

About Vikram Sarabhai Space Exhibition's Mobile Exhibition

SAC & VSSE Overview

The Space Applications Centre (SAC) is a major centre of Indian Space Research Organisation (ISRO), which focuses on design of space-borne instruments and the development as well as operationalisation of applications of space technology for the national development.

The Vikram Sarabhai Space Exhibition (VSSE), located in the premises of SAC, Ahmedabad is a non-commercial exhibition and has been functioning for the past 13 years. VSSE is open for public viewing and societal use. The aim is to impart knowledge to the visitors on the significant advancements and achievements made by ISRO in general and SAC in particular, in development of state-of-the-art communication/earth observation/navigation satellites, launch vehicles, planetary missions & applications. A person who visits the exhibition will get a glimpse of entire range of ISRO activities covering satellites, launch vehicles and applications of the satellites. The visitors will get an idea of all the people of our country are greatly benefitted by the space program.

However, the rural population of India is not able to benefit from such a permanent exhibition. Special efforts are needed to ensure that they too get the benefits of science exhibition.

To achieve this objective, the VSSE aims to conduct numerous state of the art mobile exhibitions in the rural areas and cities of Gujarat and its neighboring states..

Primary Objectives for Mobile Exhibition

In order to create awareness, educate and effectively communicate space science to the rural community of our country, VSSE has planned various professional, modern, state-of-the-art mobile exhibition in various locations. The primary objectives of such exhibitions are:

1. Create awareness on basic space technologies & applications, thereby enhancing ISRO's outreach to the larger masses.
2. Promote utilization of space-based applications, which directly benefit the society.
3. Enable target audience to easily understand the complex space-science by effectively explaining them with the help of audio-visual aids, static panels, interactive displays, scaled models of satellites etc
4. Inculcate scientific temper in young minds and inspire them to make a career in the space industry.

The mobile exhibition will be open to the target audience encompassing masses from all age groups coming from various walks of life, including students, teachers, professionals as well as the general public. Since VSSE is primarily aimed for rural places, there is no entry fee for visitors to the exhibition.

The mobile exhibition will have various exhibits like static panels, dynamic displays, scaled down models of rockets, launch vehicles and satellites, etc covering information themes like ISRO Timeline, ISRO History, Launch Vehicles, Earth Observation Satellites, Communication Satellites and their application, Inter-planetary mission, Human Space program, Kids Section, Quiz Section.

It can also be used for various activities like conducting visitors' face-to-face interactions with scientists, enabling the visitors to watch live telecast of rocket launches through internet, arranging events/quiz programs for school/college students, etc.

The exhibition will cover the entire range of ISRO activities from conceptualization of ISRO, its history to societal benefits of space program and future ISRO programs. See table below for details of various sections.

The exhibition setup consists

- Working models
- Static panels with detailed information on various topics
- Models of satellites like Cartosat, RISAT, Mangalyaan, Chandrayaan etc
- Models of Launch Vehicles and rockets of ISRO like PSLV, GSLV, Mk III etc
- Display of sample components and parts used in actual satellites
- Display of actual instruments of few satellites
- Panels displaying various day to day applications of all types of satellites\

Table: Various Sections in VSSE Mobile Exhibition

Sr	Section	Models Displayed	Topics to explain
1	ISRO Introduction and ISRO History		INCOSPAR, DAE to DOS, Dr Sarabhai, SITE, Coconut Root Wilt, Rice Estimates, Global Village, Church, presentation before PM, Start within few years of Independence so social upliftment as main objective, Application oriented organisation
2	Centers of ISRO		Center Activities
3	Initial Satellites	Aryabhata, Bhaskar, APPLE & SROSS	Initial Days of ISRO, Experimental Satellites, Spin Stabilized, single channel, km resolution, launch from USSR
4	Introduction to Remote Sensing	IRS	What, How and Why. Eye vs Camera, Sunlight, Spectral Signature, Passive & Active, Height advantage of photo, km to cm resolution, Best commercial satellite in world within few years – IRS 1C, data sold to many organizations
5	Applications of Remote Sensing Satellites	RISAT, Resourcesat, Oceansat, Cartosat	Spectral Signature, Fishing – all budget recovered, Agri Estimates, Urban planning, Geology, Water level, Land Usage, Soil Types, Bhuvan, MOSDAC, VEDAS
6	Introduction to Communication Satellites	GSAT, EDUSAT	What, How and Why Satellite Communication, Line of sight, Bands used, 5 slots of India, 2 to 1000+ channels progress
7	Applications of Communications Satellites	INSAT	Satellite Phones, DTH – TV, Weather, 24x7 Services like ATM, VSAT, Navigation, Saving lives – Lakhs to 100s death due to cyclones, High Throughput,
8	Navigation and its Applications	IRNSS Small	Nav ki Gati, Space – Ground – User segments, 4 equations-4 Unknowns, Vehicle Tracking, Railway crossing, ship movement, Aircraft tracking, Mobile chip in MI 8 launched, Atomic Clock
9	Chandrayaan	Chandrayaan	How to reach, Water on Moon, 3D maps, International Mission with 6 foreign and 5 ISRO instruments,
10	Mangalyaan	Mangalyaan, MCC and MSM	How to reach, First attempt success, Map, 12ppb Methane Sensor, 50km error in 50 Cr Km, 300 days travel
11	Orbits	Working Model	Types of orbits, Advantage of Height, Polar orbits for RS self scanning, Sun Sync for same illumination, Geostationary for Comm to make it always visible, 3 Sat to cover world, Arthur Clarke,
12	Satellite Components	Real Components	Specs of space hardware, reliability and tests
13	Sounding Rockets	Sounding Rockets Set	Atmosphere studies, Niche Apache, TERLS, Magnetic Equator, Every Wednesday – led to excitement and interest,
14	Launch Vehicles	PSLV, GSLV, MK III	The SLV3 to Mk III journey, Cycle to Huge Trailers, 30kg to 4000 kg, Experimental satellite to Humans, Various parts of LV, Various Fuels, trajectories, Why SHAR
15	Disaster Mgmt	DAT	Low cost, floats on water, few buttons so very simple to operate, fast response, location and type of emergency sent,
16	Future Missions	Astronaut Cut-Out	Aditya, Chandrayaan 2, Gaganyaan, NISAR

Glimpses of Past Exhibition as a guide for host to arrange exhibition



Advertisement Banner 1



Advertisement Banner 2



Weclome Banner



Setup 1



Setup 2



Setup 3



Setup 4



Setup 5



Setup 6



Setup 7



Setup 8



Setup 9



Setup 10



Setup 11



Setup 12



Setup 13



Setup 14



Setup 15



Setup 16



Answers hunt 1



Answers hunt 2



Coloring Competition 1



Coloring Competition 2



Face to face with scientist



Spot Quiz 1



Spot Quiz 2



Water Rocket 1



Water Rocket 2



Local Students Explaining Exhibition 2



Local Students Explaining Exhibition 3



Local Students Explaining Exhibition



Paper Modeling 1



Paper Modeling 2



Paper Modeling 3



Sky Observation 1



Sky Observation 2



Award Distibution



Certificate Distribution to volunteers



Brochure Distibution 1



Brochure Distibution3