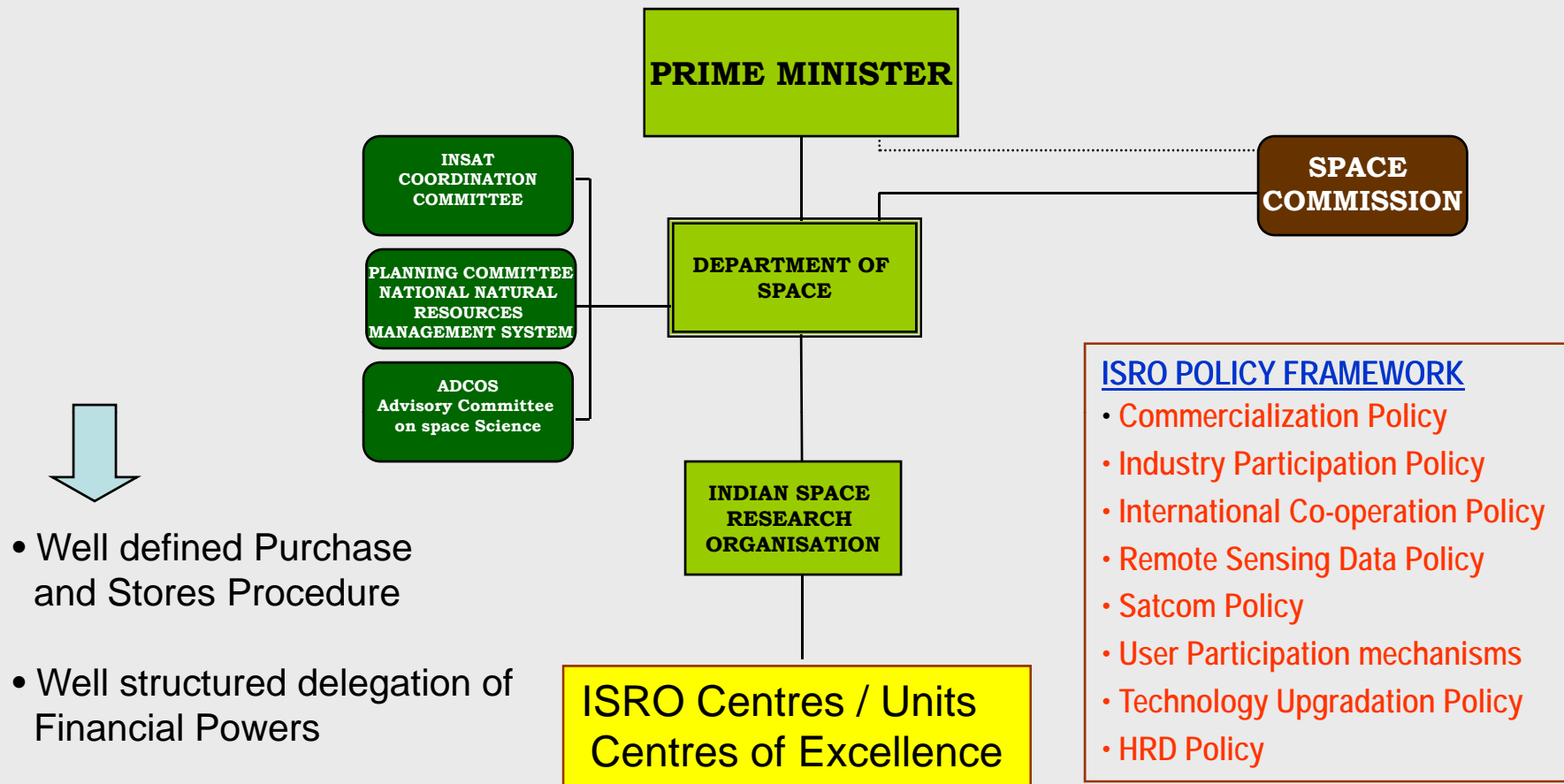


WORLD SPACE - BIZ

DOING BUSINESS WITH ISRO OPPORTUNITIES / PROCEDURES

H N Madhusudhan
Director, BEA / Director, AS, ISRO
and Executive Director, ACL

ORGANISATION STRUCTURE OF ISRO / DOS



Space Commission - an apex body with full executive and financial powers created to make the system *“free from all Non-essential restrictions or needlessly inelastic rules”* and enable rapid development of space technology in the country.

