
5. Unconventional ways for ROP dply - Parties & Zonewise
6. AIOS dply of RR units from hinterland
7. Ltd ni domination of rds
8. Adm Challenges
 - (a) Combat fatigue
 - (b) Ltd trg



COMPONENTS



Mob



2 x Display processing units



1 x RC Drone
(10 Km/120 Min, Way Point Navig)



2 x Mid-range Ptl Drones
(4 Km/40 Min)



11 x Wireless Camera



1 x ANPR/
4K Camera
(No plate reader)



1 x HHTI
(Diwa Shakti)

Mob ROP Coord Center

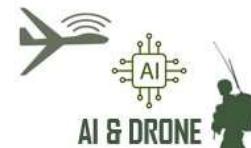
- Iden and alert vs threat pers/veh
- Coord with all elements & cdr sit awareness centre
- Monitor all sys feed and overlay for changes

Drones

- Escorts cvy
- Sp during the dply of ROP
- First responder
- Dominance of trn on either side of rd

SVL

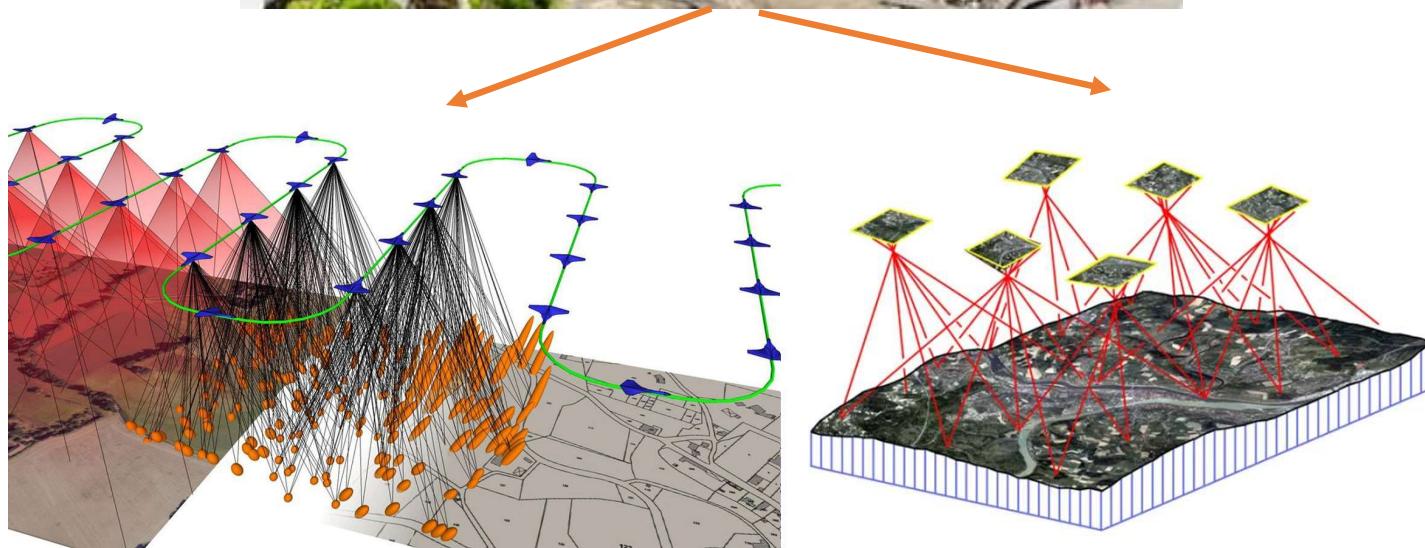
- Cover dead ground, rd turnings, key pts and hts



Smartization of
ROP
(Road Opening Party)

ADVANTAGES

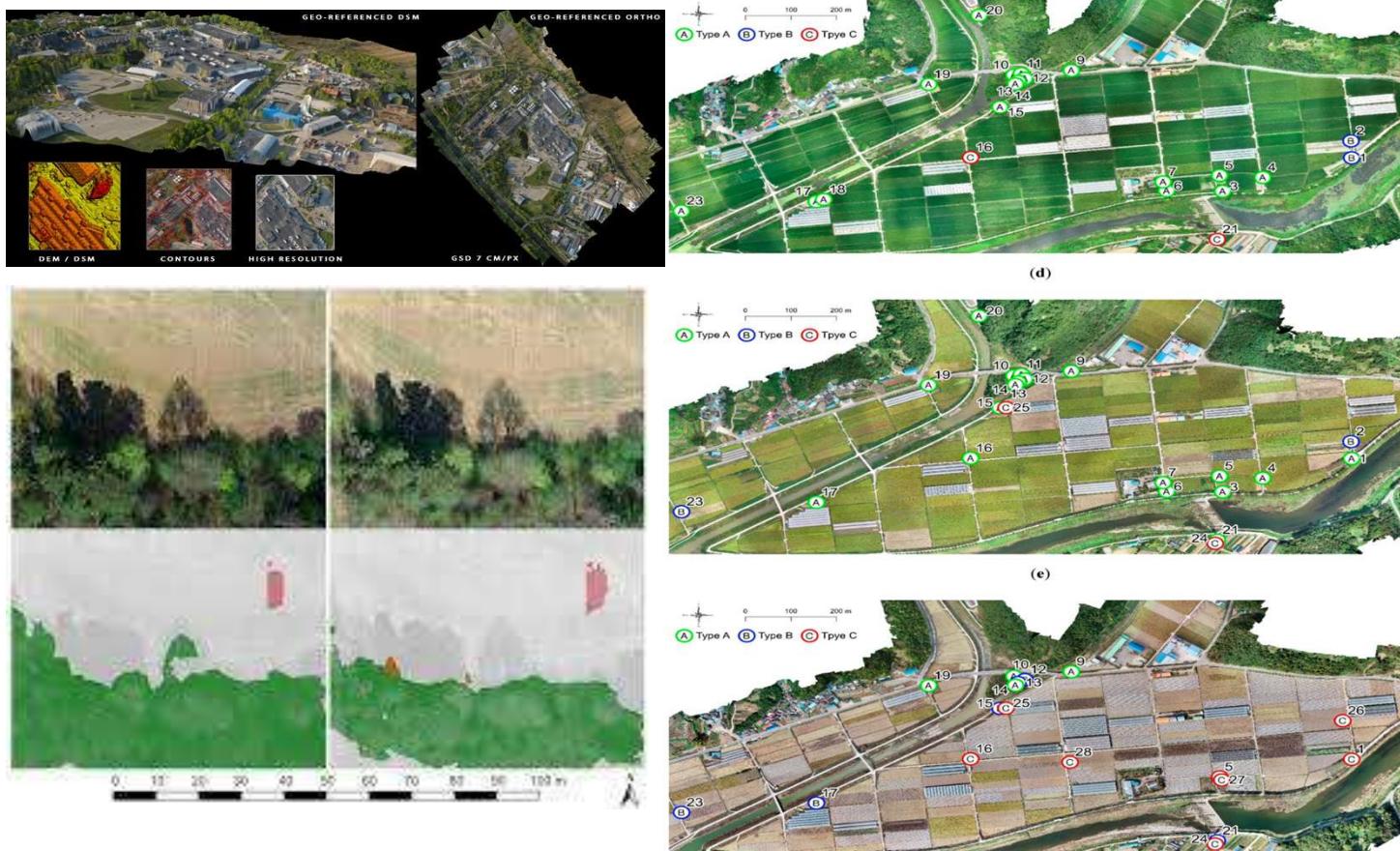
- Extended ae svl before dply of ROP



AI & DRONE

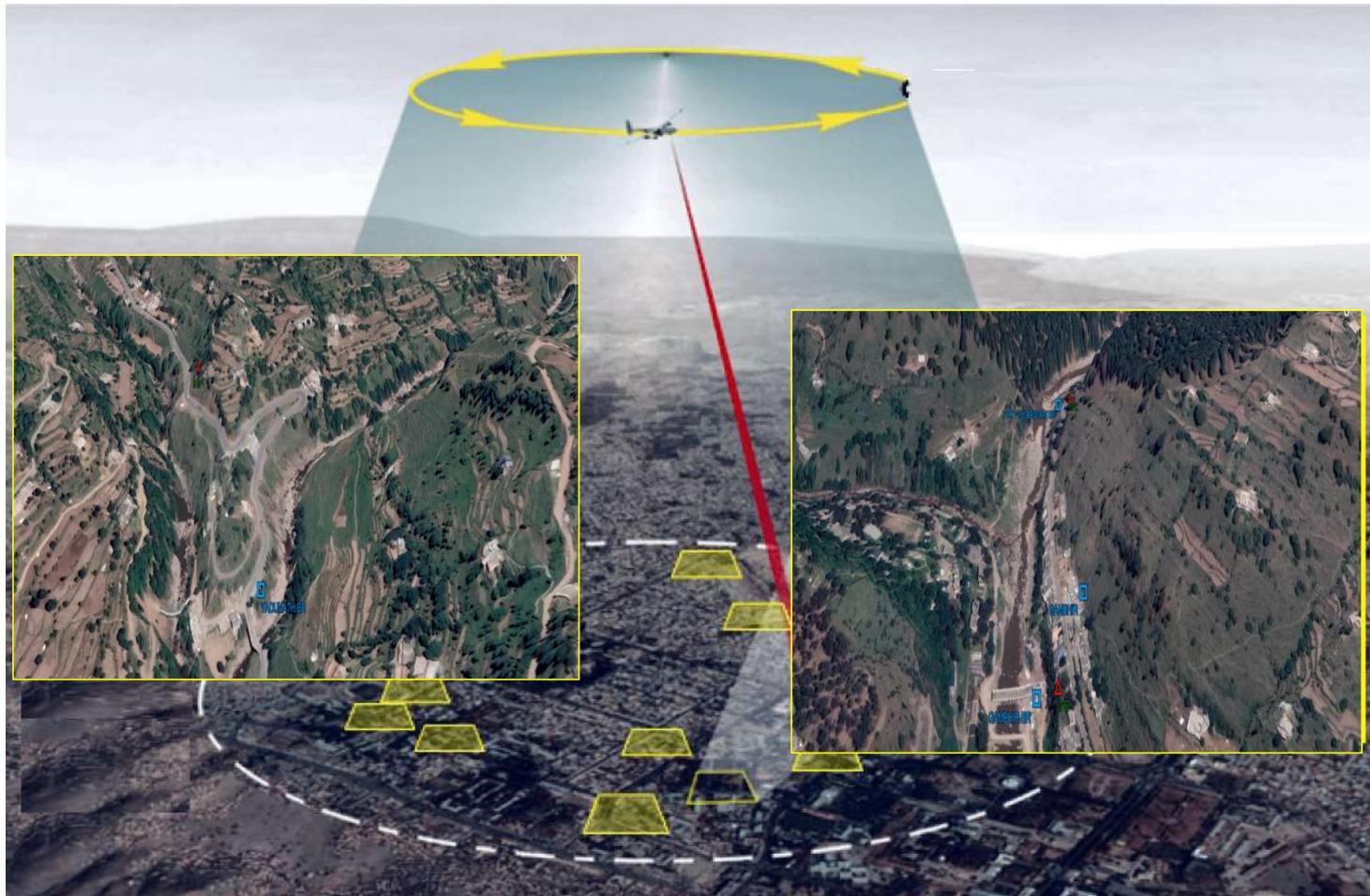
ADVANTAGES

- Analysis of maj changes from previous day feed



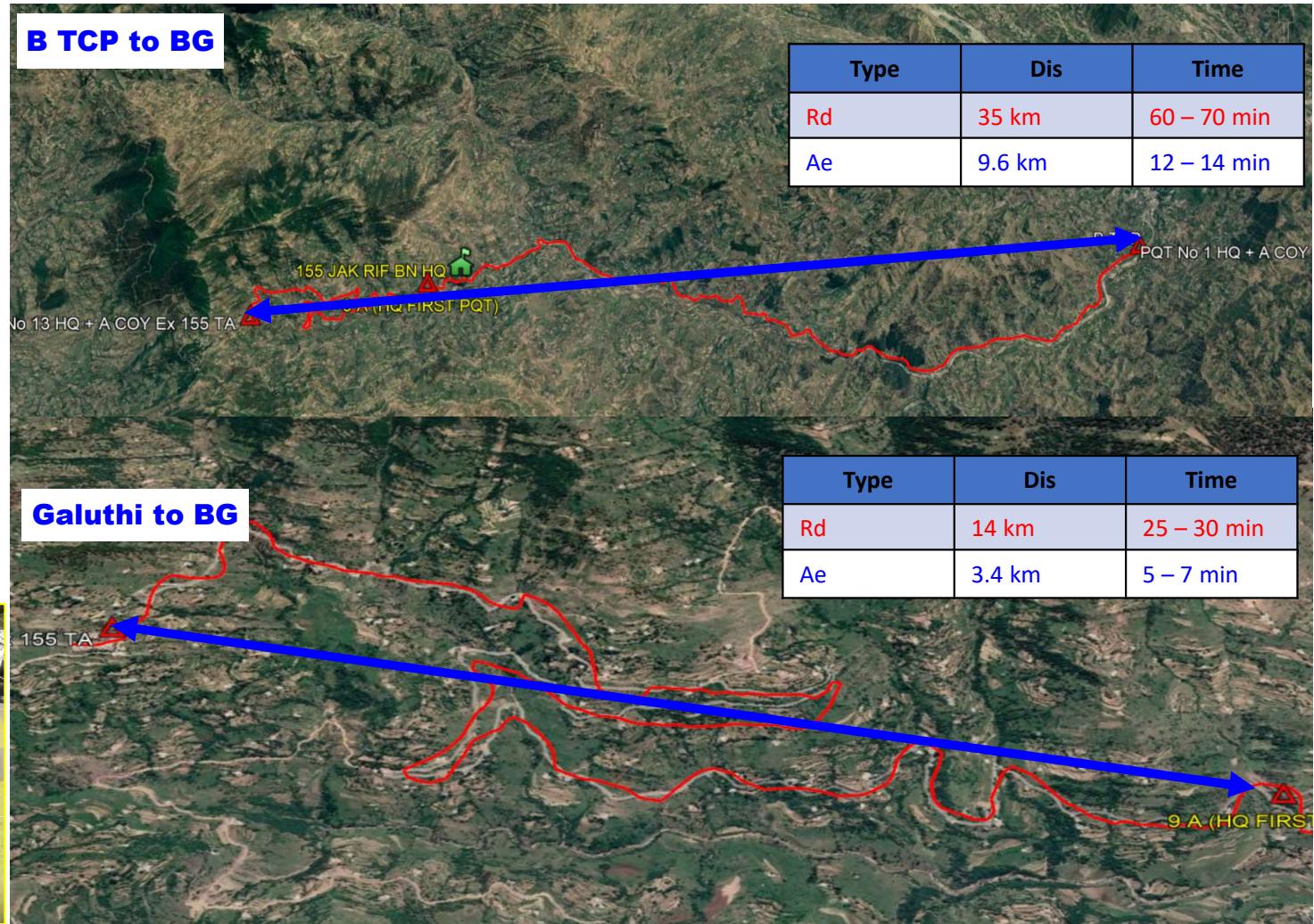
ADVANTAGES

- Simultaneous svl of hts and nallas along the rd



ADVANTAGES

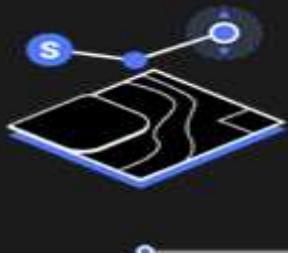
- Trn advantage with ae view/capability-Ae
- Distance (Space & Time)
- Incident mgt
- Comd & Control
- Quick follow up of suspects /tgts



ADVANTAGES

- Psy dominance
- Trg with analysis of data repository
- Data repository

PLAN, PROCESS, ANALYZE AND EXECUTE



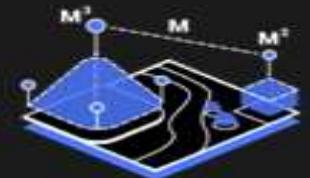
Mission
Planning



Data
Acquisition



Area
Mapping



Data
Analysis

IMPACT

1. Eff domination of current stretch by coy/piquet

TYPE	COY	PIQUET
Conventional	6-8 km	500-800 m
Present Status	20-35 km	2-3 km

2. Reduction in No of piquets enabling

- (a) Transition from unconventional to conventional ROP
- (b) Inhouse rotation of 2/3 picquets
- (c) Trg
- (d) More domination by QRTs vis-à-vis picquets.

