

GEO-ASSIST

HPC-AI Framework for Geospatial Data Analysis

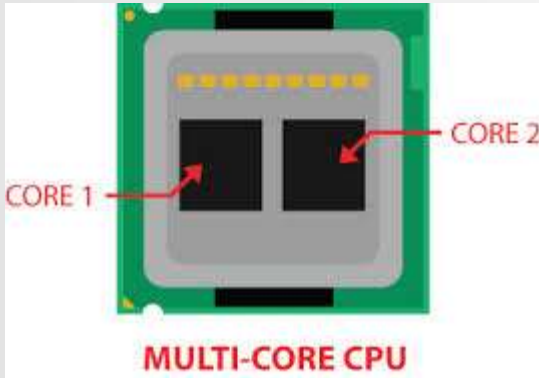
Dr. Rhushabh Goradia

CEO / Co-founder, Syncthreads Computing

rhushabh@gmail.com / +91 9172243335

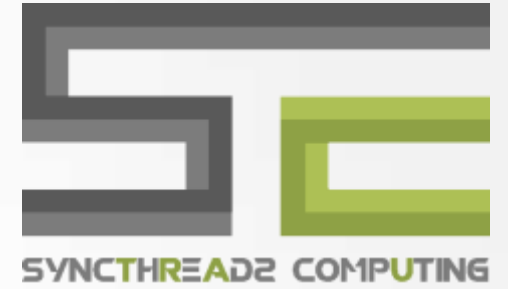
What is HPC

- **HPC** : High Performance Computing



What is HPC

- **HPC** : High Performance Computing



- **Over 100X speedups**
- **20 Billion records queried in milliseconds (MapD)**

High Performance Computing

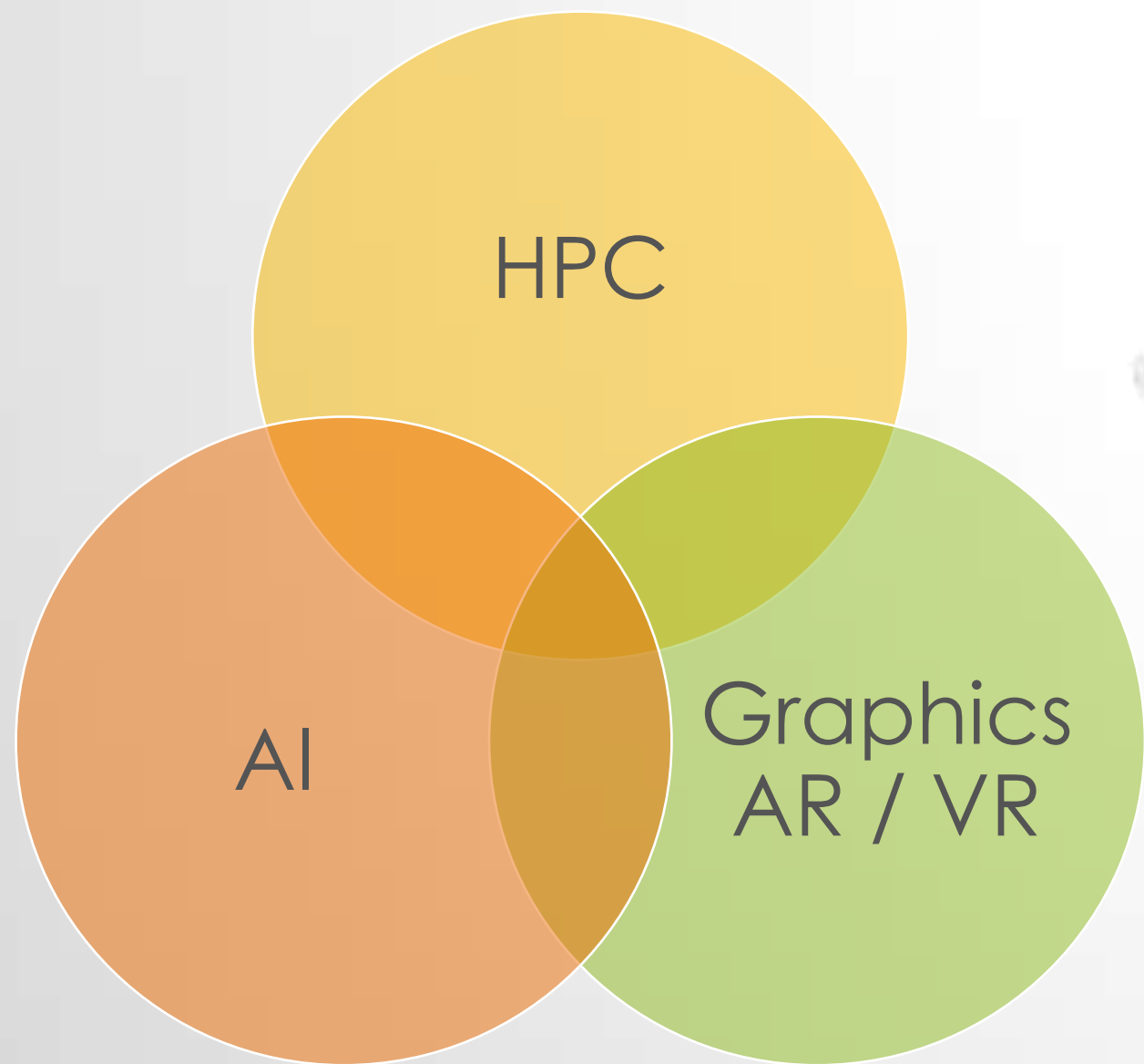


- How many GPUs to use? Which GPUs to use?
- How would you devise your AI algorithms to “efficiently” utilize these GPUs?
