CANEUS Input to High Level Forum 2016

CANEUS MNT

UNISPACE+50

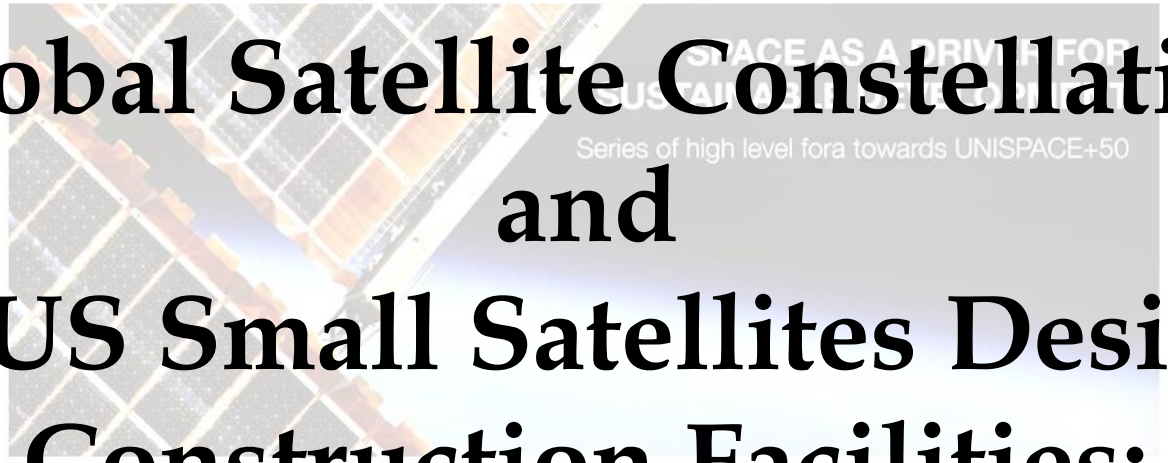
Milind Pimprikar, Chairman, CANEUS

20 - 24 November 2016, Dubai, United Arab Emirates

HLF :Space Accessibility

UN Coordinated Global Satellite Constellation and CANEUS Small Satellites Design and Construction Facilities:

Opportunity and Implementation Path Forward for UNISPACE+50



UNOOSA Coordinated Global Partnership and CANEUS Small Satellite Design and Construction Facilities to Serve the Needs of UN Member Nations

Contribution to Space Accessibility

- Need and Opportunity for the Global Initiative
- UNOOSA Coordinated Global Partnership
- Building on CANEUS – UN 8+ Years of Related Successful Partnerships
- CANEUS Small Satellites Design & Construction Facilities to Serve the Needs of UN Member Nations
- Opportunity and Implementation Plan for UNISPACE+50

Need for the UNOOSA Coordinated Global Partnership

- There currently are number of active satellite technology efforts and capabilities for the socio-economic sustainable development

- There remain constraints to the full streamlining of EO, GNSS and telecommunication in the planning and response strategies of authorities

- No global partnership to coordinate and organize all the disparate efforts

Requirement of the UN Coordinated Global Partnership:

- Common nano-satellite platform allows:
  - Data gathering system with the same telemetry and commanding
  - Production in numbers that decreases overall cost and increases predictability of performance
  - Common ground segment
  - Common launch interface and deployment system
  - Design tailored to specific requirements for reliability and mission duration
  - Availability of spares across all participants
  - Inter-satellite communication system

- Payloads built all over the world and dedicated to gather data:
  - Infrared
  - Visible
  - Panchromatic
  - Ground sensors data collection
  - Synthetic Aperture Radar
  - Etc…

- Platform / Payload Integration can be done in states that build the payloads
  - Secondary benefits for local economy

- All data collected and available /distributed both raw and post-processed to the participating countries
  - Leverage on each other

AFFORDABLE

ADAPTABLE

SUSTAINABLE

SCALABLE

UN Coordinated Global Partnership:
- Opportunity and Implementation Path Forward

UN Coordinated Global Partnership: - Opportunity

- **Opportunity:** *being able, on an equal basis, to benefit from and use space technologies and space-based data*