PROCUREMENT FRAMEWORK

(Indian and Foreign)

- ~ 60% of the Indian Space budget goes towards procurement.
- Procurement of goods and services for Spacecraft, Launch Vehicle and Ground System related – Components, modules, subsystems, equipments, machinery, fabrication and other services (such as Transponder leasing, TTC services, etc.,)
- Quality, heritage, proven performance and cost-competitiveness are amongst the important considerations in procurement.
- Building long-standing business relations given due weightage.
- Development of parallel sources / vendors for critical items.
- Focus on Indian Industry participation and development.

INDUSTRY PARTICIPATION POLICY 2001

Few Important Extracts.

- ISRO will realize higher levels of aggregates for hardware/software/systems and services from industry and entrepreneur - resident followup teams in major Industries.
- ISRO will desist from investing in production facilities in house. Even in unavoidable cases, such facilities may be funded and owned by ISRO but built and operated by industry.
- Production quantities will be committed, wherever relevant, on a long term basis (and not restricted to approved quantities project – wise)
- ISRO, wherever required, may go in for operation of existing facilities by industry/entrepreneur either as ISRO owned facilities or transfer the facility to the industry on fair valuation of the facility.
- ISRO will evolve suitable guidelines/policies for migration/deputation/lien of ISRO personnel to industry/entrepreneur to ensure adequate technology transfer/quality compliance.
- ISRO will put the Indian industry on a better pedestal to take up certain relevant R&D activities for space programme.

Indian Space Programme

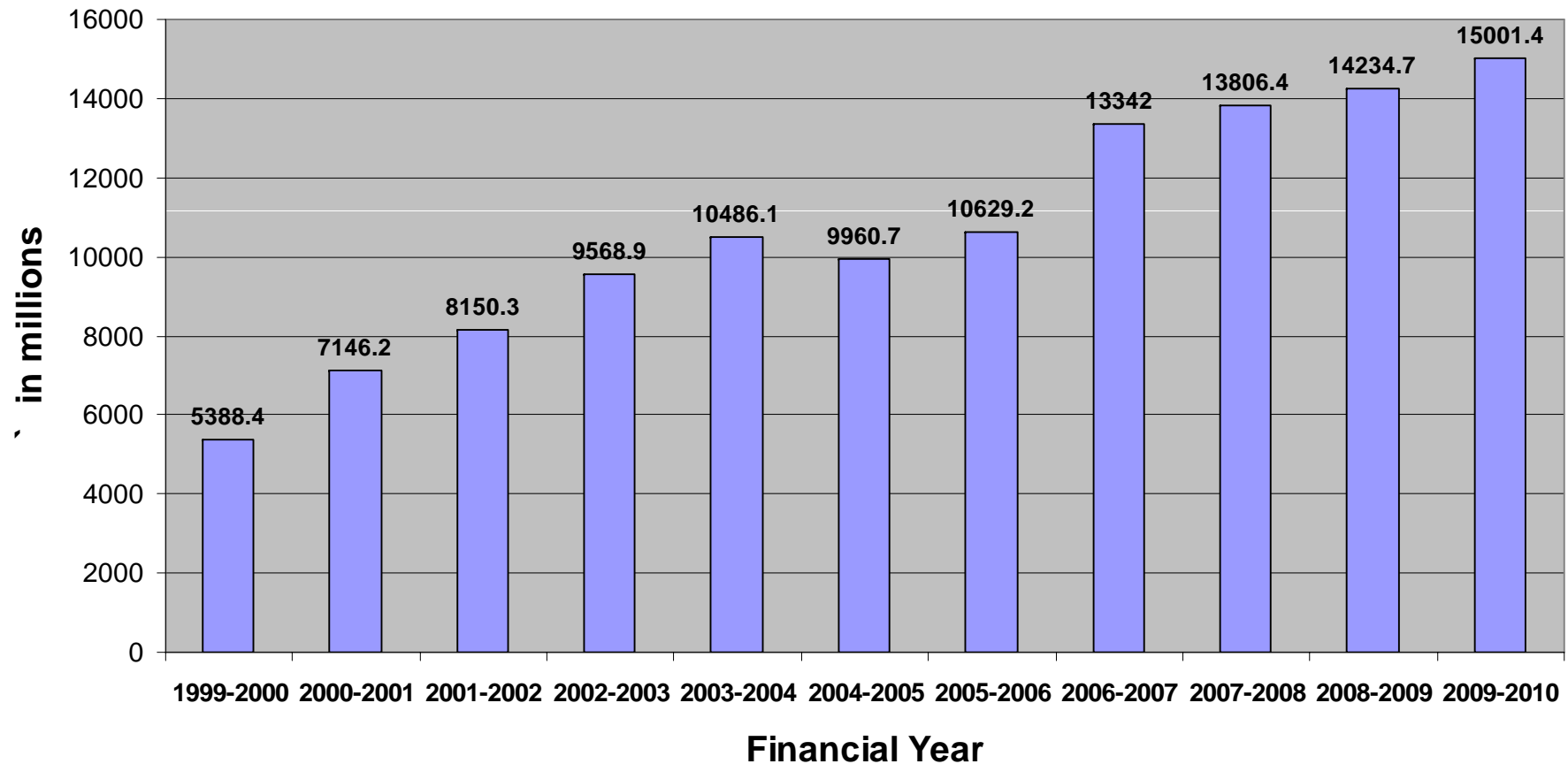
Spectrum of Products & Services from Industry