3. Integration of civ tfc mgt in coord with tfc police.



CONVENTIONAL /STRATEGIC



DRONE FEED ANALYSIS



Attention Required

DRONE FEED ANALYSIS

1. Overview “DRONE FEED ANALYSIS” -

Real time/post flight mil obj iden of RPA/quadcopter feeds and carrying out AI enabled analysis

2. Advantages/Impact -

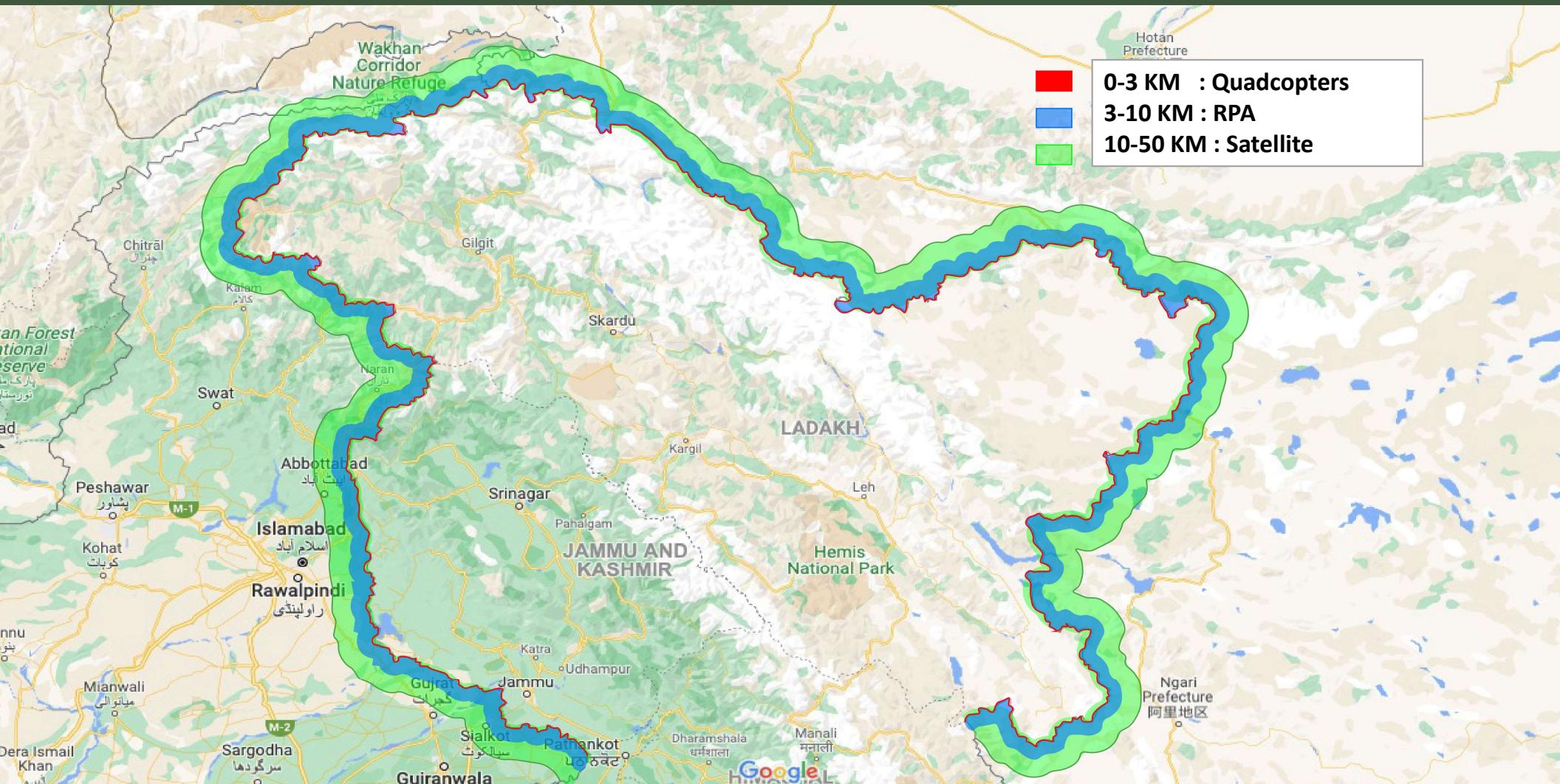
- (a) Central searchable repository, digital geo tagged cdrs map, reduces time and improves accuracy of Drone/RPA feed analysis
- (b) Identify obj of opportunity and improve svl cover
- (c) Correlation of pattens and predict events

3. Status – Under dply

Op Battlefield Sit Awareness



DRONE FEED ANALYSIS – DEVP PROCESS



DEFENSIVE FORTIFICATION

INITIAL GROUND IDENTIFICATION
BY LC/IB UNIT (QUADCOPTER)

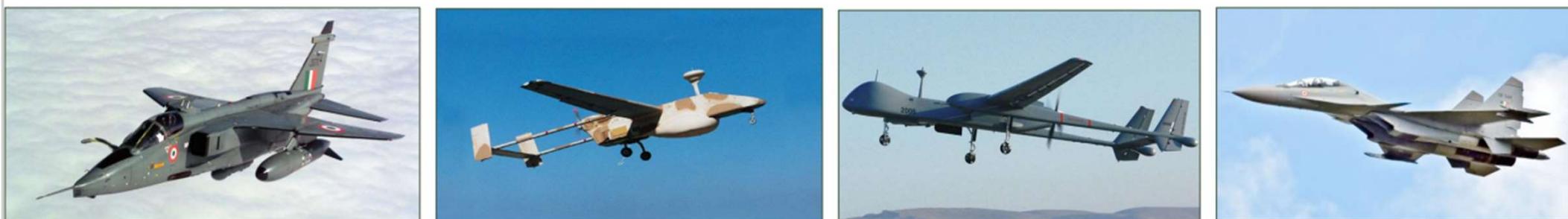
TRAINING OF SOFTWARE - GUN POSITION

INITIAL IDENTIFICATION

EVENT ANALYSIS - DEPTH TO FRONTLINE

**TRIGGER EVENT-MOVEMENT
AT DEPTH ARMOUR
ASSEMBLY AREA**

DRONE FEED ANALYSIS

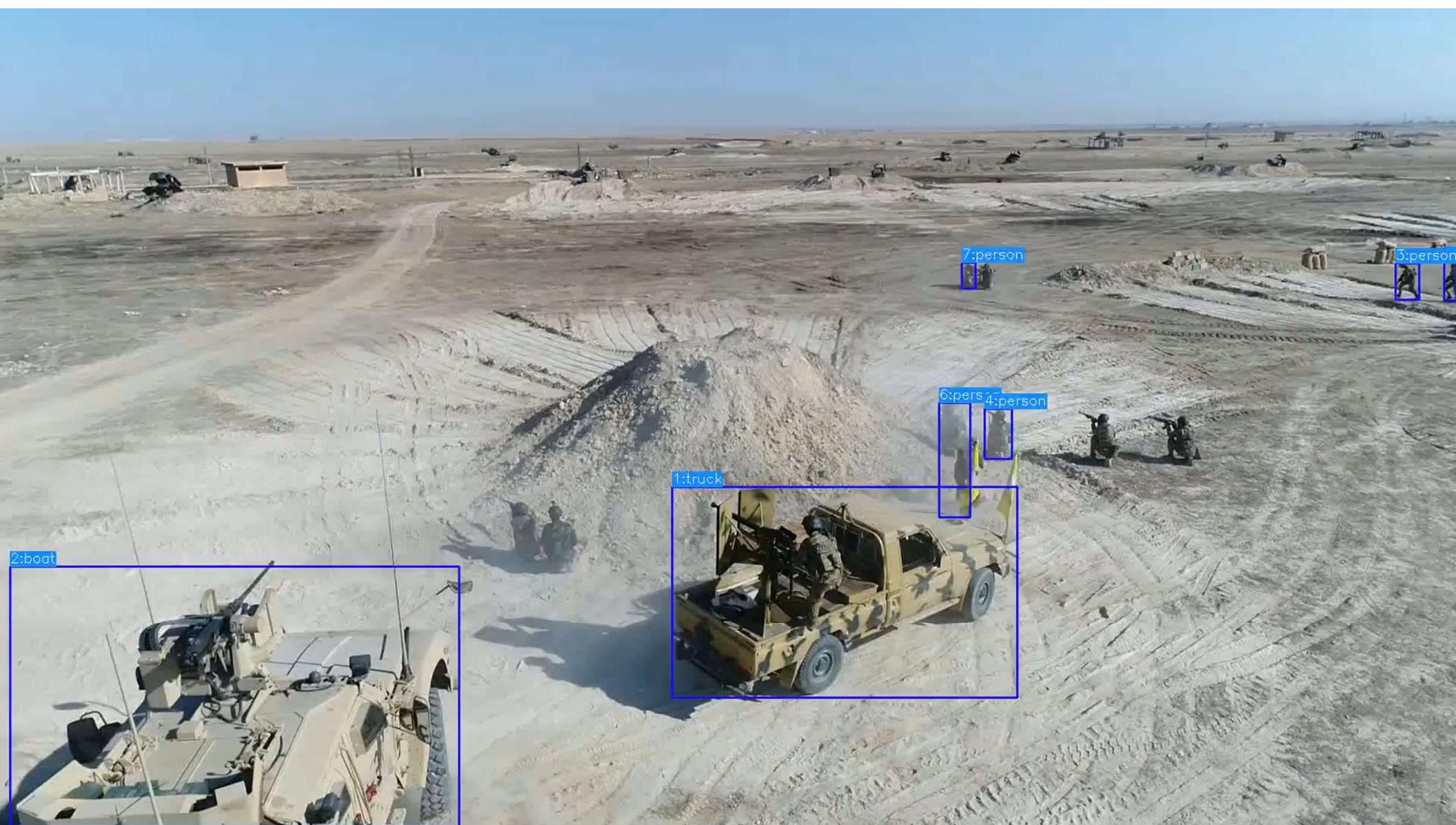


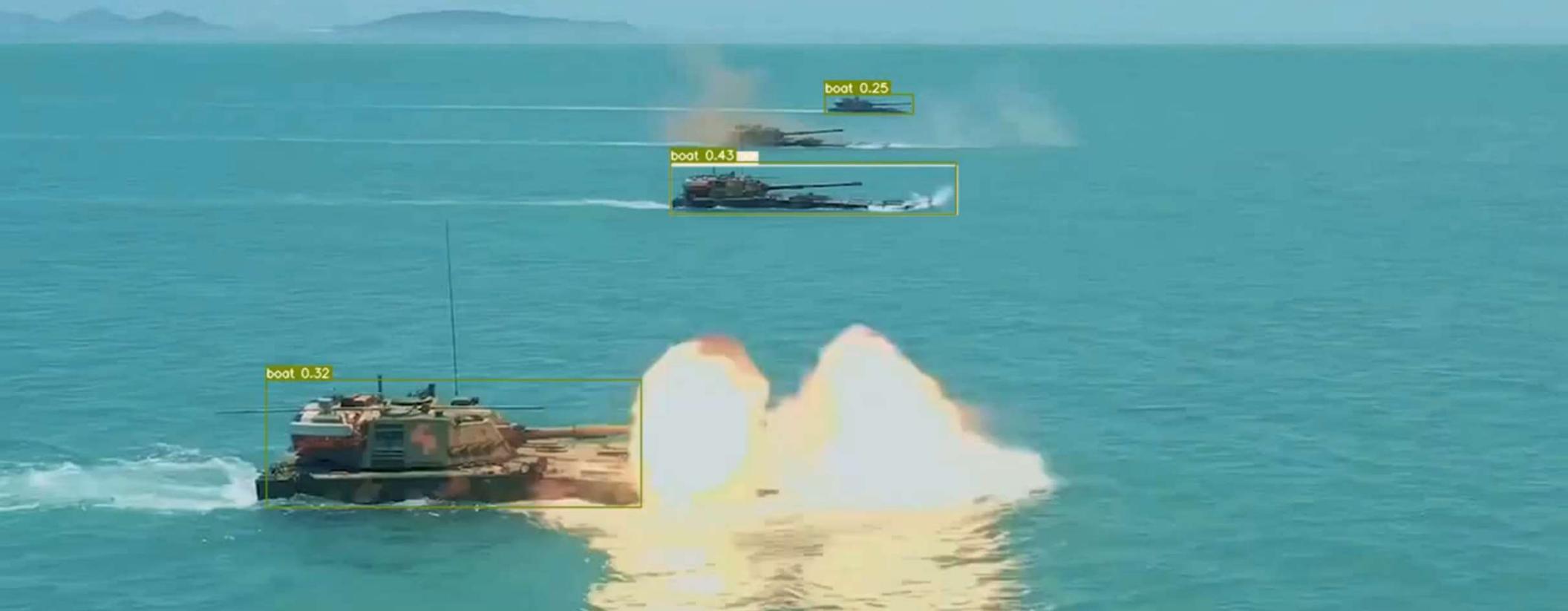
Current State



Future State







A dark, semi-transparent background image showing an aerial view of a landscape. The image features a winding blue river or lake in the center, surrounded by dense green and brown forested areas. The terrain appears rugged with many small streams and valleys.

AI CHANGE DETECTION (Satellite image collation)

AI CHANGE DETECTION – IMAGE COLLATION

1. GIS Mapping & Tagging -

Placement on GIS map of all images from various sources using meta data or human inputs :

- (a) EO (Jaguar/SU 30)
- (b) RPA
- (c) Mil Satl
- (d) Civ Satl

2. Time Overlay & Comparison -

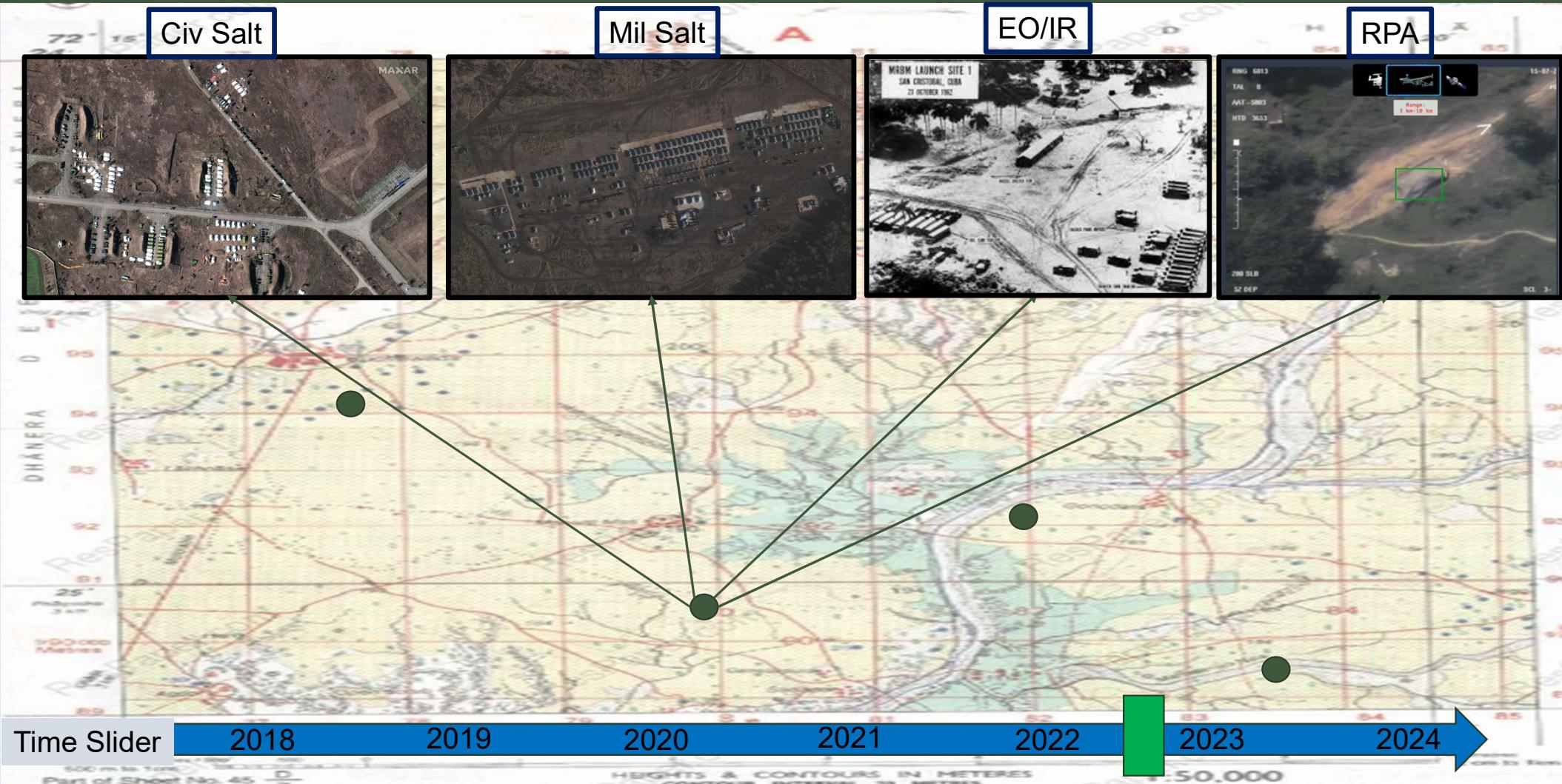
- (a) Simultaneous display of all available images across sources and time slider
- (b) Manual comparison of images via selection

