



# ARTIFICIAL INTELLIGENCE

Colonel P Hani, SM

***‘karat karat abhyaas ke, jadmati hoth sujaan...***

***Rasri aavat jaat ke, sil par parath nisaan’***

# ARTIFICIAL INTELLIGENCE

*“the study of the computations that make it possible to perceive reason and act”*

*“the automation of intelligent behaviour”*

# SOME COMPONENTS OF AI

Machine Learning

Deep Learning

Neural Networks

Cognitive Computing

Computer Vision

## Putting it all together

### 1. Training data



### 2.

Data gathered continuously from the environment, sensors and online behavior

### 3.

Data is aggregated and harmonized

### 4.

Machine learning framework processes data

### 5.

Patterns and trends are revealed, generating insight

### 6.

System takes different actions to drive value. New action is used as input to improve self-learning of the system.

○ Sensing   ○ Processing   ● Learning

Sensing

Processing

Learning



# India working on application of artificial intelligence to boost capabilities of armed forces

A task force led by Tata Sons chairman N. Chandrasekaran is finalising the specifics and framework of the project, which would be implemented in a 'partnership model' between the armed forces and the private sector

Last Published: Sun, May 20 2018. 03 30 PM IST

PTI

Enter email for newsletter

Sign Up



## MORE FROM POLITICS »

- ▶ **Judge Loya's death: Lawyers association seeks review of SC order on independent probe demand**
- ▶ **India's Q4 GDP growth likely at 7.4%: Icra**
- ▶ **Congress's aim is to oust Narendra Modi from power: A.K. Antony**
- ▶ **Gold mine operation in Tibetan county close to**

**Why the Military?**

# FIELDS FOR AI IN MILITARY

Weapon Systems

Intelligence & Surveillance

Decision Support Systems

Logistic Planning

Cyber Operations



**AIM**

# **Integration of Geo and Artificial Intelligence for Logistics Planning**

# REASONS

Easily Understood

Existing Models

Implementable

Savings

Tooth to Tail Ratio

# USECASE DOMAINS

Inventory Mgt

Supply Chain Mgt

Transport & Fleet Mgt

Maintenance Tasks

Field of Medicine

# REPAIR MGT CONSOLE

RRCC Mgt Console x RRCC Mgt Console x You

localhost:3232/Main.aspx

RRCC Management Console Designed By OACT 28 Logout


Home GIS Map Casualty MRT Spares & Tools Manpower Reports About Us

**Recent upgrades**

- Distance Calculation
- Manpower Mgt
- Spares & Tools Mgt

**Functionalities**

- Map Based location
- Casualty Mgt
- Repair & Recovery (RR) Mgt



**Welcome to RRCC Management Console!**  
Posted on Januray 1st, 2018 by Capt Viksit Sachdeva

RRCC Mgt Console is a free, in-house developed GIS based Engg Sp Package tool efficient in management of RRCC at DIV level and beyond.

The eff exec of the Corps of EME tasks, role and responsibility, especially in war, highly depend upon

© 2018 All Rights Reserved • Design OACT 28 Privacy Policy • Terms of Use

09:33 31-05-2018

# REPAIR MGT CONSOLE

[Home](#) [GIS Map](#) [Casualty](#) [MRT](#) [Spares & Tools](#) [Manpower](#) [Reports](#) [About Us](#)