- Supply of goods and services (off-the-shelf items, general fabrication services, etc.)
- Products and services involving marginal adaptations/additional efforts (for example, tooling, high purity chemicals/materials)
- Supply of products needing significant enhancement/technical development by industry with or without ISRO assistance.
- Supply of products for which technology is transferred by ISRO with buy-back commitments.
- Servicing the space applications market with ISRO technology transfer and consultancy
- Develop and service spin-off market (non-space applications) with ISRO technology transfer/consultancy
- Establishment of launch complex and processing facilities on turnkey basis.
- Running established production and operational services presently handle by ISRO.
- Annual Maintenance Services

Indian Space Programme

Funds Flow to Indian Industries

(1 US\$ = ₹ 47.00)



The share of Industries in the Space budget is expected to increase further in the coming years

Indian Space Programme

SPIN-OFF BENEFITS TO INDUSTRY

(Based on a survey conducted in 2003)

- Resulted in improved product/service in non-space applications
- Resulted in non-space supply contracts
- Improvements in quality standards
- Improvement in management practices
- Development of critical manpower in the Industry
- Resulting in access to new markets
- Actual or potential entry into export markets.

क्रय प्रक्रिया

PURCHASE PROCEDURE



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA

अन्तरिक्ष विभाग
DEPARTMENT OF SPACE

सातवाँ संस्करण (संशोधित)
Seventh Edition (Revised)

अक्टूबर 2009
October 2009

11. INDUSTRY PARTICIPATION

- 11.1 With a view to promote the development of a cost-effective Space Industry, DOS may subject to the guidelines of the Space Commission, enter into Agreements for strategic procurement and/or production under collaboration, or hiring out in-house facilities with or without lease charges, to the private industries or associate itself with private industry/consortia, for productionisation of different it terms as required from time to time.
- 11.2 DOS may also give management contracts for efficient and smooth management of its production facilities by industries.
- 11.3 The reasoning adopted for association of any private firm or industry for collaboration, contracts, and development orders etc should be recorded.

ISRO PROCUREMENT PROCEDURE

Few important features

- Encourages competition by Tendering.
- Development contracts for items involving development of technology.
- Objectivity and Transparency in Decision Making - a robust system involving a panel of experts and senior officials in procurement decisions of all high value items.
- Adherence to specifications – given the highest importance.
- “Free Issue of Materials (FIM)” approach in fabrication jobs involving use of high value materials.
- Advance payment provision to relieve the Industry from the cost of borrowed capital.