3. Output -

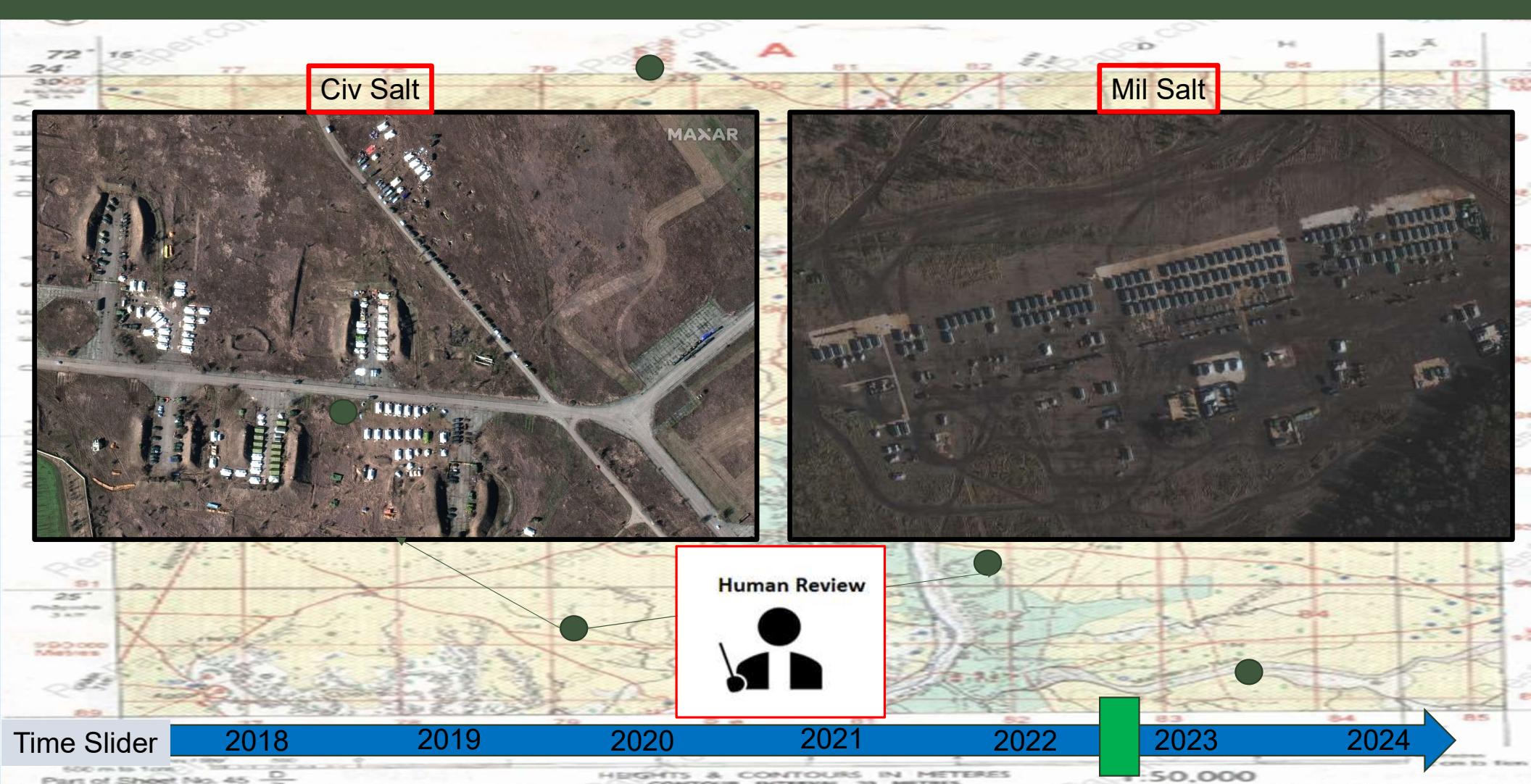
- (a) GIS map with geo tagged images from all sources
- (b) Time frame slider
- (c) Manual comparison windows



SATELLITE IMAGE COLLATION & MERGER



SATELLITE IMAGE COLLATION





LONG RANGE PAYLOAD LIFT DRONE



DEMOnSTRATION : 28 KG

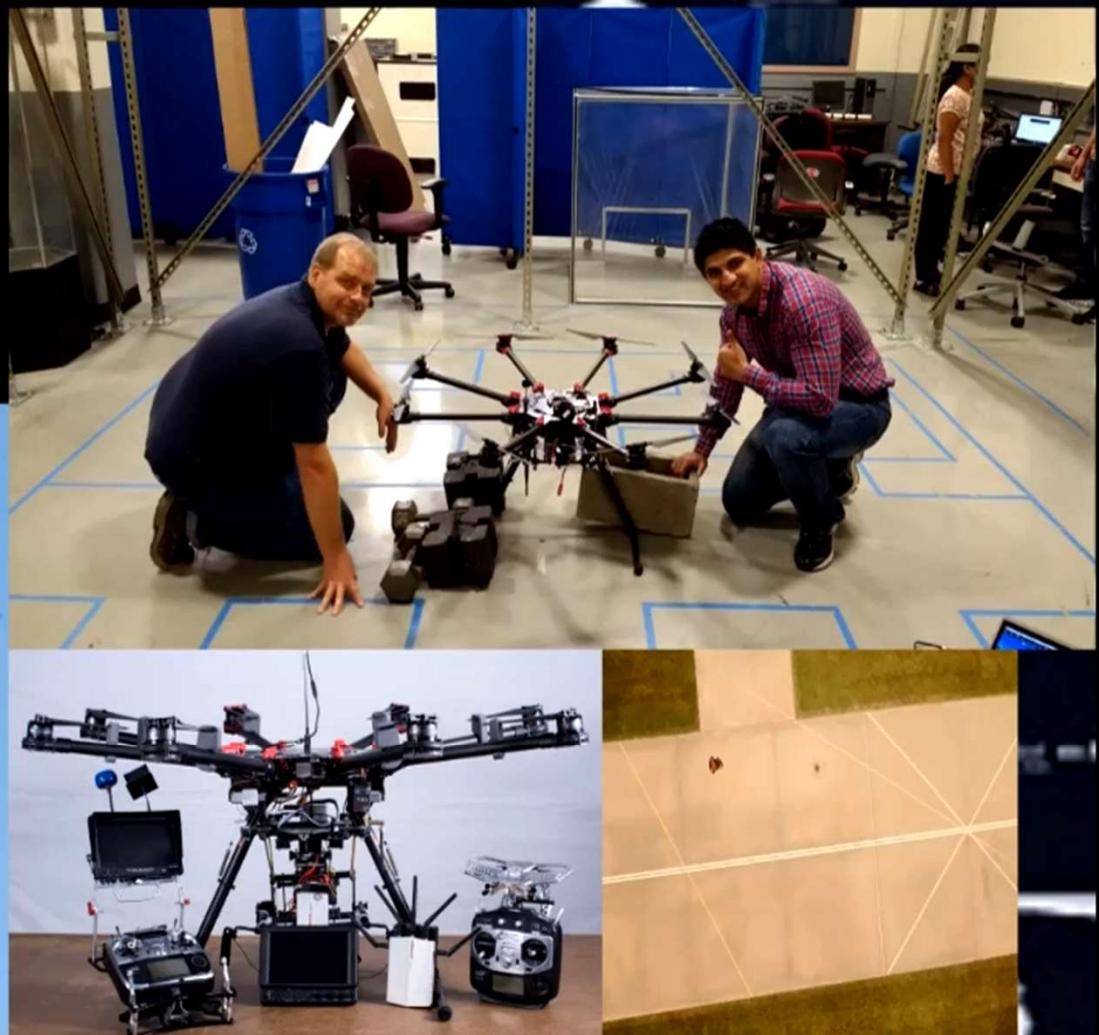




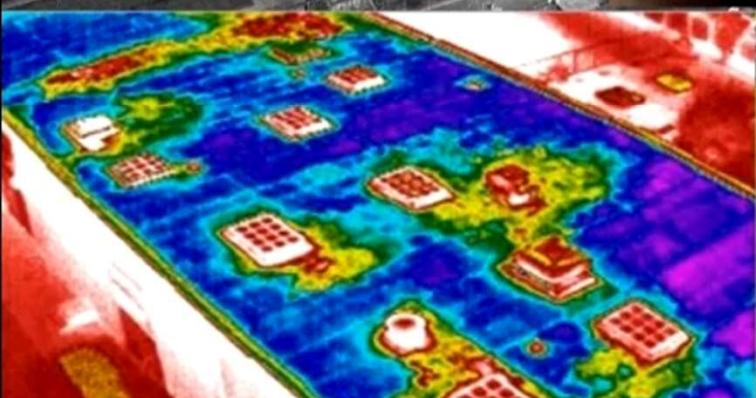
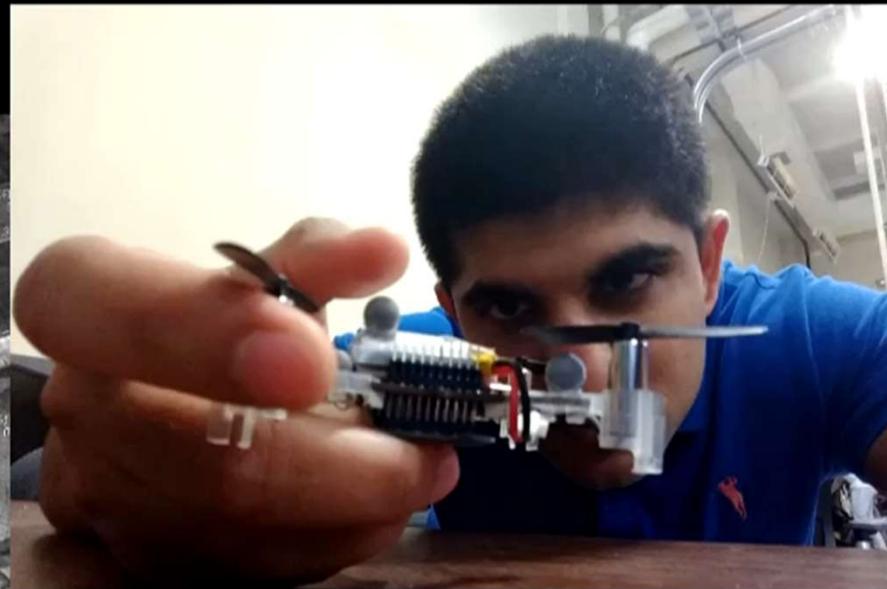
1) DRONE - AUTO OPS (Buddy Pair)

Hercules features :

- 24 KG pay load (1:2)

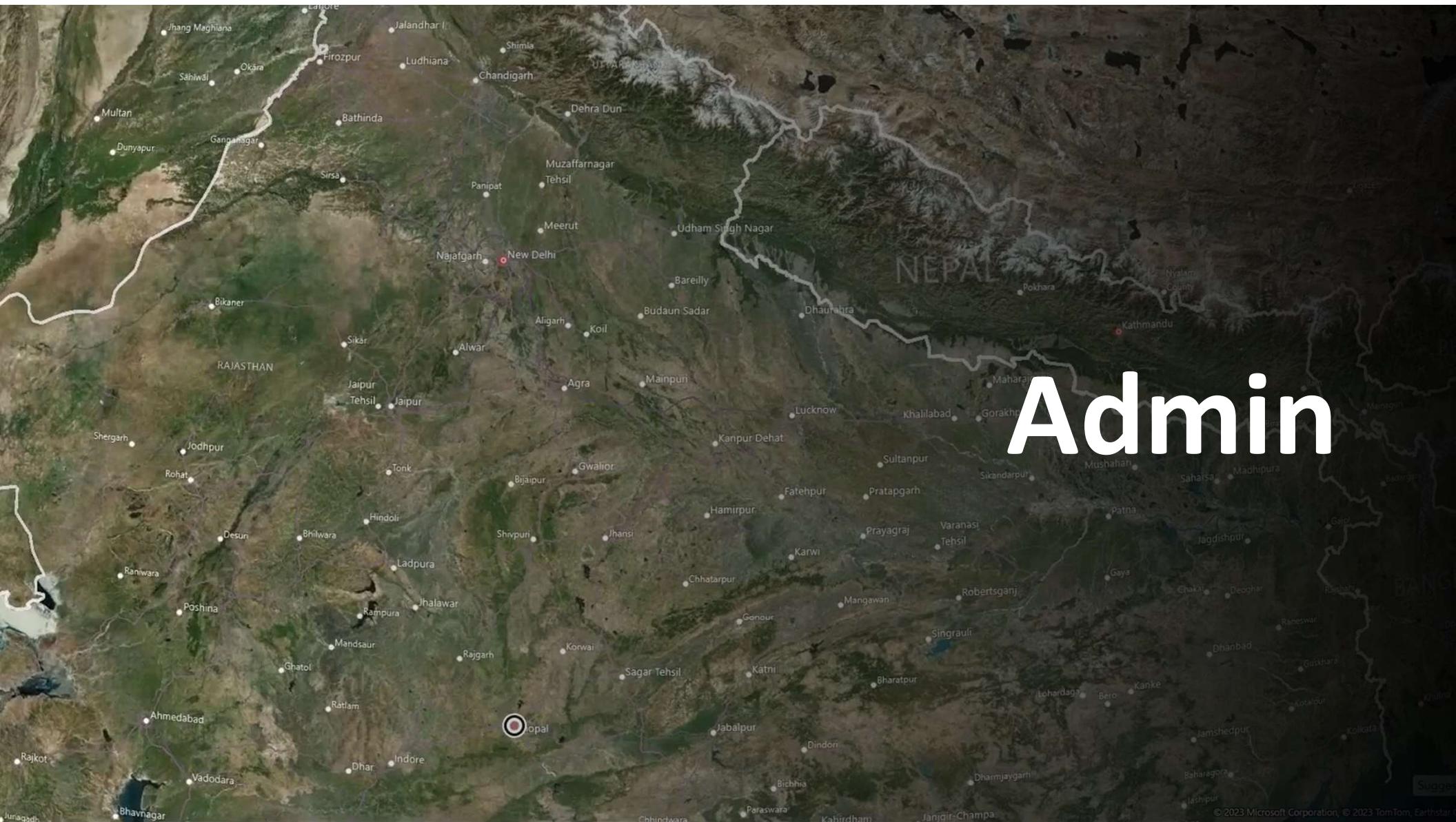


2) DRONE - SVL & TRACKING



1. Structural X-Ray
2. IR
3. Motion Sensor
4. Acoustic
5. Thermal

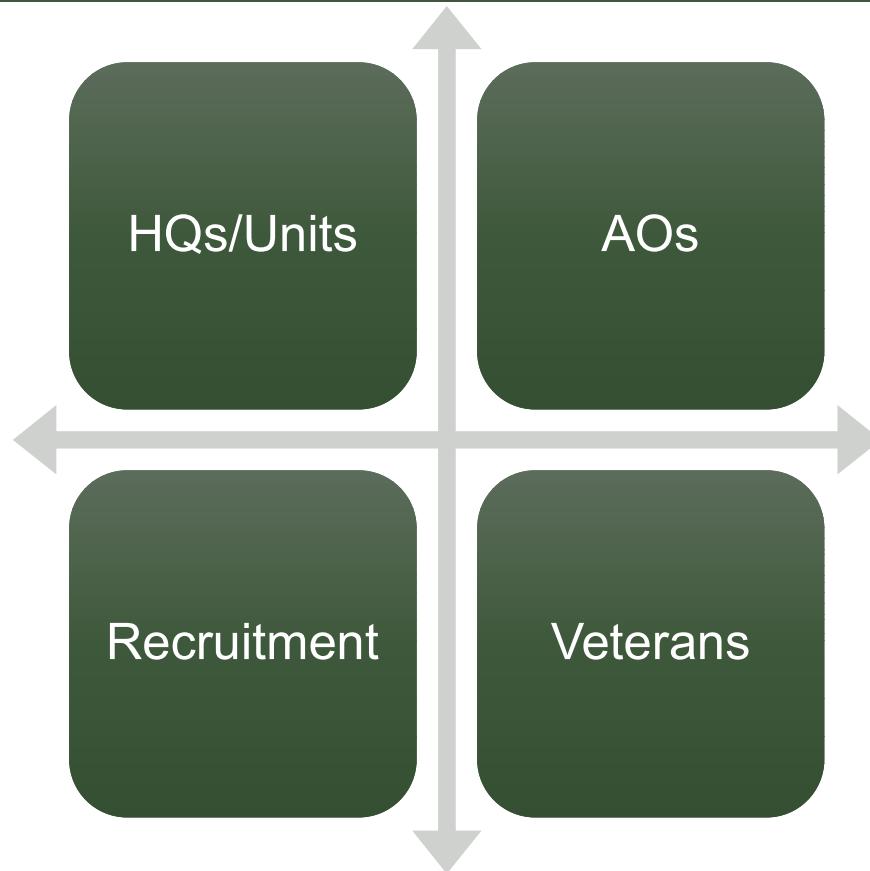
Admin



“SMART CLERK” DIGITAL DOCUMENTATION



AI SMART CLERK - APPLICATION



IA CHATGPT

HQs/Units

Can I buy curtains through ACG?