- Is the framework “well-architected”? Support Micro-services
- How quickly you want the results?
- What is the size of your data?
- What is the speed at which data is being ingested?
- Are there multiple sources?
- Are there multiple users accessing the data?
- Is your system “**cost-effectively scalable**” to handle growing demands?
- Is your system “**cost-effectively scalable**” to handle new modalities?
- What is the end user effort required to operate the system?

IA.AI
Metadata

...and so on

Syncthread Computing



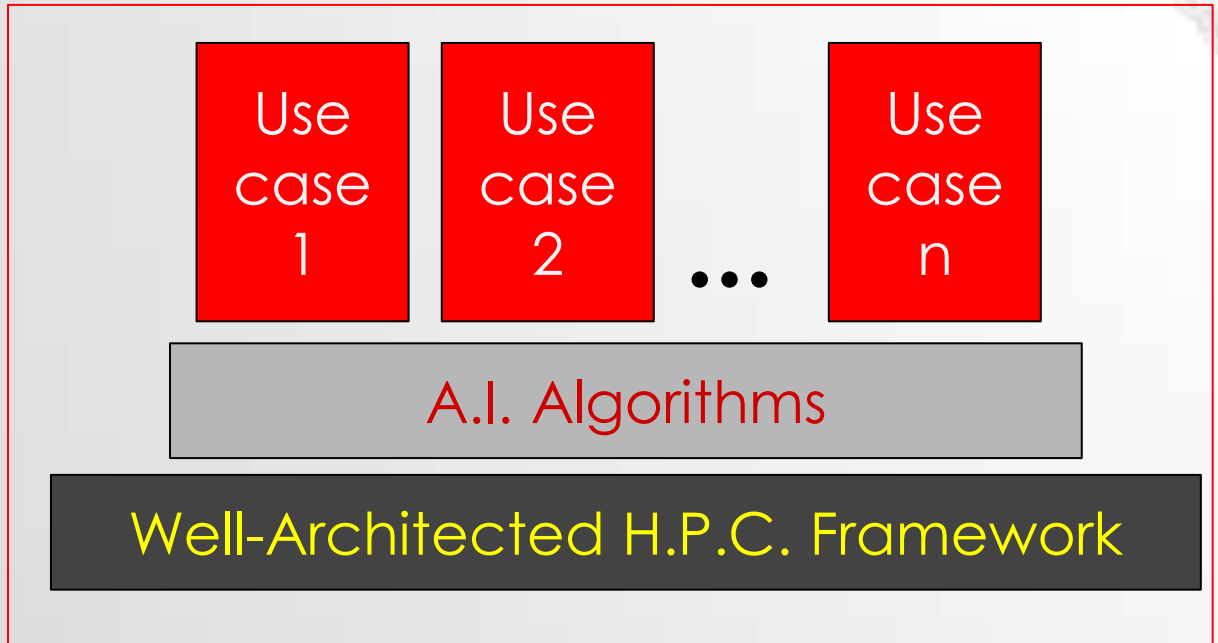
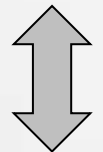
Black Box Solution to AI