  - Unique Opportunity Under A UN Framework to address:
    - Data availability and Inter-operability
    - End-to-end data flow: System of Systems

  - With new approaches in satellite design, including of small satellites, and in the coordinated conception of satellite constellations (with future and existing satellites), the space community is thriving with new initiatives and new concepts for improved delivery of space-based data

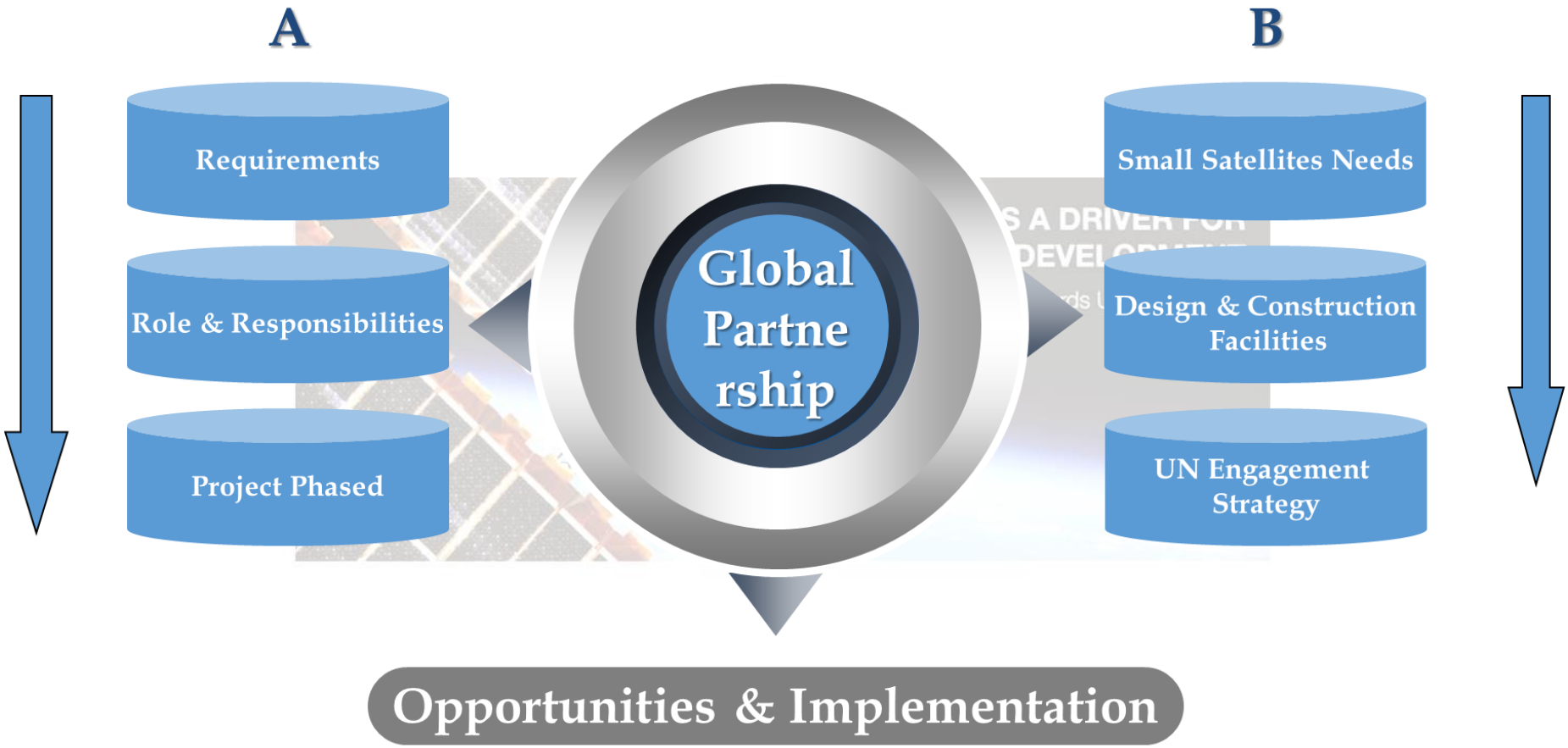
UN Coordinated Global Partnership:
- Implementation Path Forward

