RE-IMAGINING MAKE IN INDIA FROM INDIGENOUS TECHNOLOGY STANDPOINT: SAANKHYA LABS

The biggest take away from the Make in India in Defence has been the positive vibes it has generated among the young innovators, technocrats and entrepreneurs and motivating them to unleash their innovative spirit to make impactful contribution in diverse fields. ***Raksha Anirveda*** showcases Saankhya Labs as a case study of Re-imaging Make in India from indigenous technology standpoint.

The journey of Saankhya Labs and its contribution towards India's indigenisation and self-reliance in defence manufacturing started well before the Make in India initiative of the government took shape. Founded in 2007, Saankhya Labs is widely recognized for its pioneering work in Wireless Communication and has been awarded more than 30 patents along with several international and national awards. As India's first vertically integrated fabless semiconductor and systems company, it offers solutions for telecom, broadcast, defence and satcom industry.

The pioneering product offerings from Saankhya Labs have made a profound impact and have received wide acceptance globally. Initiatives such as these will immensely help India's transition from being focused merely on manufacturing to a value-added technology and IP creation nation. They will not only help India attain self-sufficiency in key technologies in the long run but also become a trusted supplier to the world.

It was a proud moment for India when Saankhya Labs unveiled indigenously designed and developed Pruthvi 3 family of processors in the august presence of Union Ministers and High-level dignitaries from Government of India. Pruthvi 3 is the world's first and most advanced multi-standard Next Generation System-On-Chip (SoC). It is a game changer in driving the next generation communications architecture required in the 'Convergence Era' of broadcast and broadband infrastructure. In addition to supporting 5G Broadcast, the biggest USP of Pruthvi-3 is that it supports a variety of communication and broadcast standards in a small footprint, low power device.

Former MoS Communication, Mr. Manoj Sinha; MoS Railways Mr. Suresh Angadi; Niti Aayog CEO Mr. Amitabh Kant; Prasar Bharti CEO, Mr. Shahsi Shekhar; Secy. Dept. of Telecom, Mr. Anshu Prakash and Saankhya Team at the launch of Pruthvi-3 chip in New Delhi on Dec 28, 2018

Powered by Pruthvi family of SDR chipsets, Saankhya has developed a diversified product portfolio in terrestrial and satellite communications. Saankhya's solutions are designed to address a variety of requirements be it of strategic importance like defence communications, satellite communications, asset tracking, maritime security and disaster management or of socio-economic and cultural importance like rural broadband, automobile entertainment, broadband-broadcast convergence, IoT etc.

Despite the limited funding that exists for core R&D in India, Saankhya Labs has created a niche for itself by building an enterprise that is focused on innovation and bringing transformative solutions to market. 5G Broadcast is one such transformative solution which is the convergence of telecom and broadcasting network. The solution will ease the congestion in the mobile network and facilitate a wide range of applications which include Direct to Mobile Broadcasting, Connected Cars, Emergency Broadcast Services among others.

NAVDOOT – VESSEL TRACKING SYSTEM FOR COASTAL SECURITY

Navdoot is award-winning product of Saankhya Labs for maritime surveillance and coastal security. Post 26/11 Mumbai terror attack, Government of India has taken several steps for maritime security. One such initiative is to use ISRO's Mobile Satellite Service (MSS) technology for real time tracking, and monitoring of deep-sea fishing vessels within Indian maritime boundary. The proposed infrastructure provides a common communication platform for maritime agencies (viz Indian Navy, Indian Coast Guard, Department of Fisheries etc) and enables ship-to-shore and shore-to-ship messaging service for fishermen.

The two-way MSS terminals installed on fishing vessels, deliver weather alerts and during exigencies, it allows fishermen to seek help via an SOS message relayed through ISRO's satellite to the disaster relief and rescue team. All messages are routed through the Centralized Command and Control Centre linked to the Satellite Earth Station in India.

ISRO successfully completed the trials on Deep Sea Fishing vessels off the coast of Tamil Nadu and Gujarat in association with MHA. Recently, in a public function held at Tumkur, Karnataka, PM Modi handed over the Two-way MSS terminals to fishermen from Tamil Nadu.

Prime Minister Narendra Modi giving 2-way MSS terminals to fishermen from Tamil Nadu at a function in Tumkur, Karnataka

NAVRAIL – TWO-WAY MSS MODEM FOR RAILWAY TRACKING

Recently, Saankhya Labs supplied over 2600 Mobile Satellite Services modems (MSS terminals designed and developed indigenously) to Bharat Electronics Limited (BEL) for deployment on locomotives of Indian Railways. This was done as part of Phase I implementation of Real-time Train Information System (RTIS) project executed by Centre for Railway Information Systems (CRIS) in collaboration with ISRO and Bharat Electronics Ltd (BEL).

The RTIS is primarily used for acquisition of train movement data, including that of arrival, departure and run-through timings at the stations enroute. The trains hauled by RTIS enabled locomotives gets tracked and plotted automatically in the Control Office Application (COA) at Central Control office.

Saankhya Labs supplied the Satcom modems and hub-side equipment for RTIS project which were powered by Saankhya's award-winning patented Software Defined Radio (SDR) chipsets.

Nurturing and supporting Indian companies such as

Saankhya Labs will not only help India attain its objectives of Self-reliance in defence communication but also galvanize the Indian ecosystem to save on imports and earn precious foreign exchange through exports, unequivocally establishing true accomplishment of Make in India.