Syncthread Computing



Client GUI - AR/VR



Black Box Solution to AI



Cliche Credibility Issue



- Syncthreads Computing: **HPC – AI Startup from IIT Bombay**
- ***SPIRIT***: “Profit is necessary for sustained growth, not a measure of success.
Saving Lives is”
- ***Industries***: Healthcare, Agriculture & ***Defence (Geospatial Space)***
 - **(S.A.R.A., iSense, Geo-Asslst, Gyan, Shiva)**
- ***Mission***: “All things standing shall fall, but the moving ever shall grow”
 - Emerging Technological Products
 - Data Centre & Cloud Setups including **National Supercomputing Mission (Central Govt.)**
 - Workshops **(NTRO, ADRIN)**

OUR CORE TEAM



Umesh Gupta (IIT)
Research Head / A.I. Data Scientist



Rakesh Devnani (MBA)
CFO, 15+ Years of Experience



Sai Kiran (M.Tech, IIT)
Chief Data Scientist, 8 Years of Experience



Dr. Rhushabh Goradia (IIT)
CEO, HPC Solution Architect



Tijo Thomas (PMP)
COO, 18 Years of Experience



Rupesh Mandke
Graphics Head, 10 years of Experience

OUR CORE TEAM



Umesh Gupta (IIT)
Research Head / A.I. Data Scientist



Rakesh Devnani (MBA)
CFO, 15+ Years of Experience



Dr. Rhushabh Goradia (IIT)
CEO, HPC Solution Architect



Tijo Thomas (PMP)
COO, 18 Years of Experience



Sai Kiran (M.Tech, IIT)
Chief Data Scientist, 8 Years of Experience



Rupesh Mandke
Graphics Head, 10 years of Experience

30+ AI Data Scientists

8+ Solution Architects

Team of Full Stack Developers

OUR CORE TEAM



Dr. Rhushabh Goradia (IIT)
CEO, HPC Solution Architect



Umesh Gupta (IIT)
Research Head / A.I. Data Scientist



Rakesh Devnani (MBA)
CFO, 15+ Years of Experience



Tijo Thomas (PMP)
COO, 18 Years of Experience



Prof. Surya Durbha (IIT)
Domain Expert Consultant
20+ years of Experience in Geospatial