- **Implementation Path and Input to the HLF:**

  - Identify and assess the requirements of all components a global partnership
    - Financial and administration aspects,
    - Human resources requirements,
    - Steering structure requirements, and
    - Coordination mechanism within the partnership

  - Define Role(s) and responsibilities of UNOOSA and of potential partners

Implementation of SD4SD Mission



CANEUS Complementary Competencies

A Worldwide Organization

Dedicated to fostering

Emerging *space technology based* solutions

Through a coordinated / shared approach

To *benefit* Socio-economic needs of

All Countries

Leveraging CANEUS Competencies

Since 1999 CANEUS has partnered with 5,500+ Participants

58+ Countries from Americas, Europe, AP, ME & Africa

UN-OOSA, UN-ISDR, UNDP, World Bank…..

NASA, CSA, ESA, DLR, ASI, CNES, ISRO, JAXA, ROSCOSMOS, AEB, NSRDA, SANSA, NAST-STI, SSAU……

EC, ISU, NRL, NOAA, NRCC, NAL, USRA, APSCO, COSPAR, KARI..

Boeing, Airbus, EADS, LM , SpaceX, Thales, SSL, ATK, GE, Mitsubishi…

MIT, Berkeley, Stanford, TU DELFT, McGill, IISc, NUST….

for Mission Specific, Finite Duration Projects

Leveraging CANEUS –UN Partnership

CANEUS has engaged with UN to develop

New Global Framework on Sharing Space based Data

CANEUS CSSP

Focus Areas: *DRR, Early Warning Systems, Capacity Building, Small Satellites and Sensors,* Global Public-Private Partnership (PPP)

CANEUS-UN Partnerships

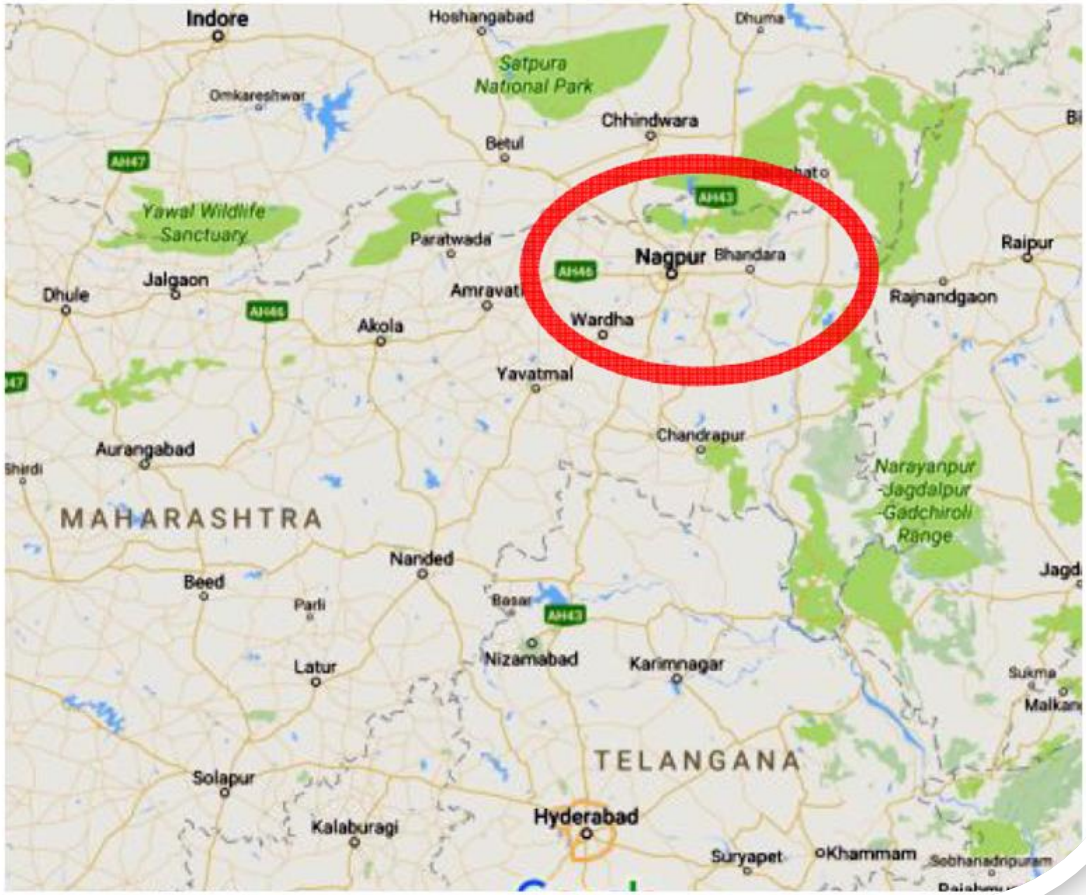
- 2016/17 – CANEUS-UNOOSA-UNISDR initiative at 2017 UN Global Platform, Mexico
- 2016 – CANEUS-UNOOSA Global Coordination Agreement
- 2015 – CANEUS – UNOOSA: New Global Space Data Framework, part of Sendai Declaration at the Third UN World Conference
- 2014 – CANEUS Small Satellites & Sensors for Disaster Management
- 2013 – UN Global Platform DRR / UN-SPIDER Technical Advisory Mission Vietnam
- 2012 – CANEUS-UNISDR Global Monitoring System
- 2011 – UNOOSA-CANEUS Small Satellites at ISU and Africa
- 2010 - CANEUS Shared Small Satellites to serve Socio-Economic needs
- 2009 – CANEUS UN Global Platform DRR

