

VISION 2031

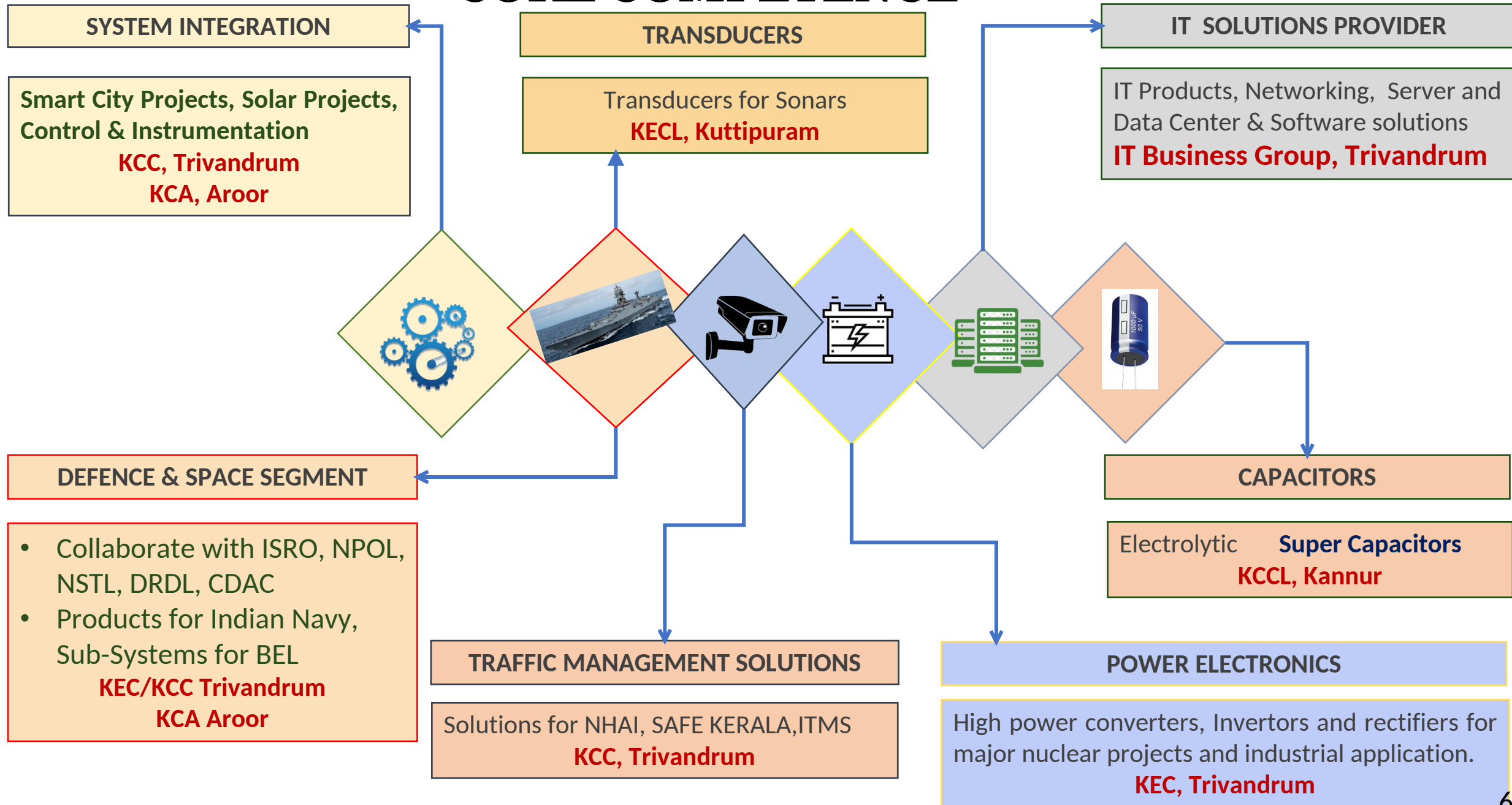
Enterprise , Technology and Innovation

MD/KELTRON

Success of Organisation/ Enterprise /Industry

- Innovation – Creating New Ideas / Methods
- **Harnessing Technology - Means for the Innovation**
- **Converting to an End Product/ Products that Customers Requires / Meets the Expectations**