ISRO PROCUREMENT PROCEDURE

Few important features

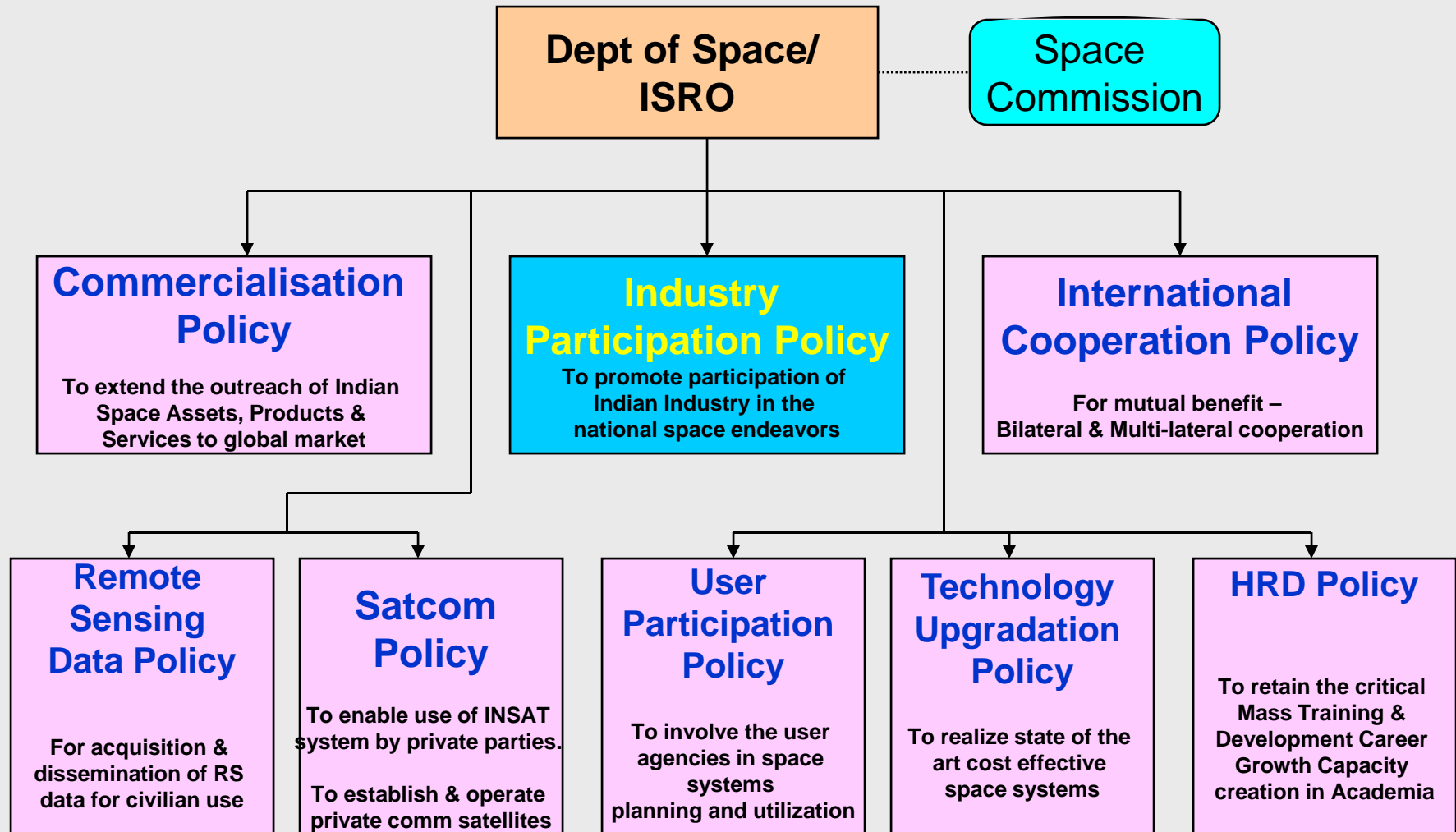
- Fairness in risk sharing – appropriate clauses in the contract to protect the contractor from the possible losses due to ‘Rejections’ for genuine reasons.
- Provision of Price Variation Clause for Long term contracts to protect the contractor from any unusual increase in input materials.
- Provision for imparting training to the Industry personnel on specialized tasks (like in electronics fabrication)
- Emphasis on availability of Post warranty maintenance support in respect of Equipments and Machineries.
- Vendor development and evaluation systems – Structured mechanisms.