Sai Kiran (M.Tech, IIT)
Chief Data Scientist, 8 Years of Experience

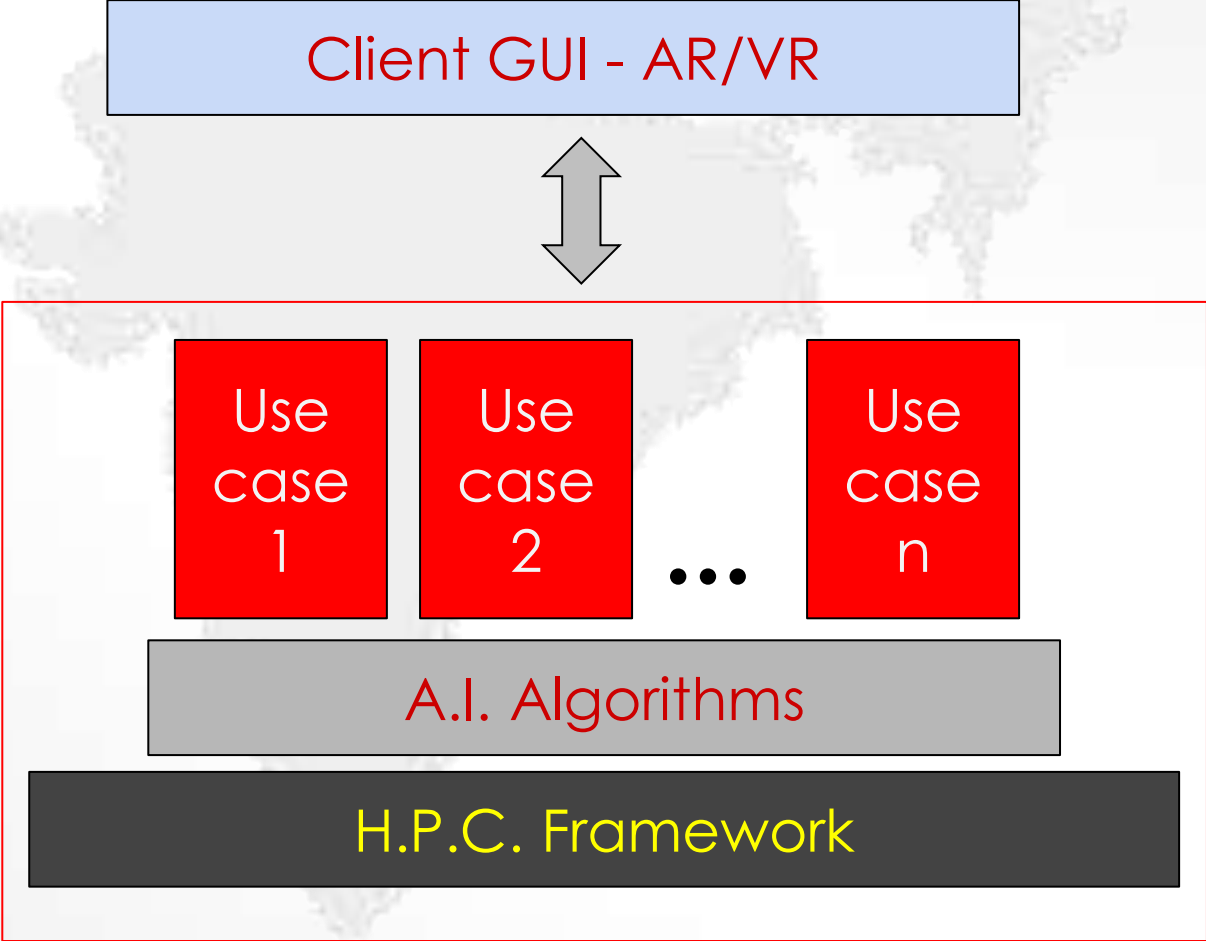


Rupesh Mandke
Graphics Head, 10 years of Experience

GEO-ASSIST: Your Paradigm Shift



Geo-Assist Black Box Solution



GEO-ASSIST: Your Paradigm Shift



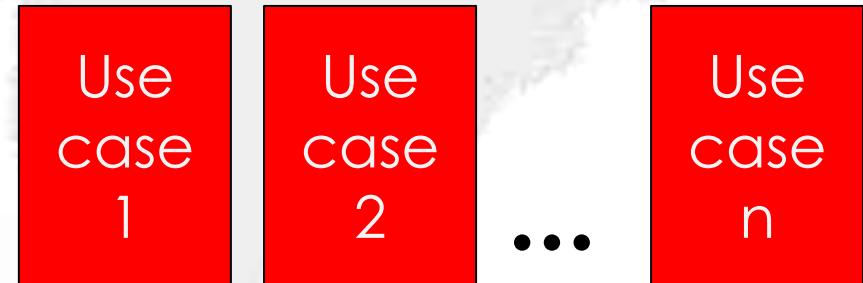
Geo-Assist Black Box Solution

G-Class

Geospatial segmentation, labelling & Classification

INQUIRE