- Curtains can be brought through ACG as per the policy letter xxxx dt xxxx.
- In addition, they can be bought through XYZ Grant as per policy letter xxxx dt xxxx.

What is the latest advisory on purchase of laptops?

- Laptops are not permitted as per Policy XYZ dt xxxx. However, amendments have been issued vide AHQ letter xxxx dt xxx as per which laptop's can be bought after sanction of GOC in C in fwg cases (etc)

What is the background on the Marital discord case of Hav Kishor Chand?

- Marital discord case was filed on xxxx by xxxx
- Fwg documents were submitted to HQ on xxxx
- Court date for review is xxxxx

AOs

What is the latest policy on outstanding ACR?

- As per the policy dt xxxx fwg is to be ensured before giving outstanding acr.
- Also as per latest advisory on subject issued vide MS letter xxxx dt xxxx IO/ RO have to ensure fwg

What are the points to be kept in mind for death in Accident-related cases?

- As per AO in case of Physical cas fwg documents should be initiated to fwg addressees.
- In addition as per latest AGs br letter no xxx dt xxx fwg personal should be contacted on telephone.

What is the latest on policy for marital discord cases ?

- AO XXX states that Marital discord cases have to be initiated with fwg documents list.
- As per the AGs br letter xxx dt xxx fwg points to be kept in mind before initiating a case.

VETERANS

What is the status of my documents?

- There is a discrepancy in the name of your wife in part 2 orders and the pension documents submitted.
- Your medical documents have not been received by the records.
- Your casualty wrt to your posting in fd area discrepancy of dates.

RECRUITMENT

I am a sportsman. How can I enroll in army?

- Also sports enrollment is presently being done at fwg regtl centres. You can apply on these dates at ABC Centre and report to XYZ.
- As a sportsman u can enroll via fwg routes.
- In case of addl details you can contact on following numbers.

Where is recruitment scheduled?

- Currently recruitment is scheduled in fwg states for fwg trades :

Bhopal, MP on 27 May 23 : 6 Cooks

Agra, UP on 23 June 23: 80 GD

Garrison Security System

```
--> or object to mirror
mirror_mod.mirror_object
operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

selection at the end -add
mirror_ob.select = 0
bpy.context.selected_objects.append(data.objects[one.name])
Int("please select exactly one object")
-- OPERATOR CLASSES ---

types.Operator:
    X mirror to the selected object.mirror_mirror_x"
    "mirror X"
```

GARRISON SECURITY SYSTEM

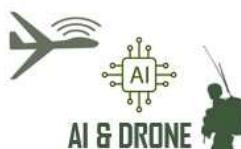
1. Overview “GSS” - Garrison Security System is a state-of-the-art face recognition, biometric and data analytics sys. That is used to create a “Your Face is Your ID” based access control for high security zones.

2. Advantages/Impact -

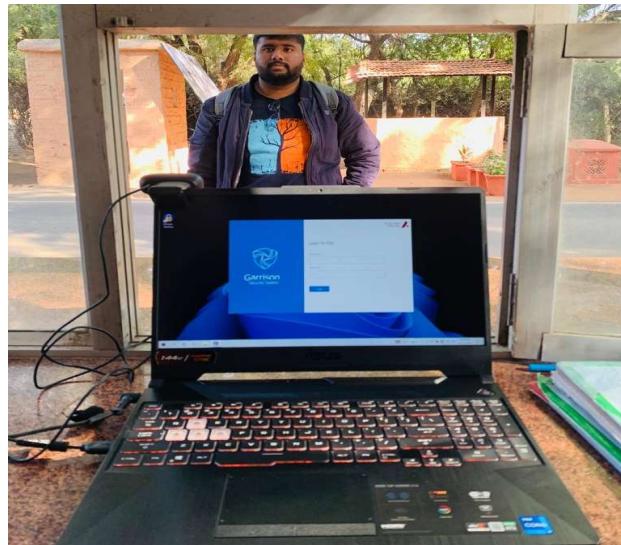
- (a) State of the Art - Access Security
- (b) High Security Zones
- (c) Tracking and Logging
- (d) Reduce Manpower

3. Status - Successfully dply at HQ NC & SC

Hi Security Access Control



FACE AS ID ACROSS ALL CPs

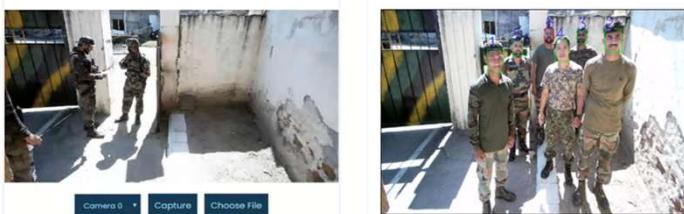


Identification of visitor at location

A screenshot of the 'Garrison Security Systems' software. It shows a grid of small video feeds of people, a 'Records' section with fields for First Name, Last Name, Identification Type, and Registration Number, and a table of identified individuals with columns for Index, Id, Name, Unit, Threat, Confidence, and Report. The table lists five entries, all marked as 'Wrong'.



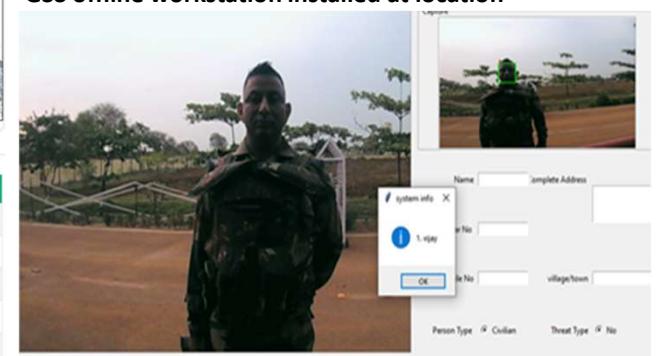
Guard Commander making entry on GSS



Recognizing visitors in group with person details



GSS offline workstation installed at location



GSS in action in low night conditions



AI & DRONE

Dashboard

Wednesday, 18th Feb 2023

Stepping Trends

Purpose Trend

Hardware Status

Hardware Type	Status
Camera	Normal
OCR Scanner	Normal
OCR Scanner	Normal
OCR Scanner	Normal

Recent Visitors

Name	Time	Status	Purpose
Ram Shankar	24-02-23 16:24:00	Checked - In	Bhopal
Foizal Iqbal	24-02-23 16:24:00	Checked - In	Bhopal
Ram Shankar	24-02-23 16:24:00	Checked - In	Bhopal
Foizal Iqbal	24-02-23 16:24:00	Checked - In	Bhopal
Ram Shankar	24-02-23 16:24:00	Checked - In	Bhopal

Change Camera

Lenovo Web 1

Last Synced: 2nd Feb 2023

RAV 0.2.129

Verify / Add Record

Wednesday, 18th Feb 2023

Capture

Upload
Person Type: Civilian

Akhil Tiwari

8109344763

Aadhaar: 3204 5632 5632

Shanti Homes, Karond

Bhopal

Working For Software Development

Location: Udhampur
 Time of Update: 22-02-2023 16:45:00

In
Out
False
Update

RAV 0.2.129

Rakesh Sharma
Regular

Activity

- Live Scan
- Verify
- Data Viewer
- Admin Tools
- Admin Tools
- Admin Tools

Detail Records

All Dates	Search																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>Purpose</th> <th>Time</th> <th>Added by</th> <th>Mobile Number</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Ram Shankar</td> <td>Duty</td> <td>24-02-23 16:24:00</td> <td>User 1</td> <td>7778885554</td> <td>Checked - In</td> </tr> <tr> <td>Foizal Iqbal</td> <td>Udhampur C2</td> <td>24-02-23 16:25:00</td> <td>User 2</td> <td>9389563198</td> <td>Checked - Out</td> </tr> <tr> <td>Foizal Iqbal</td> <td>Udhampur C1</td> <td>24-02-23 16:24:00</td> <td>User 1</td> <td>7778885554</td> <td>Checked - In</td> </tr> <tr> <td>Ram Shankar</td> <td>Udhampur C2</td> <td>24-02-23 16:25:00</td> <td>User 2</td> <td>9389563198</td> <td>Checked - Out</td> </tr> <tr> <td>Foizal Iqbal</td> <td>Udhampur C1</td> <td>24-02-23 16:24:00</td> <td>User 1</td> <td>7778885554</td> <td>Checked - In</td> </tr> <tr> <td>Ram Shankar</td> <td>Udhampur C2</td> <td>24-02-23 16:25:00</td> <td>User 2</td> <td>9389563198</td> <td>Checked - Out</td> </tr> <tr> <td>Foizal Iqbal</td> <td>Udhampur C1</td> <td>24-02-23 16:24:00</td> <td>User 1</td> <td>7778885554</td> <td>Checked - In</td> </tr> <tr> <td>Ram Shankar</td> <td>Udhampur C2</td> <td>24-02-23 16:25:00</td> <td>User 2</td> <td>9389563198</td> <td>Checked - Out</td> </tr> </tbody> </table>		Name	Purpose	Time	Added by	Mobile Number	Status	Ram Shankar	Duty	24-02-23 16:24:00	User 1	7778885554	Checked - In	Foizal Iqbal	Udhampur C2	24-02-23 16:25:00	User 2	9389563198	Checked - Out	Foizal Iqbal	Udhampur C1	24-02-23 16:24:00	User 1	7778885554	Checked - In	Ram Shankar	Udhampur C2	24-02-23 16:25:00	User 2	9389563198	Checked - Out	Foizal Iqbal	Udhampur C1	24-02-23 16:24:00	User 1	7778885554	Checked - In	Ram Shankar	Udhampur C2	24-02-23 16:25:00	User 2	9389563198	Checked - Out	Foizal Iqbal	Udhampur C1	24-02-23 16:24:00	User 1	7778885554	Checked - In	Ram Shankar	Udhampur C2	24-02-23 16:25:00	User 2	9389563198	Checked - Out
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Toggle Finger Print

Export Data

- [Export Activity Records](#)
- [Export All Visitor Detail Records](#)
- [Export Single Visitor Summary Activity](#)

Custom Fields for Checking

Vech Number	Type	Required
Vech Image	Image	Required
Remark	Text	Required
Purpose	Text	Required

System Info

Unique System key : Alpha-154fDf8
Software Version : 2.23.2

System Sync

Last Synced: 23rd Feb 2023

Users

Sanjay Jaiswal	Admin
Lakhbeer Singh	Officer
Lakhbeer Singh	Officer

Add

CALIBRATED FOR FACIAL/FEATURE CHANGES



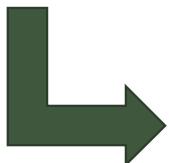
STEP 1

IMAGE USED FOR
RECORD CREATION

Capture



Name: Parth Complete Address: _____
Adhaar No: _____
Mobile No: 2 village/town: Delhi
Person Type: Civilian Threat Type: No
 Soldier Potential
 Unknown High
Submit Clear

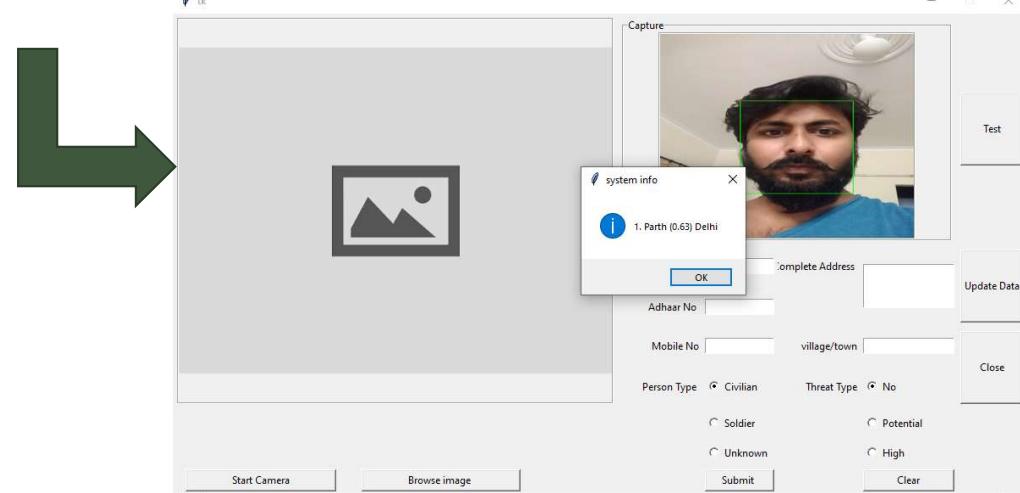




STEP 2

CAMERA IMAGE
VERIFIED BY SEEKER
SYSTEM

Capture



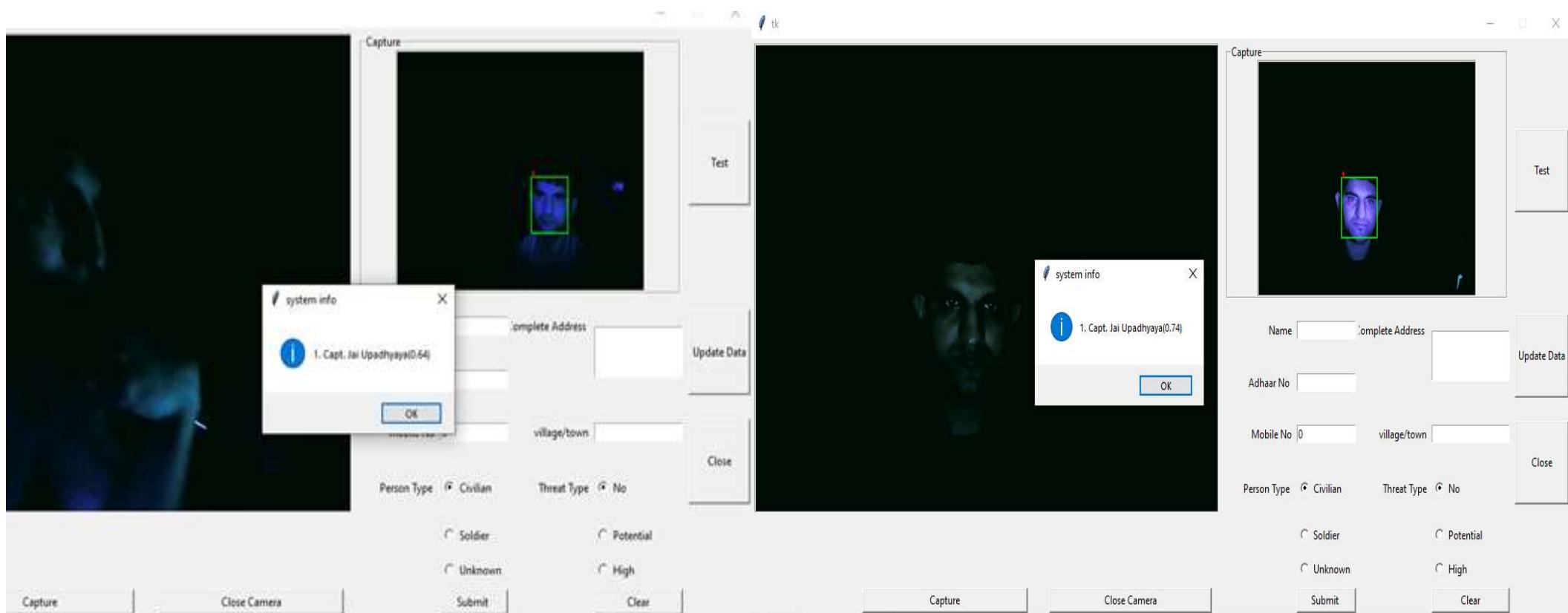
tk

system info
1. Parth (0.63) Delhi
OK

Name: Parth Complete Address: _____
Adhaar No: _____
Mobile No: 2 village/town: Delhi
Person Type: Civilian Threat Type: No
 Soldier Potential
 Unknown High
Start Camera Browse image Submit Clear

NIGHT CAPABLE

SYSTEM CARRYING OUT FACIAL RECOGNITION IN LOW LIGHT/IR LIGHT ILLUMINATION



USE BY GOVT OF INDIA



Chhatrapati Shivaji Maharaj
INTERNATIONAL AIRPORT
MUMBAI



Your face
is now
your ID

Digi Yatra

At 7 Airports
Across India





HOW – WAY FORWARD

A photograph showing two soldiers from behind, wearing camouflage uniforms. They are standing in front of a large, multi-monitor display system. The screens show a map with various green circular markers indicating locations. One soldier's shoulder has a yellow identification tag. The text "TERRITORIAL ARMY INNOVATION CENTER" is overlaid in white on a black rectangular background.