## RRCC Mgt Console

+

-

Enter the Coordinates to Se

Q

No 3 Fd Wksp  
11AB45698

No 1 Fd Wksp  
12BAH123

No 4 Fd Wksp  
BA0142006

3552

12 4568

12BA56987

Sopore

Baramula

No 5 Fd Wksp

74.543 34.414 Degrees

### Find MRT

Search an address or locate on map

▼

193222

×

Q

Show results within 24 Kilometers

0

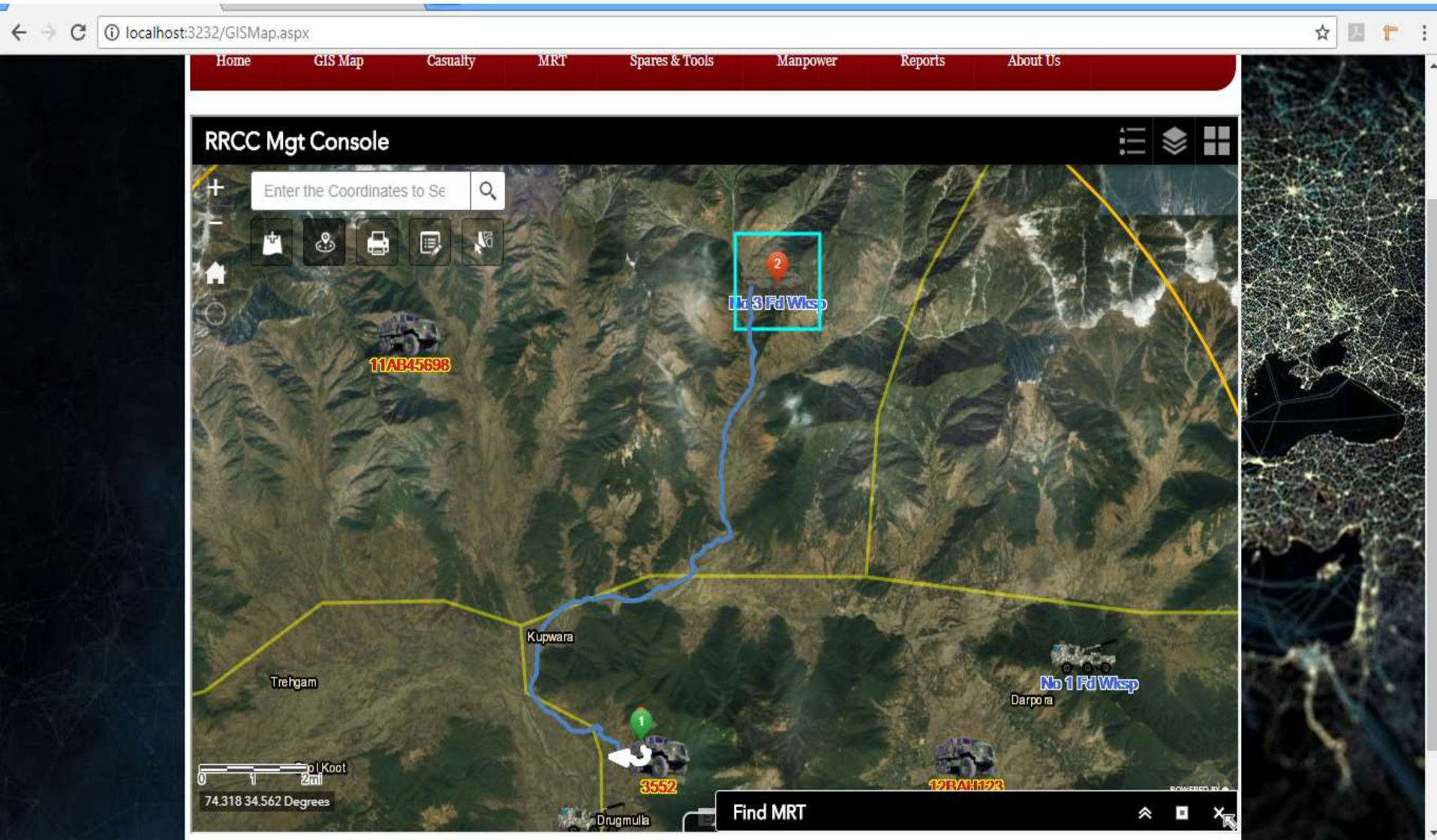
60

MRT	
MRT: No 2 Fd Wksp	2.99 km
MRT: No 3 Fd Wksp	15.49 km
MRT: No 1 Fd Wksp	16.43 km