Growth Opportunities

| | Missions | Outlay |
|---|---|---|
| 10th Plan (2002-07) 20 Missions | 13 Satellite Missions (4 EO + 8 Satcom + 1 Other) | ~ 126,150 million US\$ 2684 million |
| | 7 LV Missions (4 PSLV + 3 GSLV) | |
| 11th Plan (2007-12) 42 Missions | 24 Satellite Missions (10 EO + 9 Satcom + 5 Sp Sc.) | ~ 220,000 million US\$ 4680 million |
| | 18 LV Missions (14 PSLV + 4 GSLV) | |
| 12th Plan (2012-17) (Under Formulation) | <ul style="list-style-type: none"> • The number of missions and outlay is expected to be more than <u>double</u> of 11th Plan • Major initiatives – HSP, Semi-Cryo, GSLV Mk III, Navigation, Advanced Planetary missions ... | |

THANK YOU

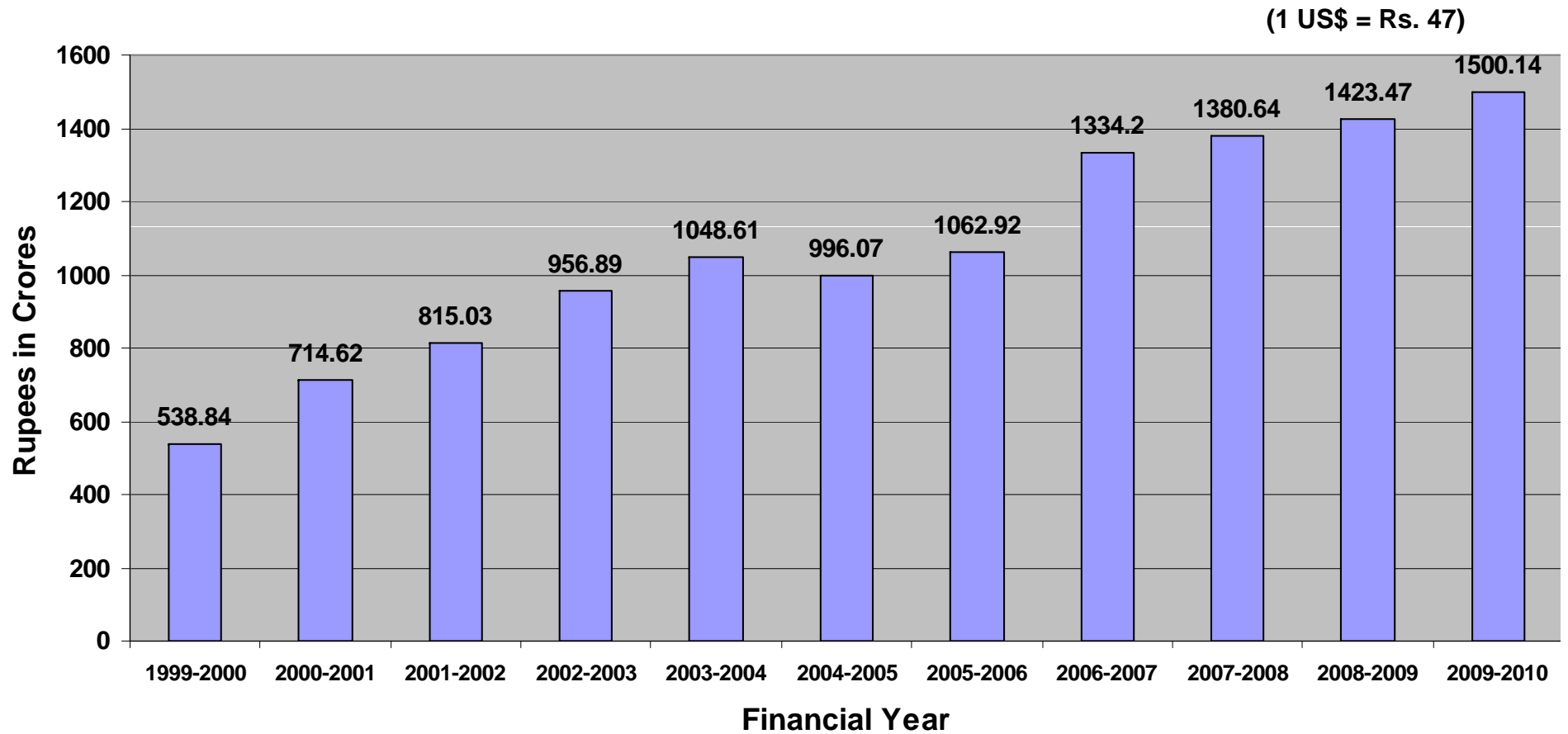
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Indian Space Programme

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