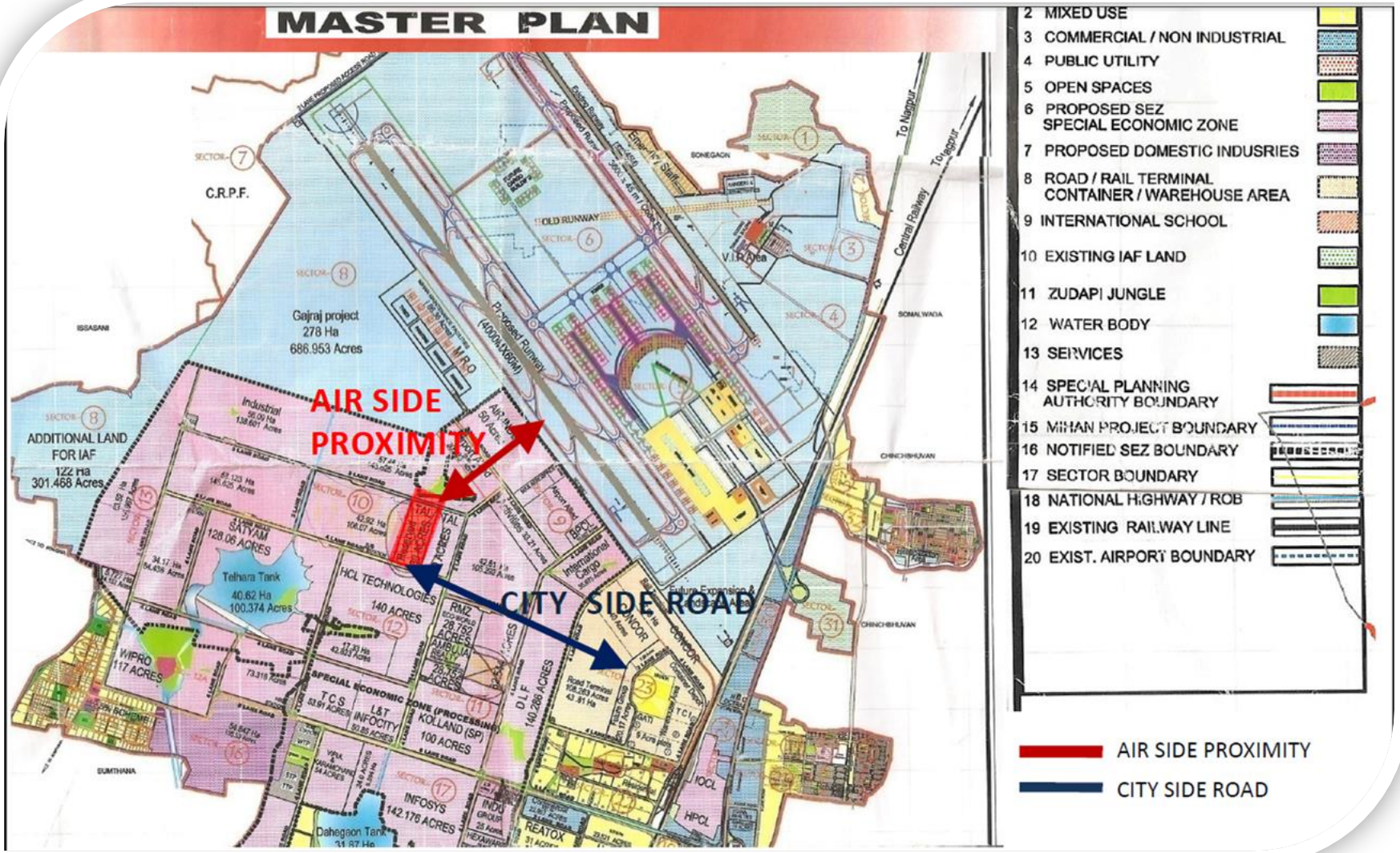
UNOOSA Coordinated Global Partnership for a Constellation of Satellites for Sustainable Development