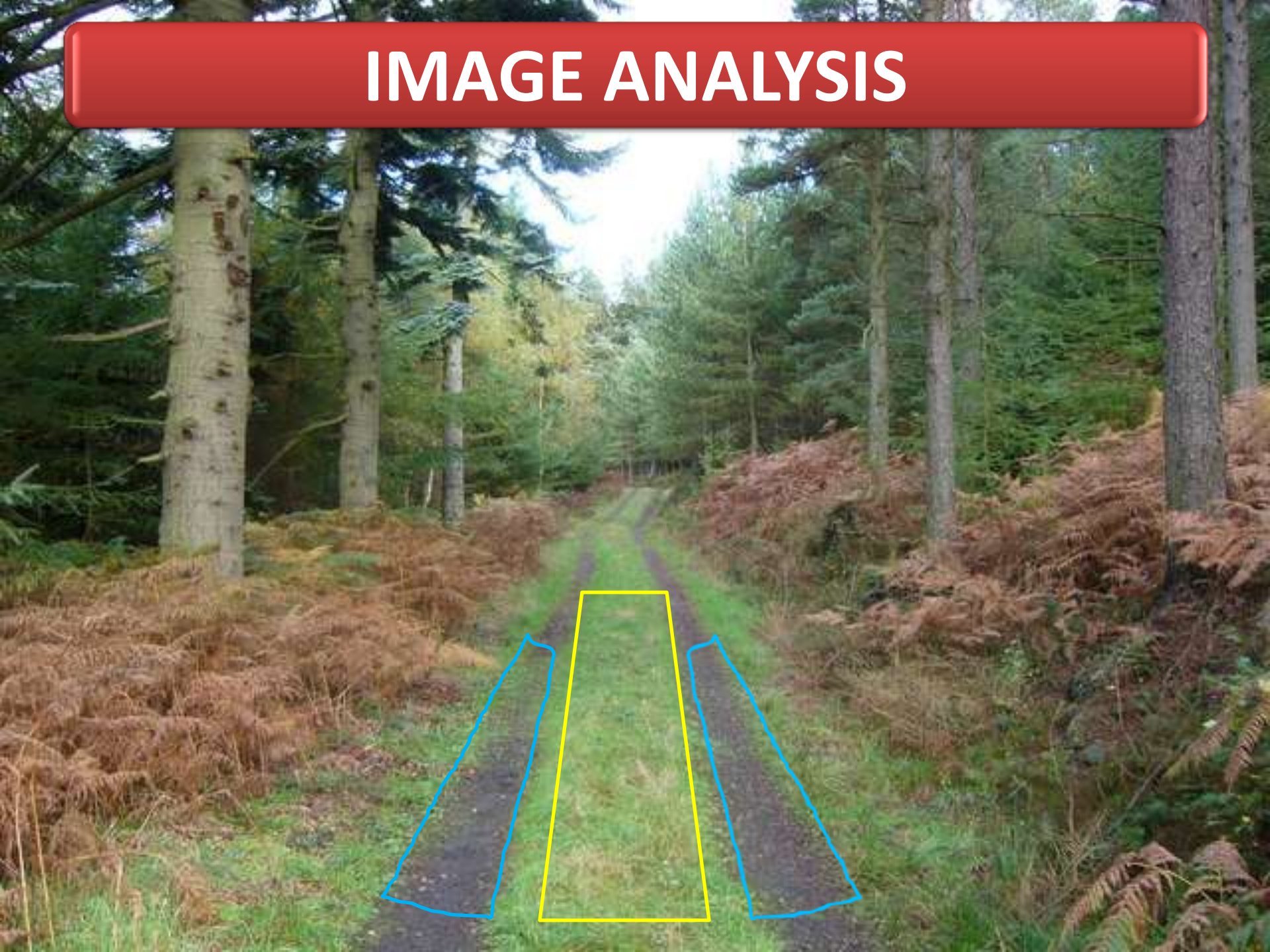


# REPAIR MGT CONSOLE





# IMAGE ANALYSIS



# INTEG GEOSPATIAL & AI

Intelligent Route Optimisation

Predictive Network Management

Terrain to Image mapping

Route Anomaly Detection

Dynamic Changes in Vector Layers

Feedback through IoT Architecture

# USECASES

Centralised System using Neural Networks

Effective Push Models

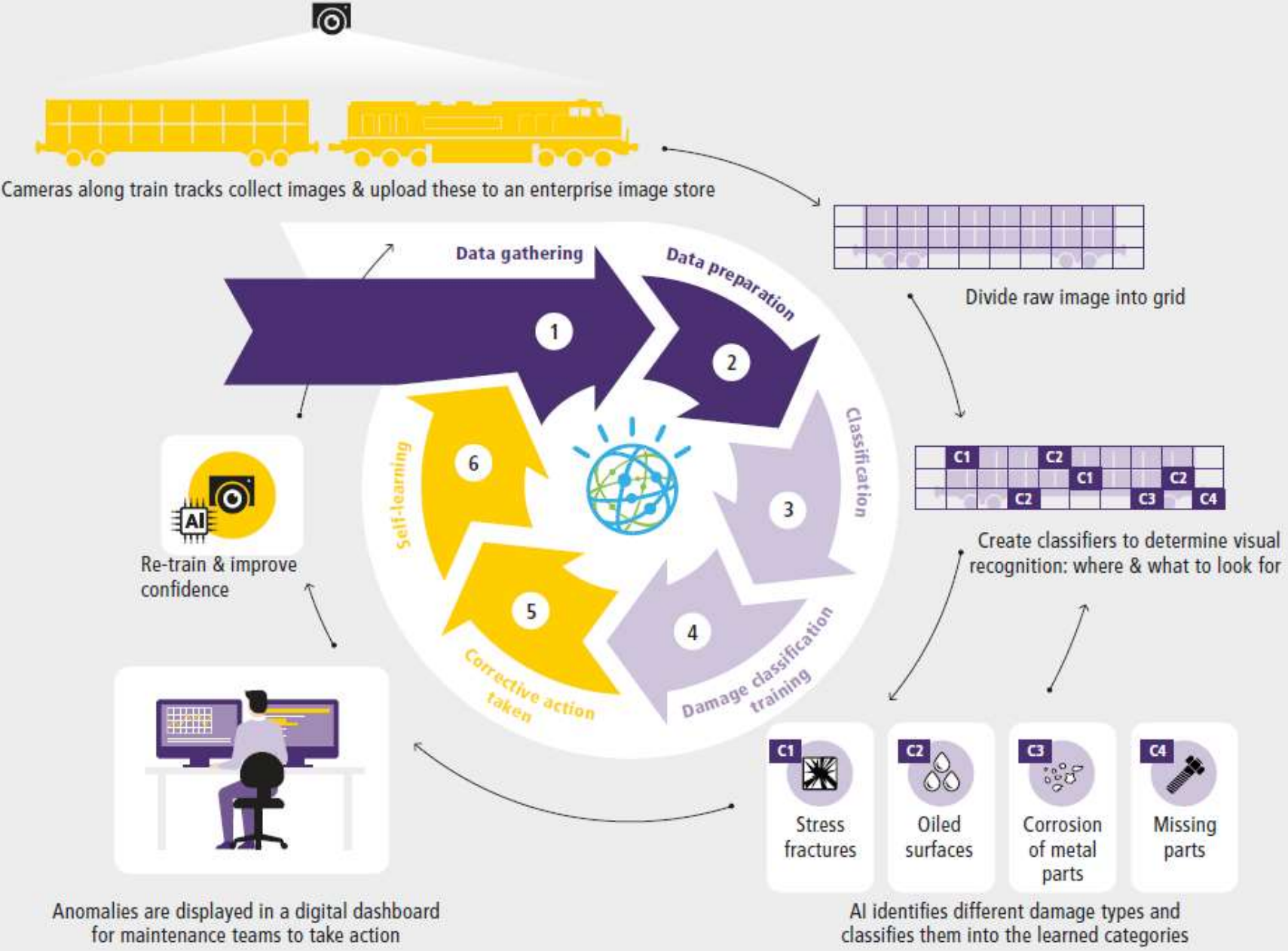
Anticipatory Logistics

Inventory Data Analysis

Visual Recognition for Maint Tasks



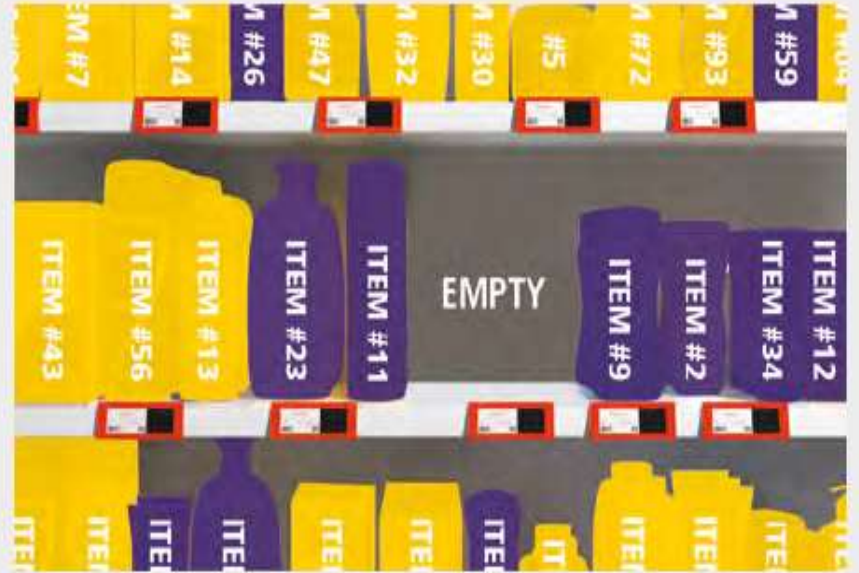
# HOW IBM WATSON LEARNS VISUAL INSPECTION OF LOGISTICS ASSETS



## INVENTORY MANAGEMENT USING COMPUTER VISION AI: QOPIUS



Normal 2D image of retail shelf  
taken with smartphone



Overlaid visualization of product  
and shelf insights using Qopius

# USECASES

Handwriting Recog

BA Number Recog for Convoy management

Intelligent Sorting of Ammunition

Drones for Damage Assessment

Cognitive Automation- Expert Assist



# Summary

Adoption of AI- a Necessity

Mil Logistics is Prime and Easiest Candidate

Trial Evaluation of Solutions

Cloud

Bandwidth

**Jai Hind**