CORE COMPETENCE



Defence

➤ Long Range Detection of Underwater / Target from a Ship

➤ Customer (India Navy's Requirement)

➤ The Given Dimensions of the Ship /Existing Equipment Sensors Cannot be Changed

➤ Electronics Inside the Ship can be Modified

Defence

➤ Innovation

➤ The Way Sensor Outputs are Combined - Altered

➤ Sensor Frequency Response Curve Altered/ Focused

➤ Technology

➤ Front End Electronics Redesigned for Noise

Reduction

➤ Detection Algorithms (Call it **AI**) Developed



Defence

➤ End Product

- Same Sonar Sensors / No Dimension

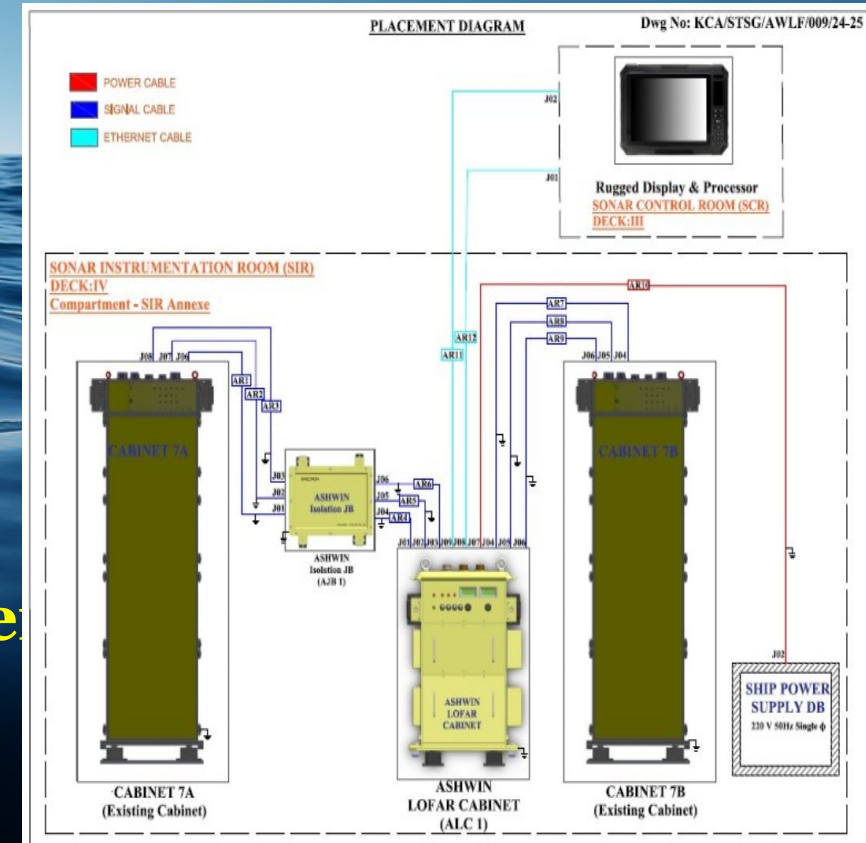
Change

- Long Range Detection Realised

- Indian Navy Placed Order and now in Sea Trials Evaluation

➤ Spin Offs

- Nominated as the Industry to Develop Sonar Suite of the Autonomous Underwater Vessel



Autonomous Underwater Vessel (AUVs – Drone of Underwater)