Interactive content-based Querying, Retrieval & Analysis



A.I. Algorithms

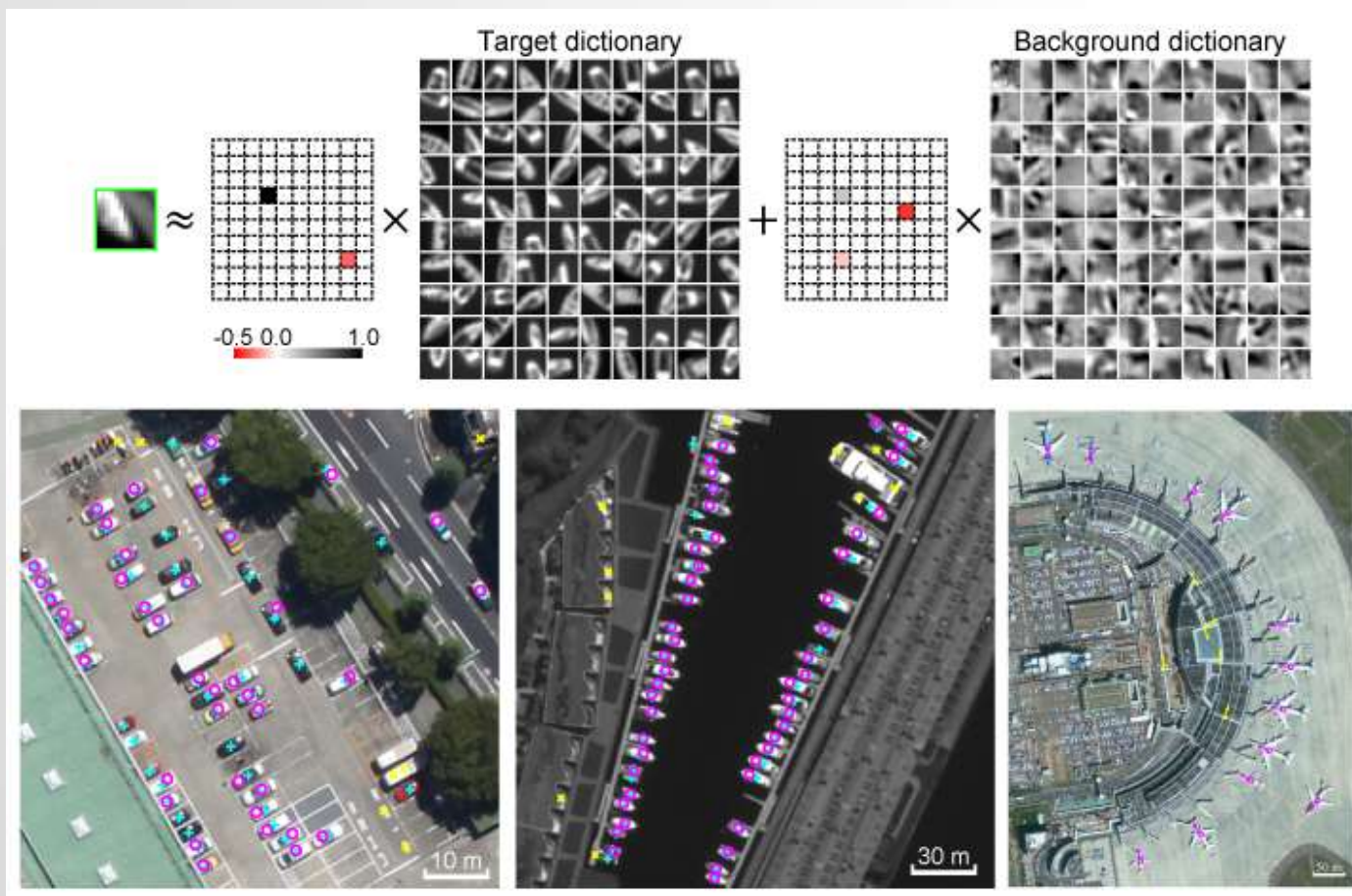
H.P.C. Framework

WHAT IS GEO-ASSIST



G-Class

Geospatial segmentation, labelling & Classification

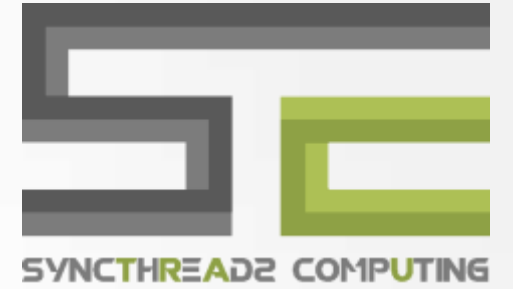


WHAT IS GEO-ASSIST

INQUIRE

Interactive content-based Querying, Retrieval & Analysis

- Object metadata
- Intelligence Analysis on Spatial-Temporal Data
- Analytics for CHANGE