TERRITORIAL ARMY INNOVATION CENTER

TERRITORIAL ARMY INNOVATION CELL (TAIC)

1. Aim :

- Build support system that can effectively utilize exceptional technical skills of current and future TA personnel to develop inhouse solutions/innovations in new age technologies.
- Create a niche identity for TA to become a trusted technology advisor to IA through tech specific recruitment.

2. TAIC to be setup at TA Directorate.

3. Current identified skills/expertise of TA personnel include :

- Artificial Intelligence & Machine Learning
- Software Development
- Cyber Security
- Drone & Robotics

TAIC - UPDATE

1. TAIC approved by COAS & VCOAS for establishment.
2. Approval by ADG, ADB to provide sp in creation and ops of TAIC.
3. Multiple innovations by TA personnel has been recog at various levels across IA.
4. Initial list of experts and their proj has been identified, list to be expanded.
5. Innovation Cells approved by fwg Comd :
 - Northern Comd.
 - Central Comd.
 - Western Comd.

PARTNERSHIP - GOVT OF M.P & Uttarakhand

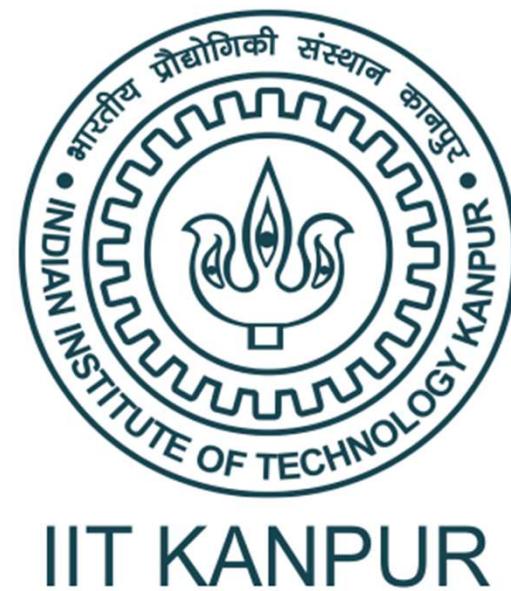


Govt. Of Uttarakhand

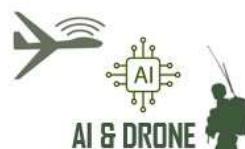
PARTNERSHIP - GOVT OF IPR & IIT KANPUR



Centre of Plasma Physics
Institute for Plasma Research (CPP-IPR)



IIT KANPUR



TAIC – INITIAL EXECUTION

1. TA and ADB to collaborate to help co develop solutions and systems.
2. ADB to provide technical support, problem statements, evaluation and expansion of Proj
3. Other Agencies
 1. SDD
 2. MCTE
4. Initial Projs Examples:
 - a) Document Digitalization – 2 Months
 - b) Resource/Event management software - 3 Months
 - c) Improvement/integration of existing software (E.g., 30 KVA Gen VR Sol, Drone Flight Simulator update) – 1/2/3 Months
 - d) Cyber risk assessment and preparedness – 2 /3 Months
 - e) Drone operations familiarization – 1 month

STATUS

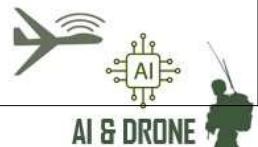


A group of soldiers in a rugged, mountainous terrain. In the foreground, a soldier crouches behind a large piece of equipment. Behind him, several other soldiers stand or crouch, some looking towards the horizon. A quadcopter drone is flying in the sky above them. The scene is set against a backdrop of rocky mountains under a cloudy sky.

Northern Comd.

NORTHERN COMD. UPDATE

S No	Proj Name/Task	Status	Update/Next Action
(a)	<p><u>Seeker/GSS</u></p> <ul style="list-style-type: none"> - It is an AI based Facial Recog & Analytics Tool that carries out svl, population monitoring & access cont. - It has been designed by the offr and co-devp with HQ NC. 	<p>5x Sys dply in NC & SC Under dply at 71 Subarea, Udhampur</p>	<ul style="list-style-type: none"> - HQ NC. Post successful dply of pilot, proj expanded to ph 2, reqmt of 27 sys iden for dply in 16 Corps zone to establish comprehensive svl grid by HQ NC. - HQ CC. Reqmt of 15 sys iden for dply in HQ CC and subsequently in all cantonments.
(b)	<p><u>Storm Drone</u></p> <ul style="list-style-type: none"> - Automated room intervention attack drone for ops on GPS denied envt. - Sys has been designed by the offr and co-devp and tested in fd with PARA (SF). 	<p>Successfully field tested under procurement</p>	<ul style="list-style-type: none"> - HQ NC. 10 sys under procurement by HQ NC for PARA (SF) approved by GOC-in-C, NC - PARA(SF). Unit designated for further enhancement and devp of the drone.
(c)	<p><u>AI Innovation Cell</u></p> <ul style="list-style-type: none"> - Setting up of field evaluation and testing cell for co devp AI & Tech projs. 	<p>Approved</p>	<ul style="list-style-type: none"> - HQ NC. Location for setup of AI testing & evaluation cell under 16 Corps allocated.



A group of soldiers in a rugged, mountainous terrain. In the foreground, a soldier crouches behind a large metal drum, holding a rifle. Behind him, several other soldiers stand or crouch, some looking towards the horizon. A quadcopter drone is flying in the sky above them. The scene is set against a backdrop of rocky mountains under a clear sky.

Western Comd.

WESTERN COMD. UPDATE

S No	Proj Name/Task	Status	Update/Next Action
(a)	<p><u>AI Change Monitoring App</u></p> <p>- AI based changed detection, iden and analysis of en pattern of ops and predictive analysis sys</p>	Proj approved for R&D and procurement in WC	<p>- <u>HQ WC.</u> Proj approved for R&D and procurement under WC through IR & D fund. AoN issued.</p>
(b)	<p><u>AI Innovation Cell</u></p> <p>- Setting up of field evaluation and testing cell for co devp AI & Tech proj.</p>	Approved	<p>- <u>HQ 2 Corps.</u> Devp centre allocated to 40 Arty Div.</p>



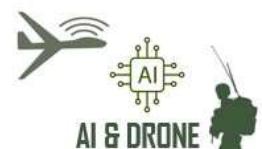
AI & DRONE

A group of soldiers in a rugged, mountainous terrain. In the foreground, a soldier crouches behind a large metal drum, holding a rifle. Behind him, several other soldiers stand or crouch, some looking towards the horizon. A quadcopter drone is flying in the sky above them. The scene is set against a backdrop of rocky mountains under a cloudy sky.

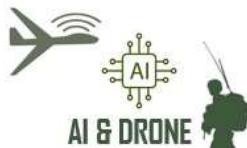
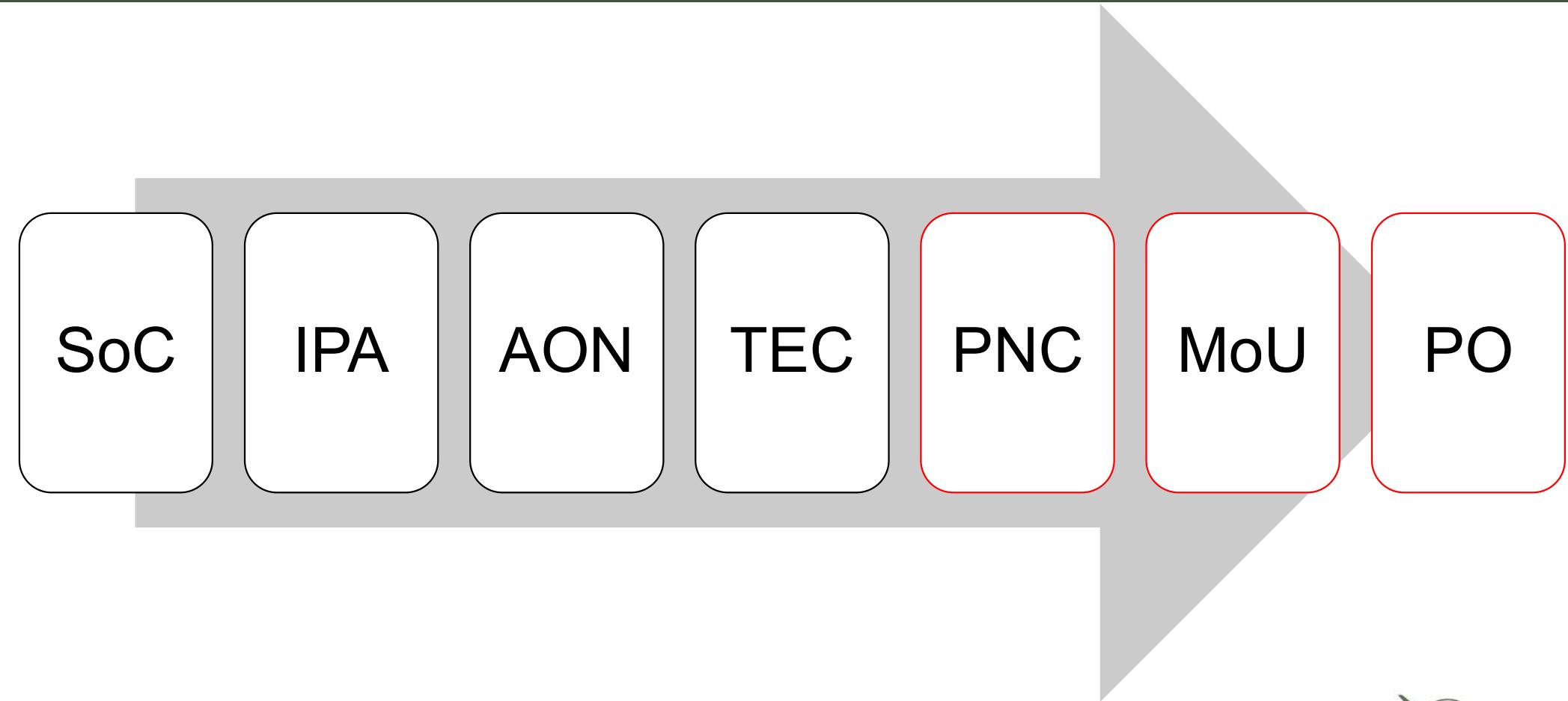
ADB

ADB UPDATE

S No	Proj Name/Task	Status	Update/Next Action
(a)	<p style="text-align: center;">DFA</p> <p>- AI based management and analysis of feed from remotely piloted aircraft like Heron and Searcher drones.</p>	Proj approved for R&D by ADB.	- ADB. Proj approved by ADB for funding through ATB fund.
(b)	<p style="text-align: center;">Smartization of ROP</p> <p>- Integrated AI C&C app, svl and drone sys for enhancement of ROP situation awareness, phy/psy domination and threat response.</p>	Proj approved for R&D by ADB.	- ADB. Proj approved by ADB for funding through ATB fund.
(c)	<p style="text-align: center;">Rudra Rakshak - Proactive Security System</p> <p>- AI enabled integrated security sys for addressing security needs of mil stns/est and LC through monitoring sensors, ptl and attack drones.</p>	Under devp	- CIF(R) & (V). Frm designated for co devp and fd testing of proj.



Execution & Procurement Process



Execution Responsibility

Proj Monitoring, Procurement, Testing & Support

- TA Innovation Center
- User Unit

Hardware (OEM Procurement over GeM)

- HP
- Dell
- Asus

Software (as service over GeM)

- Zero2AI
- Affirmity Corp
- Upsala IT systems



Way Forward

- 1. Iden of Proj - Seeker Sys, Storm Drone, Smartization of ROP, Rudra Rakshak**
- 2. Assessment of Reqmt/Loc**
- 3. Standard Procurement Process**
- 4. Any Customization Reqmt/New Proj**



Q/A



JAI HIND

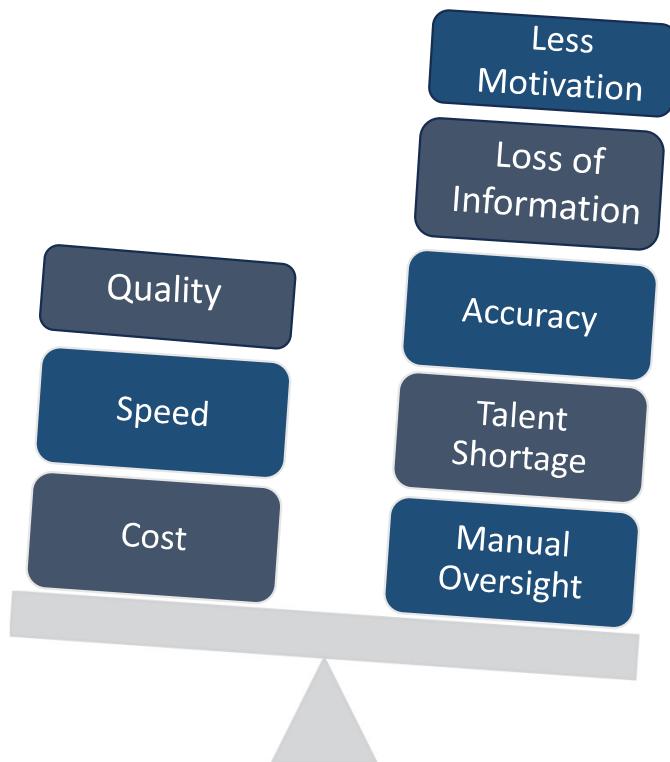
Sarv Drishti



CHALLENGES & CURRENT STATE

COMPROMISES

RISKS



- Manual collection and analysis of data.
- Labour intensive and therefore time consuming.
- Loss of accuracy due to manual intervention.
- Need for language translators.
- Risk of missing out on important data sources.

Every additional layer of complexity multiplies points of failure

Note: Cost is about how much resources are required, whereas speed is about how long we're waiting for the task to be completed.