Facilitating Access to Satellite Technology for Design & Construction of Small Satellites in Development Facilities

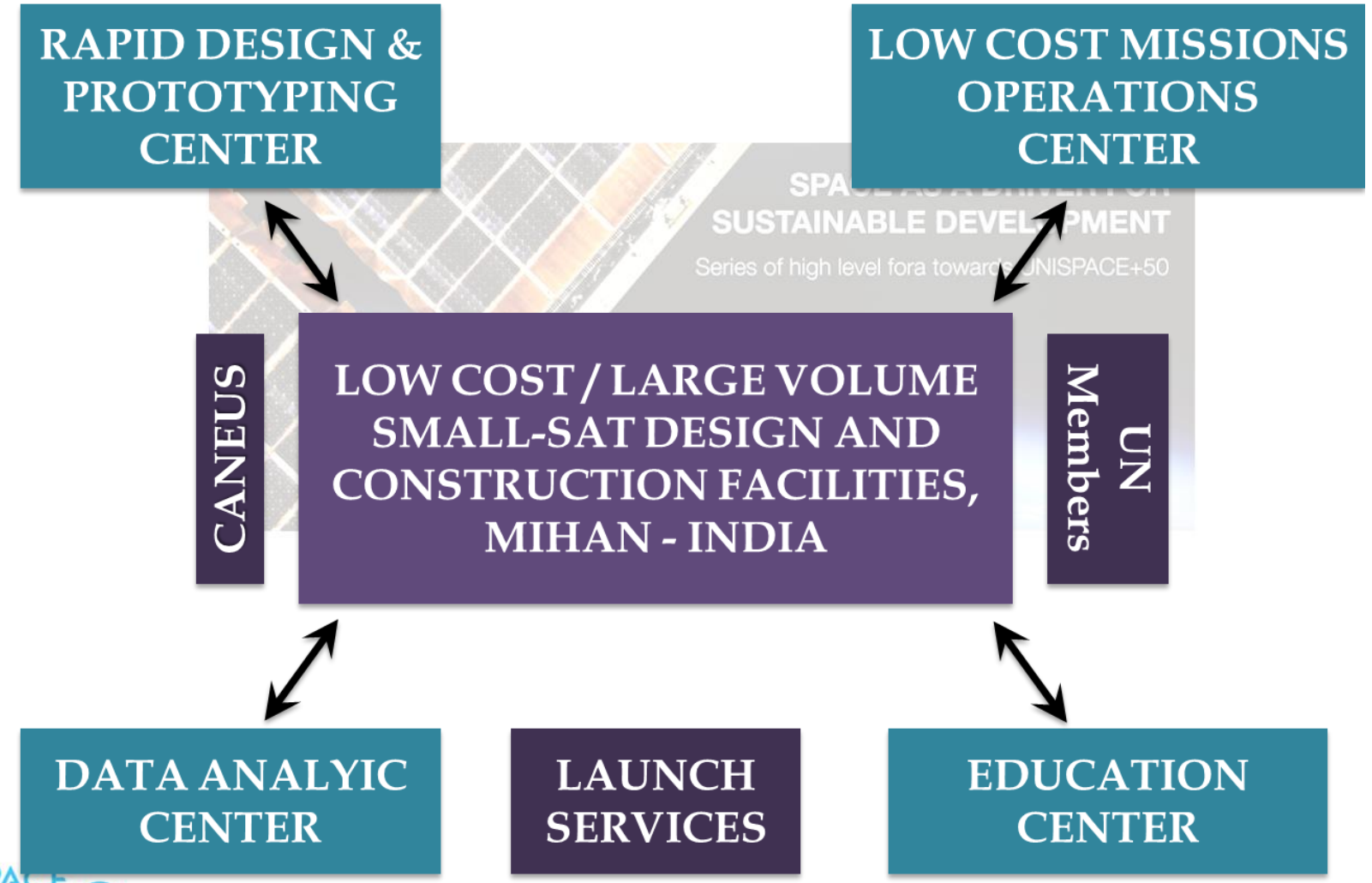
MIHAN India

"MIHAN" – Multi-modal International Cargo Hub and Airport Nagpur




MASTER PLAN
AIR SIDE PROXIMITY
CITY SIDE ROAD
Gajraj project
278 Ha
686.953 Acres
ADDITIONAL LAND FOR IAF
122 Ha
301.468 Acres
C.R.P.F.
OLD RUNWAY
Proposed Runway (4000mX60M)
To Nagpur
To Jaipur
Central Railway
SONEGAON
SOMALWADA
CHINCHBHUVAN
ISSASANI
SUMTHANA
SATYAM 128.06 ACRES
Telhara Tank 40.62 Ha 100.374 Acres
HCL TECHNOLOGIES 140 ACRES
WIPRO 117 ACRES
TCS
L&T INFOCITY
SPECIAL ECONOMIC ZONE (PROCESSING) KOLLAND (SP) 100 ACRES
DLF 140.288 ACRES
INFOSYS 142.176 ACRES
Dahegaon Tank
REATOX
IOCL
HPCL
2 MIXED USE
3 COMMERCIAL / NON INDUSTRIAL
4 PUBLIC UTILITY
5 OPEN SPACES
6 PROPOSED SEZ SPECIAL ECONOMIC ZONE
7 PROPOSED DOMESTIC INDUSRIES
8 ROAD / RAIL TERMINAL CONTAINER / WAREHOUSE AREA
9 INTERNATIONAL SCHOOL
10 EXISTING IAF LAND
11 ZUDAPI JUNGLE
12 WATER BODY
13 SERVICES
14 SPECIAL PLANNING AUTHORITY BOUNDARY
15 MIHAN PROJECT BOUNDARY
16 NOTIFIED SEZ BOUNDARY
17 SECTOR BOUNDARY
18 NATIONAL HIGHWAY / ROB
19 EXISTING RAILWAY LINE
20 EXIST. AIRPORT BOUNDARY
AIR SIDE PROXIMITY
CITY SIDE ROAD

Space Accessibility to Serve UN Member States



Input to HLF Dubai Declaration: UNISPACE+50

- Development and implementation of the proposed global partnership coordinated by UNOOSA
- An engagement strategy aimed at facilitating access to satellite technology, including for the design and construction of small satellites in development facilities
- Implementation steps to realize the UN 2030 Agenda for Sustainable Development


Thank You !