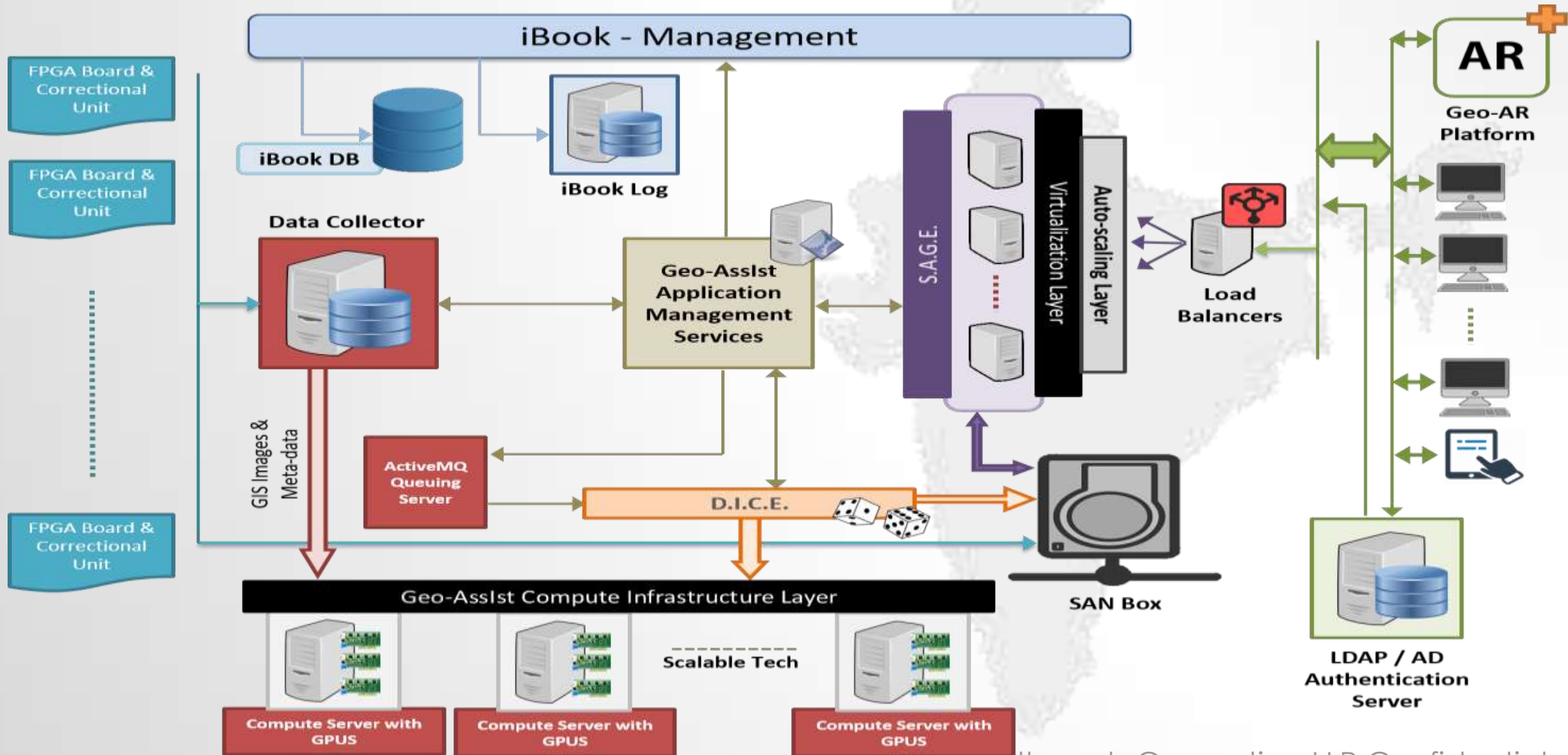


APPLICATION SCENARIOS



- Detect areas (e.g., back-filled trenches, post-bombing areas, camps, roads etc.) of disturbance from a tactical view point and facilitate content-based search and retrieval of similar areas from Large archived Satellite/Airborne / UAV imagery
- Disaster Recovery Planning
- Border and Naxalite area surveillance
- New insights to spatial-temporal data
- Transformation Invariant Analysis