SARV DRISHTI – OBJECTIVE

1. To develop an **AI-assisted analysis system** that addresses the limitations of the current manual process.

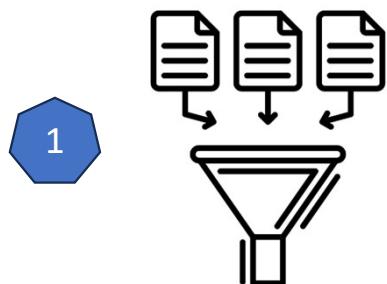
2. The system aims to :
 - a) Automate data collection
 - b) Language translation
 - c) First-level categorization, and summarization

3. Leveraging AI technologies to enhance :
 - a) Speed
 - b) Accuracy
 - c) Accessibility of analyzed data

Lang Translation and Analysis

SARV DRISHTI : STAGEWISE APPROACH

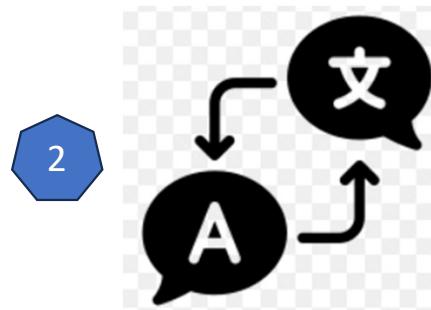
Data Collection



1

- Data sources both internal and external to China
- Data from public web journals, social media & other sources
- Auto monitoring of various topics, individuals, organisations and sources

Translation & Repository



2

- Data repository
- Language translation
- Focused smart search

Analysis & Summery



3

- Sentiment analysis feature to assess attitudes, emotions and opinions
- The system will conduct first level analysis of articles and research papers and generate concise summaries, provide Classification & Confidence Score

Sarv Drishti will automate the collection and categorisation of data from various digital sources

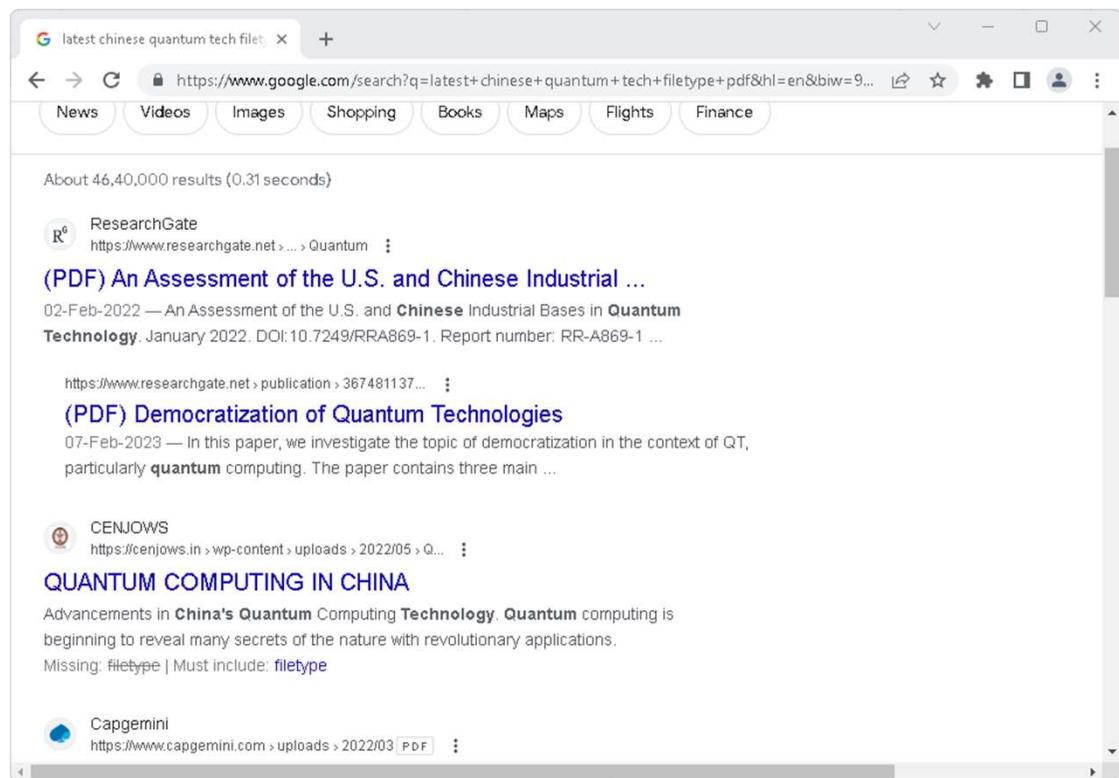
**Proof of
Concept**



DEMO

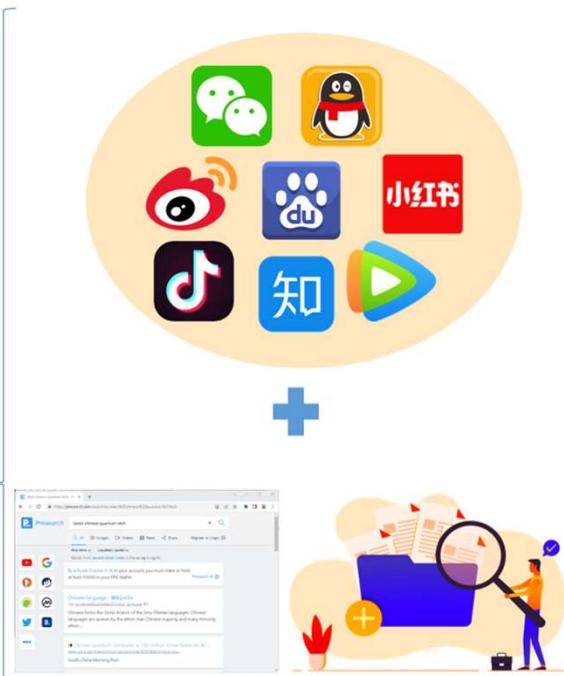
STAGE 1 : DATA COLLECTION

BEHIND THE “CHINESE GREAT INTERNET WALL”



- Basic access to data restricted by MIIT-2009
- Hard to index for other Search Engines
- Hard to gauge authenticity of documents
- Recent research not published
- Lost in Translation
- Transient documents only available for a short time window
- Potentially successful service subject to cyber-attack
- Access needed to data in Baidu, Sogou, Haosuo, Shenma, Youdao

HYBRID CRAWLING



Expanded input modalities
Social media + Search Engines
Patent DBs + Official communications
User contributed content
De-centralized – cannot be shutdown



AI learns from a few samples
AI drives next-steps
Starts with human supervision
Will be autonomous over-time
Dynamic – sampling frequently



Service produces higher quality
Topical sources
Follows references to find hidden troves
Feeds rest of the pipeline
Cyber-attack resilient

DATA OVERVIEW

Defence



PRC Military Overview.pdf



CLAWS - 2022.pdf



The China Maritime Militia.pdf

Economy, Science & Tech



中国科学院



China in 2030 - World Bank.pdf



China News.pdf

Politics, Internal & Diplomacy



China and its India Policy.pdf



China & the World.pdf



Tibet Census.pdf

STAGE 2 : TRANSLATION & REPOSITORY

POC - DEMO

Link to App : <http://34.228.162.225:9401/>

Mobile Version

External Q&A

Question
Chinese quantum mechanics capabilities

Alternate Language Reply Choice
Chinese

Answer
China is also actively pursuing research on quantum computing. In 2020, a team from the University of Science and Technology of China announced the development of a quantum computer prototype, named Jiuzhang, that reportedly outperformed the world's most powerful supercomputers in certain calculations. This achievement represented a significant milestone in the race for practical quantum computing.

In addition to quantum communication and quantum computing, Chinese researchers are also exploring other applications of quantum mechanics, such as quantum sensing and quantum simulation. These technologies have the potential to revolutionize various fields, including metrology, navigation, and materials science.

Overall, Chinese advancements in quantum

Link to Videos :

Upload & Internal.mp4 

Policy India.mp4 

Desktop Version

Multilingual Document Q&A and summarization.

Upload & Summarize Repository Q&A External Q&A

Question
Details about OBOR

Alternate Language Reply Choice
Chinese

Answer
The OBOR (One Belt, One Road) initiative was launched by China in 2013 and aims to develop countries and improve global connectivity. It consists of the 21st Century Maritime Silk Road and the Silk Road Economic Belt, which will connect over 65 countries, representing a significant portion of the world's population, trade, and GDP. The initiative focuses on creating networks for a more efficient flow of trade and integration of international markets. It includes six international corridors, such as the China-Pakistan Economic Corridor and the Bangladesh-China-India-Myanmar Economic Corridor. The initiative has received positive reactions, with over 100 countries and international organizations responding well and over \$90 billion USD of related projects underway. However, it is estimated that the initiative will cost over \$12.6 trillion by 2030. The Asian Infrastructure Investment Bank (AIIB) was established in collaboration with the OBOR initiative to address infrastructure needs across Asia.
Chinese
《欧洲（一条），一条道路》的倡议是由中国于2013年发起的，旨在发展国家并改善全球连通性。它由21世纪的海上丝绸之路和丝绸之路经济带组成。该倡议将连接65个国家，代表世界上很大一部分人口、贸易和GDP。该计划着重于创建网络，以更有效地贸易和国际市场的整合。它包括六个国际走廊，例如中国-巴基斯坦经济走廊和孟加拉国-印度-印度-中国-老挝-泰国走廊。该倡议得到了积极的反应。有100多个国家和国际组织的反应良好，超过900亿美元的相关项目正在进行中。但是，据估计，该计划到2030年将花费超过12.6万亿美元。亚洲基础设施投资银行（AIIB）是与OBOR倡议合作建立的，以满足整个亚洲基础设施需求。,

Reference Details
Referenced.txt 12.5 KB Download

Question & Answer
Clear

Use via API  Built with Gradio 

The-Belt-and-Road.pdf Show all X

POC - DEMO

Media Playback Audio Video Subtitle Tools View Help



STAGE 3 : ANALYSIS & SUMMERY

POC - DEMO

Link to App : <http://34.228.162.225:9401/>

Upload & Summarize Repository Q&A

External Q&A

Upload Document Download

Chinas-Belt-and-Road-Initiative... 2.2 MB

Alternate Language Reply Choice

Chinese

Uploaded Document Summary

population: China's objectives for the BRI include increasing trade and investment, establishing free trade zones, enhancing financial cooperation, accessing natural resources, strengthening transport infrastructure, and deepening cultural exchanges. The BRI addresses Asia's infrastructure needs, estimated at USD 26 trillion until 2030, with a focus on energy and power sector investments. However, Asia's infrastructure financing needs exceed current and planned investments under the BRI. The BRI holds the potential for strong contributions to sustainable development goals, but there are risks of shifting excess capacity and less environmentally-friendly energy sources to other countries. Overall, the BRI is a significant initiative to address global infrastructure needs, but additional efforts are necessary to ensure sustainable and high-quality infrastructure investments.

Multilingual Document Q&A and summarization.

Upload & Summarize Repository Q&A External Q&A

Upload Document Download

The-Belt-and-Road-Initiative.p... 7.6 MB

Alternate Language Reply Choice

Chinese

Uploaded Document Summary

The Belt and Road Initiative (BRI), also known as the One Belt, One Road (OBOR) project, is a comprehensive global development initiative launched by China in 2013. It aims to improve connectivity and promote economic integration among countries. The BRI consists of the 21st Century Maritime Silk Road and the Silk Road Economic Belt, which will connect more than 65 countries and cover over 62% of the world's population, 35% of world trade, and 31% of world GDP. The initiative focuses on policy coordination, cultural exchange, financial integration, trade and investment, and facilities connectivity.

China's stance can be classified as 'positive' as it has received an immense amount of positive reactions and has already invested over \$100 billion in related projects. The BRI has gained support from international institutions such as the United Nations, World Bank Group, International Monetary Fund, and the European Union. These organizations recognize the potential of the BRI to lower trade costs, increase competitiveness, improve infrastructure, and provide greater connectivity.

However, there are challenges and opportunities along the different corridors of the BRI. For example, the China-Pakistan Economic Corridor aims to develop the Gwadar port into a new Dubai and invest in energy projects to combat Pakistan's energy shortage. The Bangladesh-China-India-Myanmar Economic Corridor focuses on creating links and investing in energy, telecommunications, and agriculture. These corridors offer opportunities for companies specialized in construction, maintenance, and technical expertise. However, challenges such as corruption, lack of transparency, and security concerns need to be addressed.

Overall, the BRI presents numerous opportunities for economic development and connectivity, but it also faces challenges that need to be overcome. China's positive stance suggests its commitment to promoting global connectivity and integration.

CLASSIFICATION=Positive
CONFIDENCE SCORE=80%

Alternate language Document Summary

一带一路倡议（BRI），也称为“一带一路（Obor）项目”，是中国于2013年发起的全球全球发展计划。它旨在改善国家之间的连通性和促进国家之间的经济整合。BRI由21世纪的海事丝绸之路和丝带之路经济带组成，丝带之路将连接65个以上的国家，覆盖世界人口的62%以上，占世界贸易的35%，占世界GDP的31%。该计划的重点是政策协调、文化交流、金融一体化、贸易和投资以及基础设施建设。

中国的立场可以归类为“积极”，因为它已经获得了大量的积极反应，并且已经投资了超过900亿美元的相关项目。BRI已获得联合国、世界银行集团、国际货币基金组织和欧盟等国际机构的支持。这些组织认识到BRI降低贸易成本、提高竞争力、提高基础设施并提供更大的连接性的潜力。

但是，在BRI的不同走廊上存在挑战和机遇。例如，中国经济走廊旨在将瓜达尔港口发展为新的迪拜，并投资能源项目，以消除巴基斯坦的能源短缺。孟加拉国-印度-印度-缅甸经济走廊致力于建立联系和投资能源、电信和农业。这些走廊为专门的建筑、维护和技术专长的公司提供了机会。但是，需要解决诸如腐败、缺乏透明度和安全问题之类的挑战。

总体而言，BRI为经济发展和连通性提供了许多机会，但它也面临需要克服的挑战。中国的积极立场表明其致力于促进全球经济连通性和整合。

分类: 附件

Link to Video :



Chinese Upload and Internal.mp4



Dhoni Ronaldo.mp4

EVENT & INVENTORY MANAGEMENT



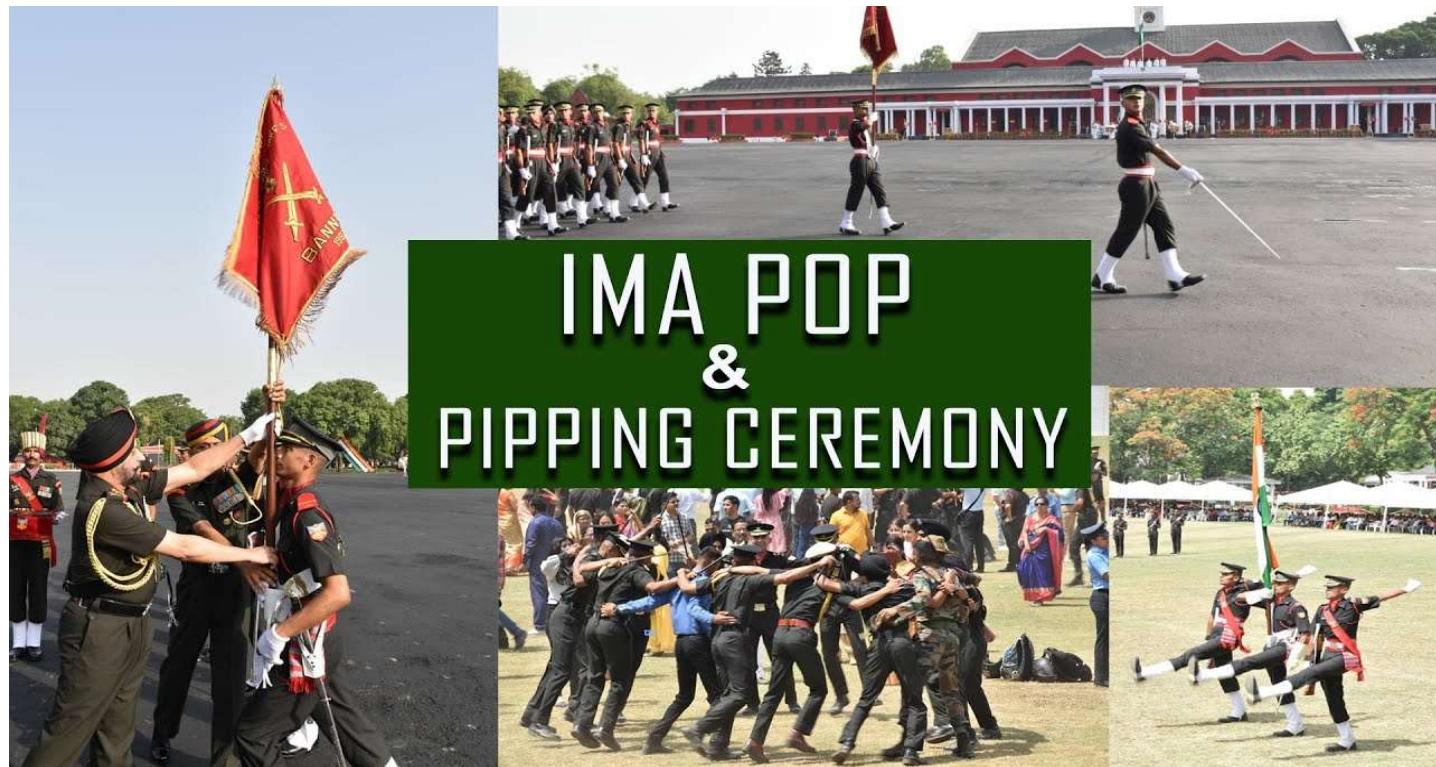
IMA : QR BASED EVENT & INVENTORY MANAGEMENT

Years: 2021, 2022 (4 POPs)