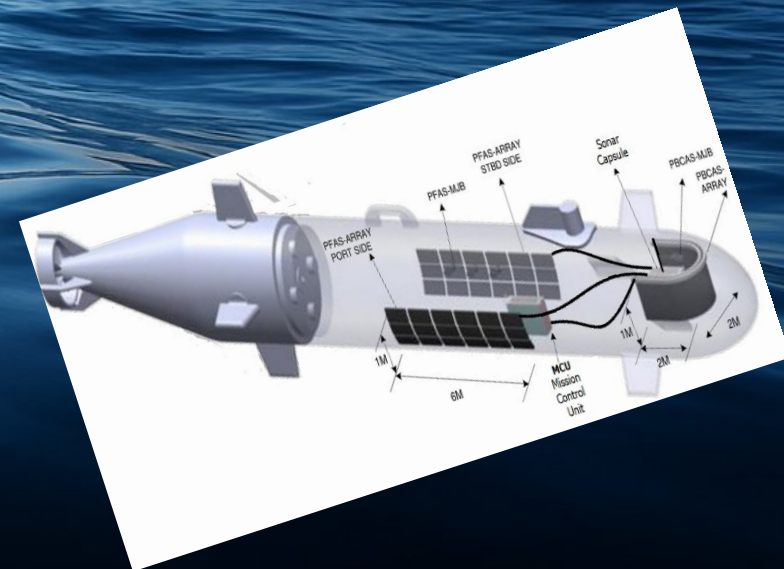
- Nation's First AUV – Jalkapi
- Being Designed & Developed by an Indian Start

UP

- The Sonar Suite from Keltron

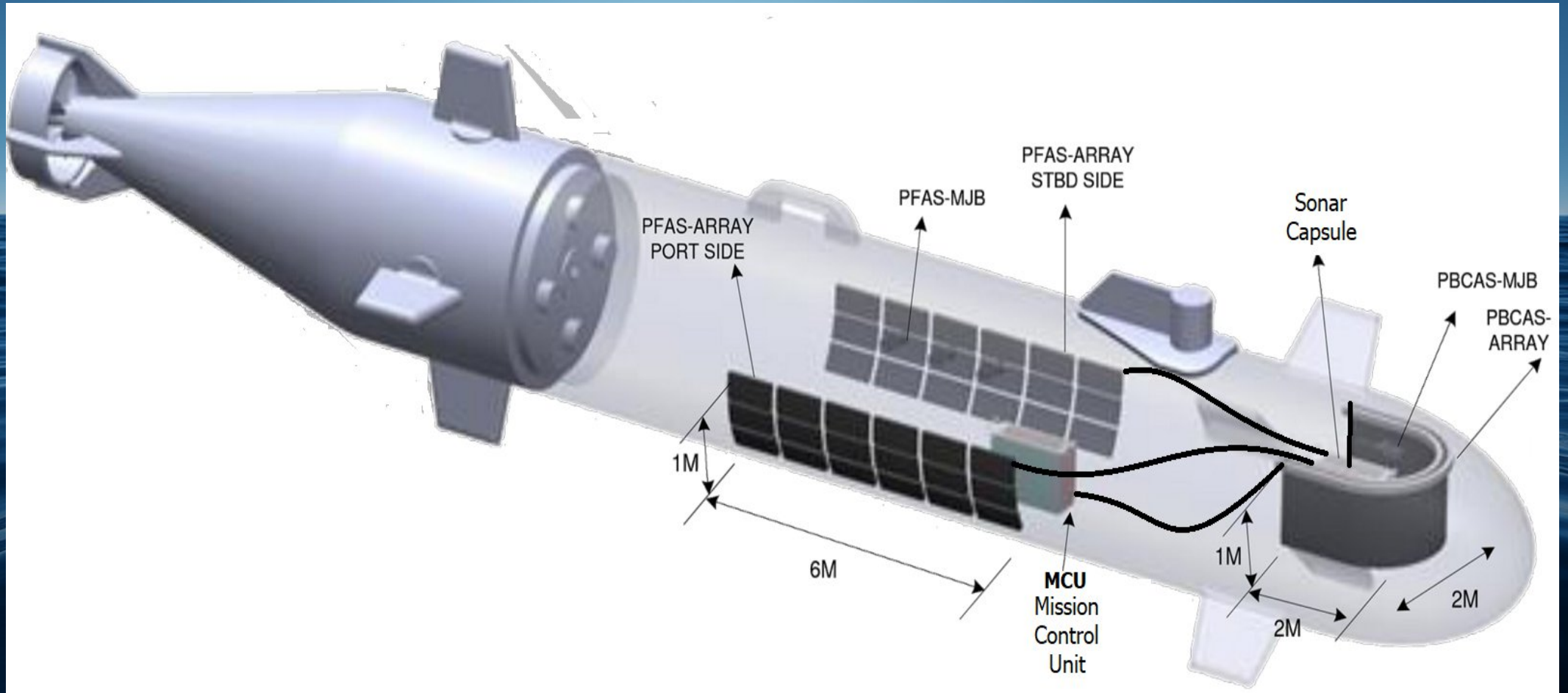
- Why ??