SPECIFICATIONS

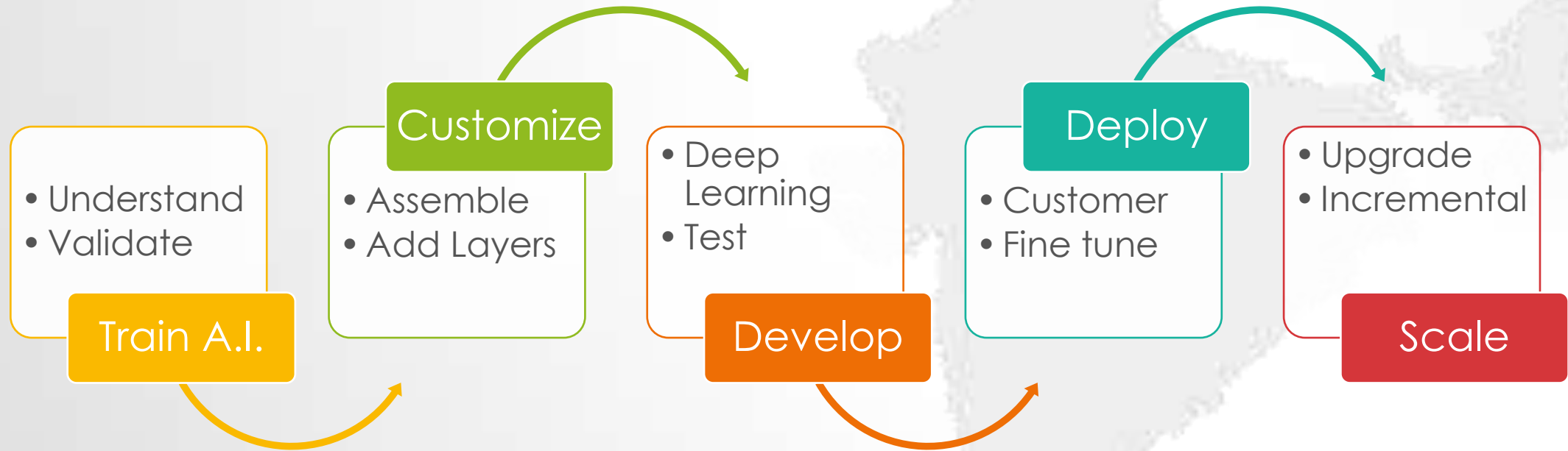
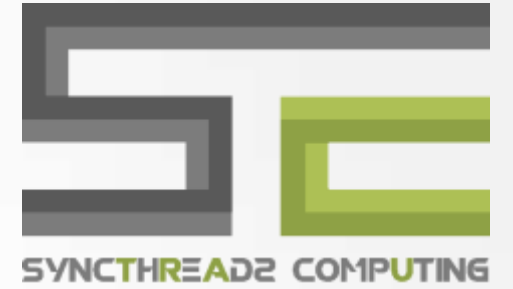


Key Offerings: GA-Vital



- **Scalable** Well-Architected Framework
- Automated AI-algorithms for **data & metadata**
- **Plug-and-play** micro-services
- **Intuitive user interface**
- **Geo-AR** platform
- Viewing and analysis support for all standardized geospatial **data formats**
- Two client data customized modules
 - **INQUIRE** – Interactive content-based Querying and Retrieval
 - **G-Class** – Geospatial Image Classification, Labeling and Segmentation

THE PROCESS



- Hardware Framework & Software AI Layers completely customized to your data

Make In India



- Hardware requires investments
- **Desperation & Enthusiasm is a duality here**
- Provide best possible tech to reduce foreign dependence
- **Exploit us!** - For lack of better words

THANK YOU

rhushabh@gmail.com

+91 9172243335

NEXT STEPS...



- Requirement Understanding & Proposal Presentations
- AI / HPC / Analytics of Imagery & Data / Graphics
- **Let's explore and upgrade!**