Capacity to Handle: over 1 lac
QRs on a single device

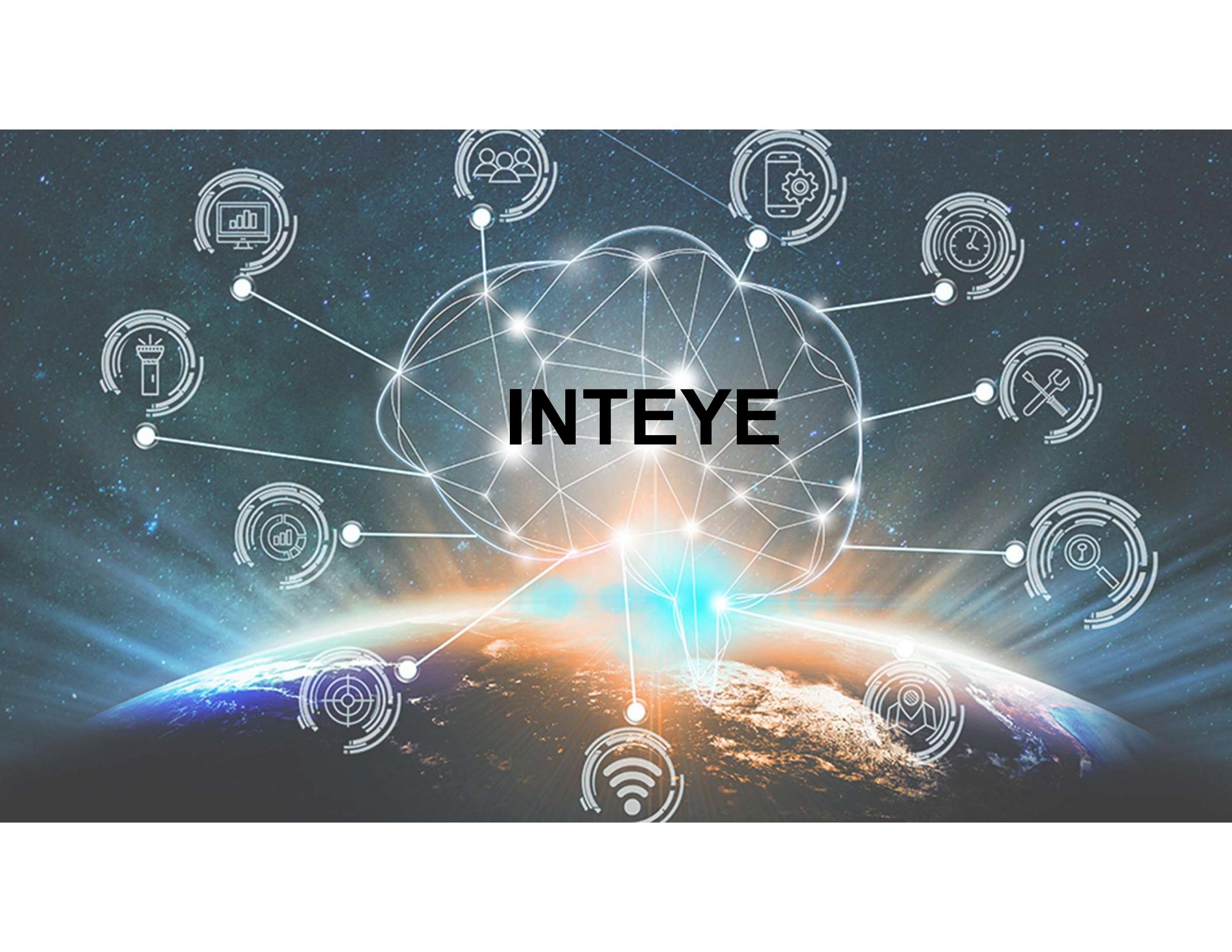
Handled: 12000 guest QR scans

Additional Feature: Sync data
across all devices using app



IN GLOBAL MILITARY APPLICATION SINCE 2019





INTEYE

INT EYE - OVERVIEW

1. Similar AI tools being used by

- US
- China
- Israel (TorchX)

2. Multilevel approach to Intelligence -

- INT Gathering
- INT Analysis
- Actionable INT

THE JERUSALEM POST

CORONAVIRUS ISRAEL NEWS ISRAEL ELECTIONS WORLD NEWS MIDDLE EAST U.S. POLITIC

Israel's operation against Hamas was the world's first AI war

The IDF used artificial intelligence and supercomputing during the last conflict with Hamas in the Gaza Strip.

By ANNA AHRONHEIM MAY 27, 2021 20:13



EMAIL TWITTER FACEBOOK

LEARNING ARTICLES NEWS



INDIAAI
A PRATICALLY FREE INITIATIVE

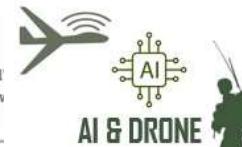
Israel • Autonomous Weapons • Jun 01, 2021

Israel claims to have fought the world's first 'AI' war

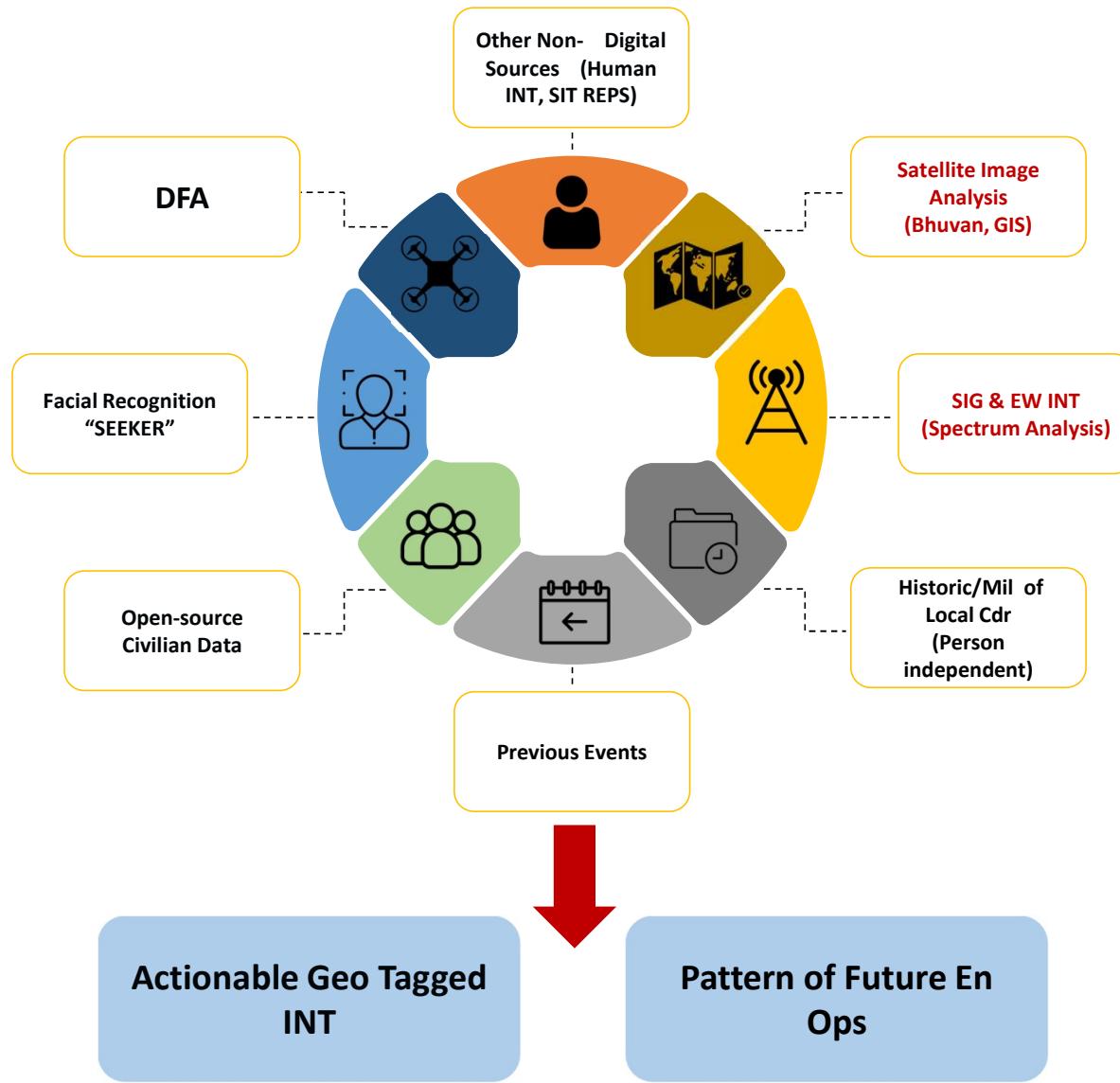
By INDIAAI

Highlights

The Israeli military claims that they were the world's first to use artificial intelligence (AI) and supercomputing in a war in Palestine, earlier this month.



DATA SECURITY – STAND ALONE & AIR GAPPED



INT GATHERING

1. INPUT - From all source types

- (a) Video - Sat, Drone Feeds, Cell Phones, SVL feed
- (b) Audio - Sig Intercepts, Call records, Mobile audio calls
- (c) EW Spectrum
- (d) Physical - Sit Reps, Human Int
- (e) Open Source - Internet, Social media, Blogs

2. AI catalogs and Identifies Mil objects -

- (a) Tks, Tps, Bunkers, Trn details, Imp movs etc.

3. Builds historic INT Library/Data Base

Integrated Theaterwide Comd Center



Live Platform : <http://emphasis.org.in/Verlytics/>

The screenshot displays the EMPHASIS Verlytics platform interface, which includes a dashboard, training section, and history.

Dashboard: Shows summary statistics: Hours of Training (250 Hrs), Videos (5), Processed Videos (5), and Training Videos (60).

Training Section: An aerial view of a forest scene with a green bounding box highlighting a person. A tooltip indicates "Human - 98.10%".

Object Identified: A table showing one identified object: Human (Color: Green).

Video Details: Duration: 30 sec, Size: 6.72 MB.

Play/Pause: A button to control the video playback.

History: A sidebar listing recent activities: 1 file, 1 video, 1 processed video, and 1 annotation.

Right Panel: Displays two video frames. The top frame shows a group of people near a vehicle with a green bounding box. The bottom frame shows a road scene with a red bounding box.

EMPHASIS

Search



Admin



New Instance Type:

Box



Complete Video



Label + ?

DashBoard

Testing

Training

History

Docs

Manage User

Manage Account

Support

RECORDED WITH

SCREENCASTOMATIC



Add label

Enter Label Name 

Chose a Color:

#24F50E

Set Priority: Low Mid High

Create

Name	Priority	Action
Plane	Mid	
Jeep	High	

INT ANALYSIS

1. Military Knowledge -

Using interface knowledge of local Cdrs is digitalized

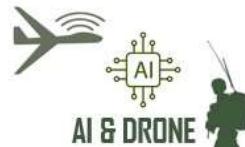
2. AI Analysis -

Over time systems learns and adapts to the INT inputs

3. OP Patterns -

(a) Pattern of En Ops

(b) Correlation of events



ACTIONABLE INT

1. Output Types –

- (a) Geo Tagged Maps - Historic INT, events and Pattern of ops overlay on Sat images
- (b) SVL Grid Gaps - Identifies gaps for optimum use of SVL assets
- (c) Spectrum Analysis - EW map
- (d) Trn Visibility
- (e) Predictive analytics

2. Segmented Output –

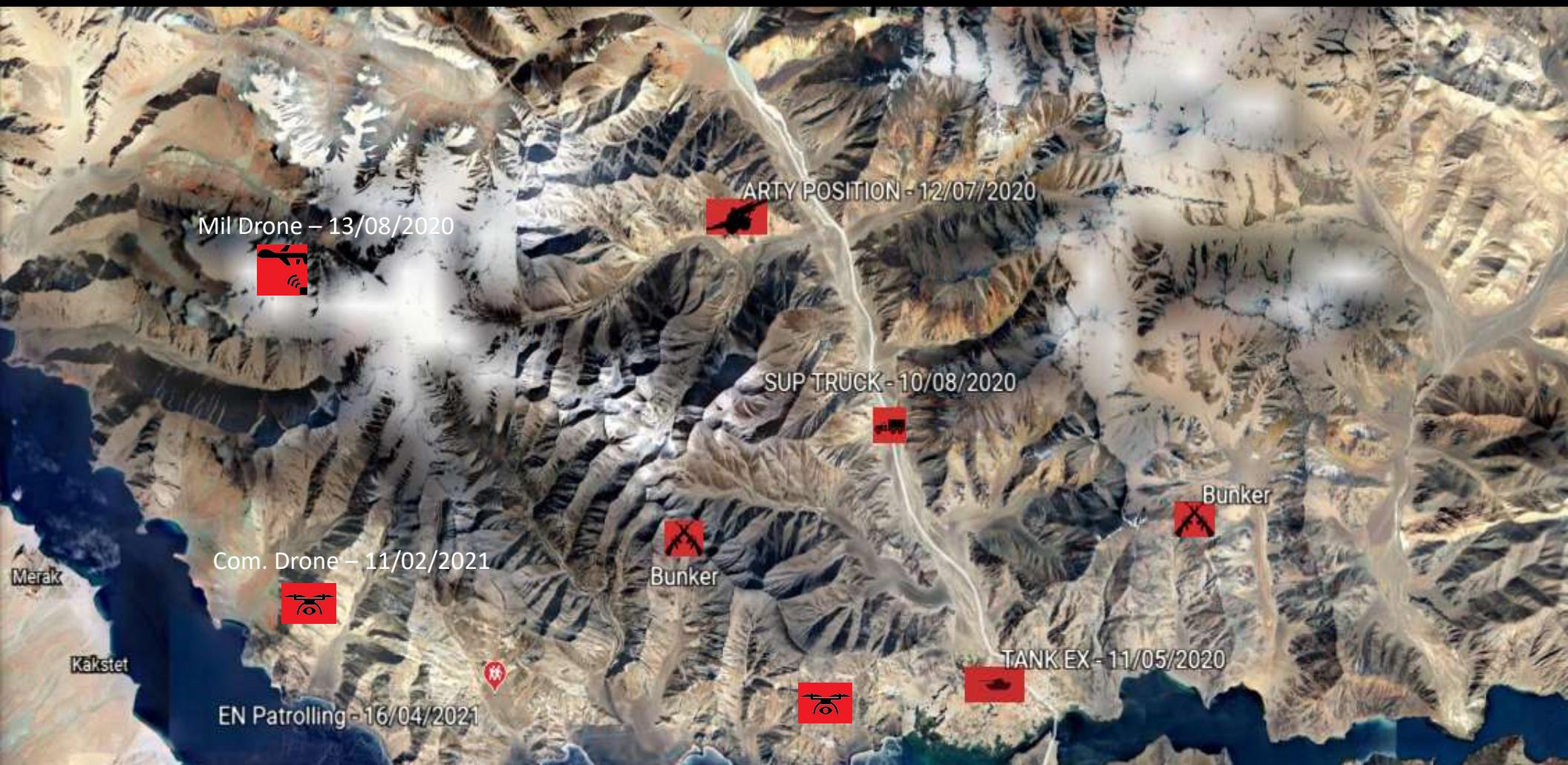
Output is provided based on level of op requirement (Coy Cdr to Corps Cdr level)



The background of the slide features a dark, abstract pattern composed of numerous small, glowing green and yellow dots. These dots are arranged in a way that creates a sense of depth and motion, resembling waves or ripples on a surface. The overall effect is futuristic and dynamic.