- The Innovation /Technology Implementation Leading to the Sonar Capability Gave Confidence to the Customer and the Industry



Autonomous Underwater Vessel (AUVs – Drone of Underwater)

➤ Nation's First AUV – Jalkapi



Toll Booths - Conventional

- Passive RFID
- Vehicles Slow Down (Creates Traffic)



Multi Line Free Flow (MLFF)

- Same Passive RFID
- Vehicles Can Travel Even at 200KMPH
 - The Number Plate Read by AI Cameras
 - Linked on the Fly to E-Vaahan
 - Amount Deducted From Same Passive RFID
 - Our Solution KIIFB Funded

Multi Line Free Flow (MLFF)



Yearly Capital Allocation

	Amount in Rs Cr	Focus Areas
Railways	2,77,000	<ul style="list-style-type: none">➤ Betterment of Trains➤ Safety Systems
Defence	2,19,000	<ul style="list-style-type: none">➤ 75% to be Spent for Home Grown Solutions➤ Modernisation Including Autonomous Systems/ Swarm
DRDO	22,000	<ul style="list-style-type: none">➤ Cutting Edge Research / Industry Partnerships / ToT
NHAI	1,87,000	<ul style="list-style-type: none">➤ Connectivity➤ Safety➤ Ease of Traffic Flow

Collaboration

- **Academia**

- **Centre of Excellence Focusing on Innovation/ Improvement in Desired Area**

(CUSAT & IIT Kharagpur - Signal Processing Algorithms & Power Electronics Products)

- **DRDO Labs – Industry Partner for R & D Work/ (ToT)**

Collaborations

- **CSIR Labs, CDAC - Industry Partner/
Royalty Method**
- **Own R & D - Create a Small Core Group
that Continuously Focuses
on Certain Niche
Product or
Improvement/ Next Version**

Create IP

Tie – Ups / Strategic MoUs

➤ Start Ups / MSMEs

- **Open Challenges like IDEX or National Open Challenges**
- **Harness Disruptive Technologies**

➤ MoU / Partnering with Big Industries

- **Central PSUs (BEL / Shipyards / BDL)**
- **Pvt Major Firms (Mahindra, L & T, Bharat Forge, Kaynes)**

➤ Space Electronics – ISRO, KSPACE, NISL

Opportunities Outside India

- Study of Similar Systems / Used in Other Countries (at least one or two)
- In This Also Strategic Partnership – Industry / Firms with Long Association in that Countries are Important

Case Study

- South East Asian Country – Russian Boats
- Pneumatic Actuators - African Countries

Human Resource

- **Vibrant, Energetic, Innovative, Out of Box Thinkers, Motivated & Correct Attitude HR is the Key to Success**
- **We Need to Engage Our Available Resource Proactively & Encourage them; Train them**
- **In Armed Forces We Say We Need to “Work as Though There is No Tomorrow”**

Conclusion

- Continuous Thinking & Learning
- **Continuously Engaging - the Customer (Customer is King and the Reason for Our Existence)**
- Academic / R & D Tie ups
- **Incubate Start ups**
- Strategic Partnerships Across India
- **Explore Markets Outside India**
- Innovate & Adapt Technologies to Create Product that Customer Wants
- **Constructive Engagement of the HR**



Thank You