“INTEYE” SCENARIOS

SCENARIO 1 : CONVENTIONAL OPS



EN Patrol

KOS

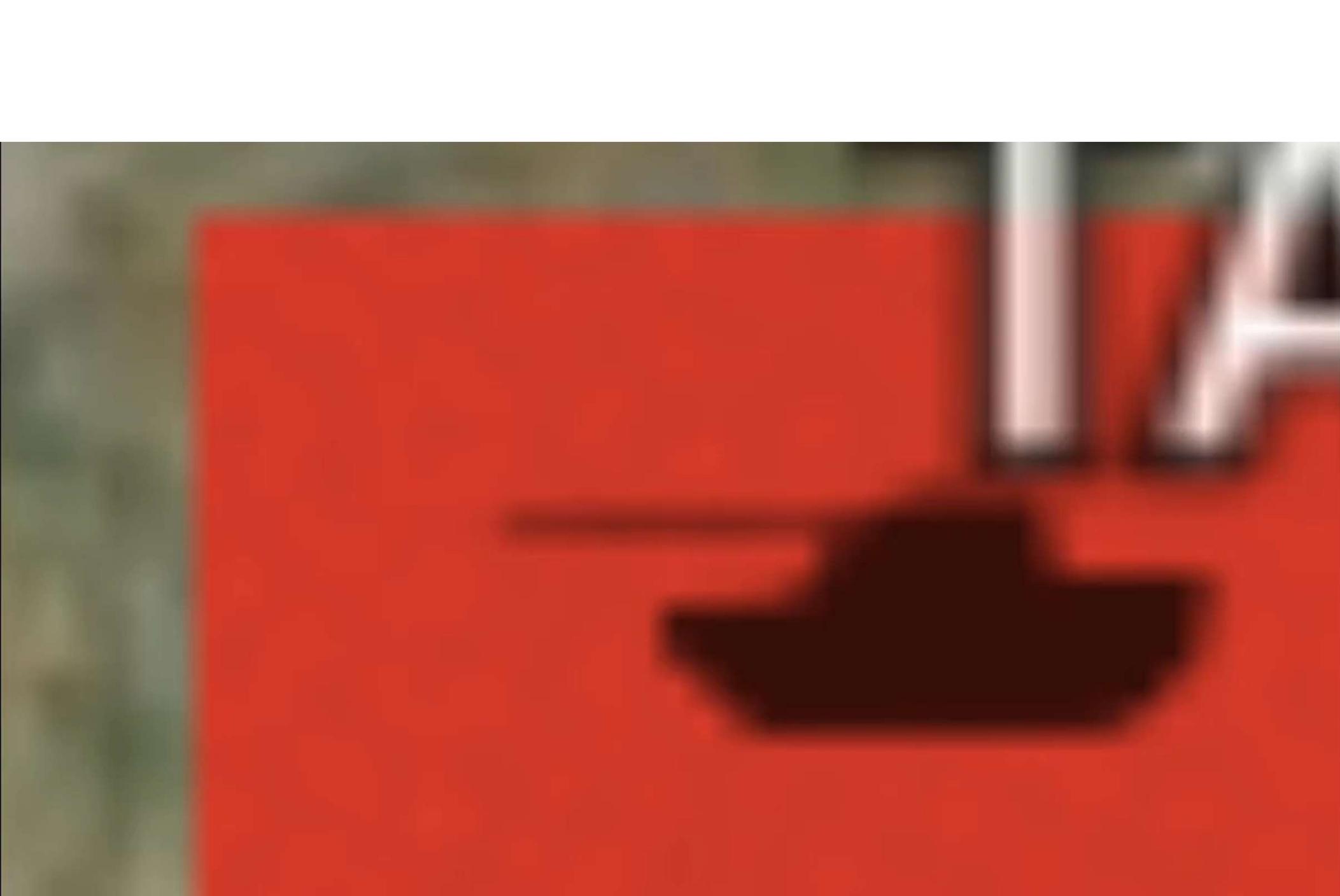
Pandean



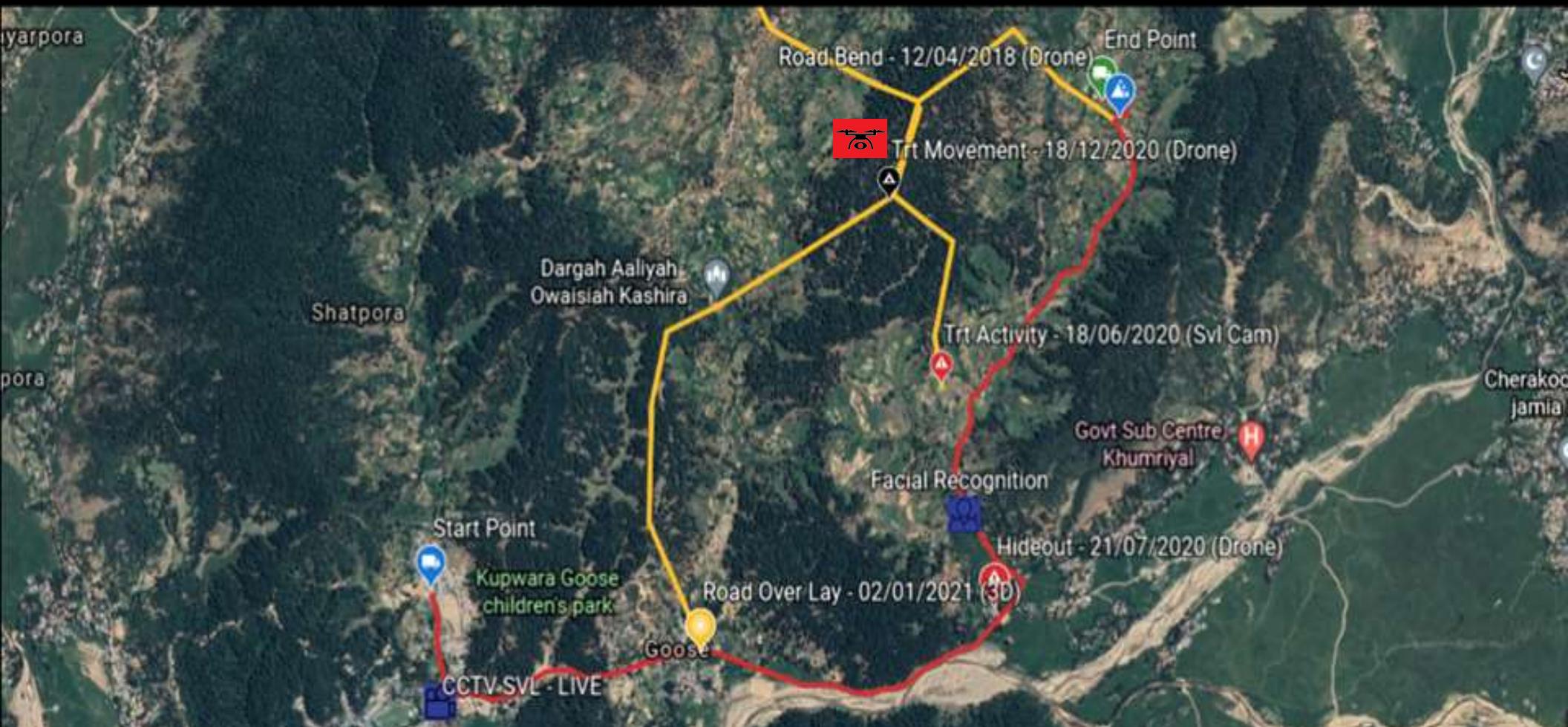
Ba

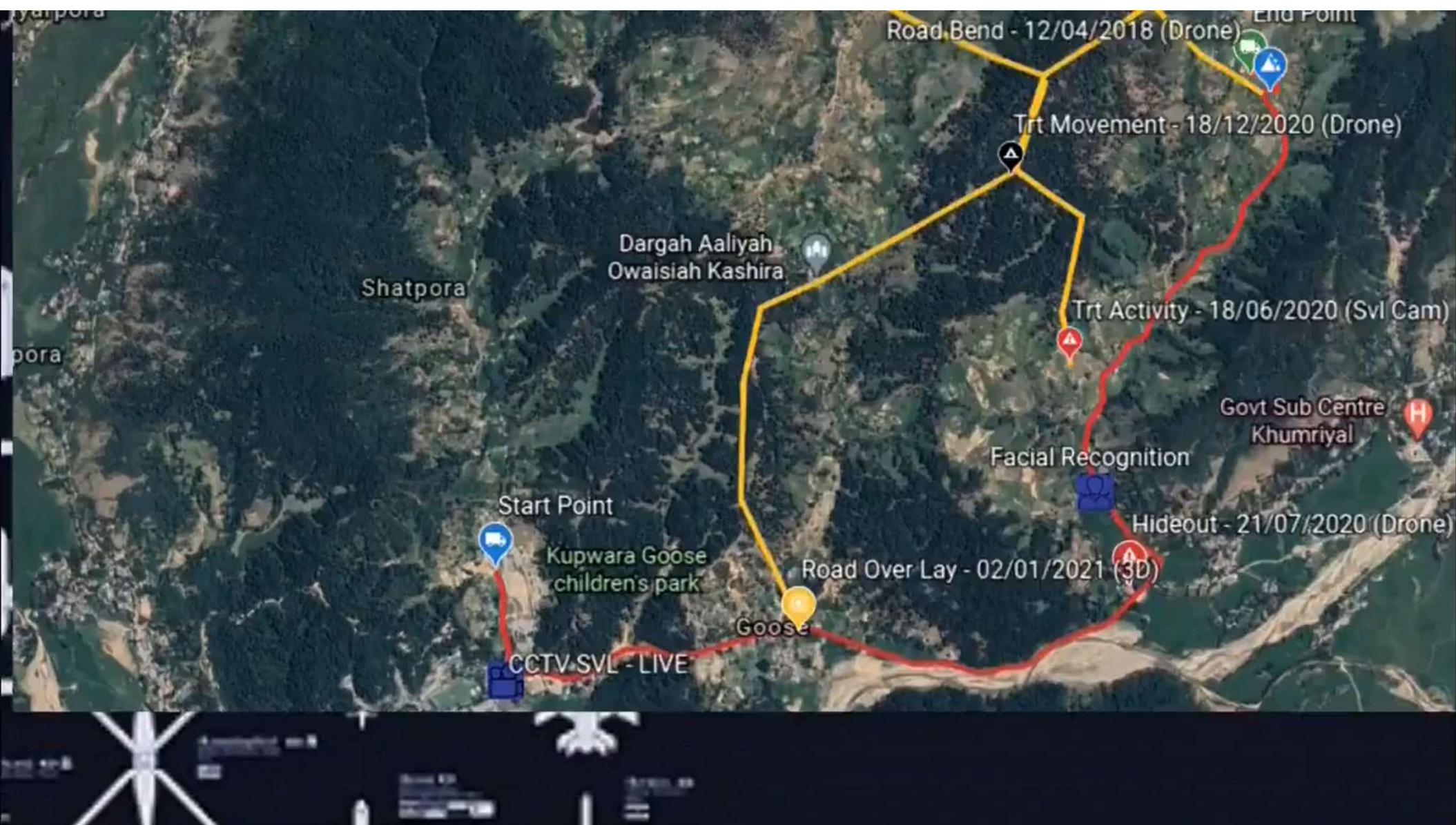
Grandes

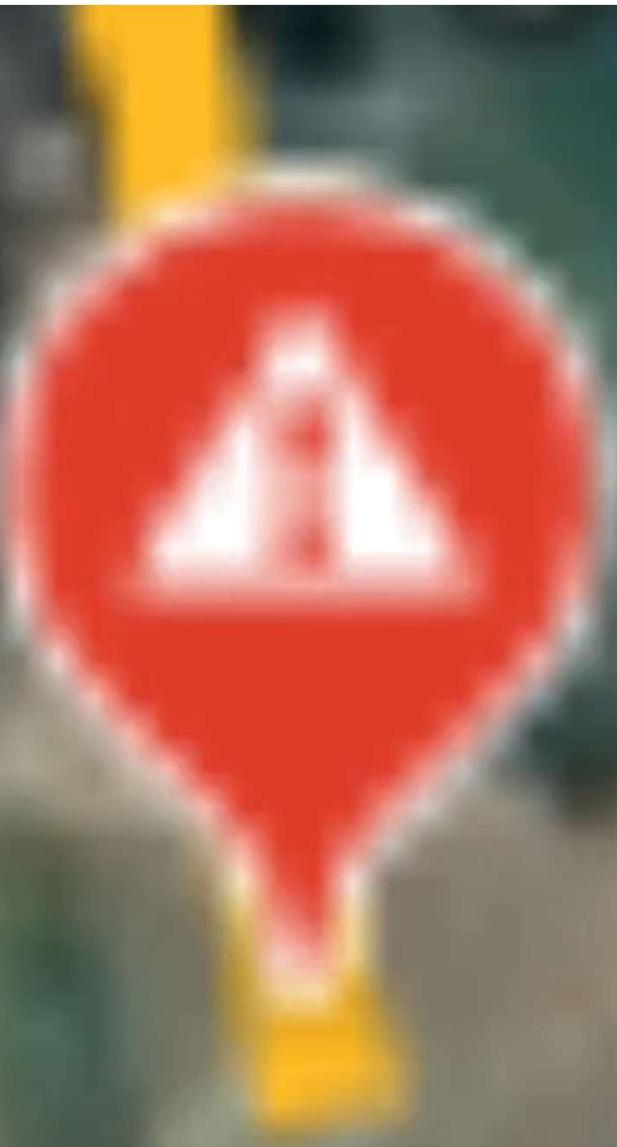




SCENARIO 2 : CI/CT OPS







INT

PREPARATION

OF BATTLE



BATTLEFIELD ASSESSMENT SYS

1. Task -

- (a) IPB based analysis
- (b) Svl tasking orders

2. Current Impact –

- (a) Manually analyzed with coord between multiple fmns and teams

3. Estimated Impact –

- (a) Digital IPB and svl tasking orders
- (b) AI enabled offensive and defensive scenario building
- (c) Sys can be input for/expanded to MDMP

Decision Sp Sys



ILLUSTRATIVE EXAMPLE

Variable Factors

1. Force
 2. Doctrine
 3. Time
 4. Space
 5. Target
- profile
3. Force & capb assessment
 4. Probability of next actions

NAIs ers eqpt

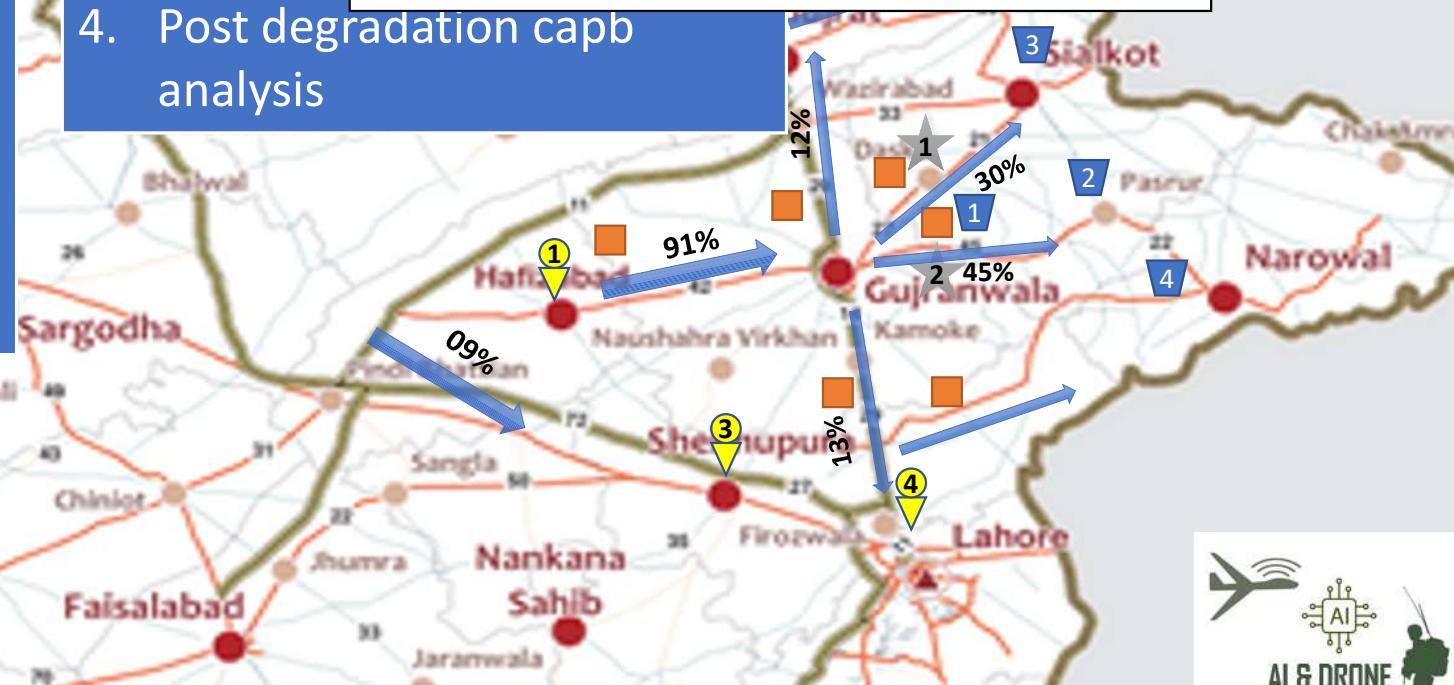
ers eqpt

DP & TAI

1. Svl taskin
2. Mapping options
3. Probabil
4. Post degradati

Result

1. Prediction of Course(s) of En Action
2. Relevant Historical Analyses



LEGEND

- (1) - NAI
- (2) - TAI
- (3) - ISR
- (4) - DP