Proposal for the Creation of the NATIONAL SPACE DEVELOPMENT AND UTILIZATION POLICY and the NATIONAL SPACE AGENCY

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Outline of Presentation

Background of Global Space Development
Status of Philippine Space Development
Space Policy Project Methodology
Key Objectives of the NSDUP
Framework of the NSDUP
Key Development Areas and 5-Year Roadmap
The National Space Agency
Organizational Structure of the NSA
Initial Appropriations
Strategy for Legislation
Summary
What is Space Science?

Branch of science that is concerned with anything related to outer space and related fields.

- Astronomy and Astrophysics
- Aerospace Engineering
- Astronautics
- Satellite Technology
- Space Exploration
- Earth Observation
- Space Medicine
- Space Policies and Laws
Space Technology Sector

UPSTREAM
Provision of technology

- Space segment prime
  - Subsystem supplier
    - Component or material supplier
  - Ground segment prime
    - Subsystems & components
    - Research and consultancy
    - Support products and services

DOWNSTREAM
Exploitation of technology

- Satellite broadcast service provider
- Satellite communication service provider
- Satellite navigation service provider
- EO and value-adding
- User equipment suppliers
- Support products and services
- Financial services (inc. space insurance)

Source: UK Space Industry Report, 2006
Countries with Existing Space Programs

- **Manned Extraterrestrial Exploration**: Operates Space Station + Manned Space Flight + Operates Extraterrestrial Probes + Launch Capability + Operates Satellites
- **Operates Space Station**: Manned Space Flight + Operates Extraterrestrial Probes + Launch Capability + Operates Satellites
- **Manned Space Flight**: Operates Extraterrestrial Probes + Launch Capability + Operates Satellites
- **Operates Extraterrestrial Probes**: Launch Capability + Operates Satellites
- **Launch Capability**: Operates Satellites
- **Operates Satellites**: None Of The Above
Space technologies have become an important part of everyday life. Weather forecasting, global communications and broadcasting, air traffic management—these and many other essential activities would be almost unthinkable today without satellite technology.

This second edition of The Space Economy at a Glance paints an updated and richly detailed picture of the space industry, its downstream services activities, and its wider economic and social impacts. The report provides indicators and statistics based on both official and private data, but also a strategic outlook that identifies key issues for the future. The figures cover many OECD and non-OECD countries and, for the first time, include various official statistics concerning the Brazilian, Chinese and Indian space programmes.

Why examine the space economy?

Space has been historically a key strategic sector for many OECD and non-OECD countries, with space exploration, science and security applications as key drivers. However, over the past decade the number of public and private actors involved in space activities worldwide has increased, spurring even further the development of the nascent space economy. This space economy includes many commercial activities that have been derived over the years from governmental research and development. Several mature downstream activities have reached mass markets and include information technology products and services, such as satellite television and GPS receivers.

In addition, the use of satellite technology in navigation, communications, meteorology and earth observation has given rise to a growing stream of applications in such areas as air traffic control, transport, natural resource management, agriculture, environmental and climate change monitoring, entertainment and so on, which in turn are creating new downstream uses and new markets. Space can increasingly be seen as an important potential source of economic growth, social wellbeing and sustainable development.

Countries with Operational Satellites (2010)

Source: The Space Economy at a Glance 2011, OECD
Status of Philippine Space Development

NO ACCESS TO SPACE
The Philippines has no direct access to space and is lagging behind neighboring ASEAN and Asian countries. This limits the capability for surveillance, space technology development and utilization for civilian and military purposes.

RELIANT ON FOREIGN SATELLITES
Despite having two orbital slot allocations, we do not have any satellite in orbit; all satellite data and communications uses foreign satellites which the country has no control.

LACK OF TRAINED EXPERTS
Currently, the country has a very small pool of trained astrophysicists, space scientists and engineers that are capable of doing research and development.

SMALL SPACE R&D AND INDUSTRY
Due to lack of technology transfer and R&D, the Philippines has no existing capability to launch rockets and payloads to high altitudes and outer space.

NO EXISTING SPACE POLICY OR FRAMEWORK
The Philippines is not a signatory to most international space treaties and currently has no space policy or agency to provide a cohesive space development strategy.
National Impacts of a Space Program

Review of possible impacts derived from investments in space programme

Temporarily impacts
- New commercial activities (new products and services)
- Productivity / efficiency gains in diverse economic sectors
- National / regional economic growth
- Cost avoidances

Enduring impacts
- 'Indirect industrial effects' from institutional contracts (new exports or new activities for the space industry)
- New mass market products and services using satellite capacities (e.g. satellite positioning signals in car navigation)
- New products outside the space sector based on transferred technologies (e.g. medical imagery)
- E.g. Precision farming, fisheries, land transport
- Indirect impacts on the economy derived from the enduring presence of a local space industry
- E.g. Costs avoided and lives saved thanks to flood forecasts

Source: The Space Economy at a Glance 2011, OECD
Economic Value of SSTA

SSTA is one of the main frontrunners of technological development.

National investments in space programmes are often justified by acquired scientific, technological, industrial and security capabilities.

Provides interesting socio-economic returns such as increased industrial activity, and bring cost efficiencies and productivity gains to other fields.

Commercial space sector constitutes approximately 75% of the current space economy.

On average, an investment of $1 in space development generates a economic return of $4
Previous Space-Related Programs

Optical and Radio Astronomy since 1897

Project Santa Barbara in the 1970s

AGILA-2 Telecommunications Satellite in 1990s

Committee on Space Technology and Applications (COSTA)

National Conference on Space Technology and Applications Research (NC-STAR)

Philippine Space Science Education Program

National Astronomy Week and World Space Week

HB 6725  Philippine Space Act of 2012

10-Year Baseline Research of Space Science and Technology Applications (SSTA)
Outcomes of the SSTA Baseline Research

Functions of a space agency is distributed to various government agencies and units.

There is a need for a National Space Policy that would create a cohesive and unified strategy for short, medium and long term space development.

There is also a need for a National Space Agency that would all issues related to space that would affect the nation.

Identify key areas for space development that would serve as its niche in the global space community and develop the necessary tangible and intangible assets.

Education and industry funding support should be provided to create a strong space R&D and robust space industry.

Enhance national and international cooperation through joint projects that would be beneficial to all parties involved.
Project Methodology

The project was conducted in three months from September to December 2014 by Regulus SpaceTech with funding from PCIEERD. The development of the space policy was done by:

1) Desktop review and analysis of national space policies of foreign countries;

2) Analysis of the results and recommendations of the SSTA Baseline research;

3) Private discussion with space policy experts and space lawyers in the international space community;

4) Conduct six (6) stakeholders meeting to gather inputs from the various sectors namely: industry, academe, government, defense, Visayas and Mindanao regions;

5) Drafting of the NSDUP and NSA Proposal
The National Space Development and Utilization Policy
Objectives of the NSDUP

1) Serve as the primary strategic roadmap for space development in the next decade.

2) Focus on areas of space science and technology applications that would address national issues and concerns.

3) Promote efficient utilisation of space assets and resources among various stakeholders through proper coordination and cooperation.

4) Establish capacity-building measures to produce a space-capable workforce and necessary infrastructure to create a vibrant and sustained space economy.

5) Enhance international cooperation with space agencies and organisations through joint agreements and linkages.
The NSDUP focuses on six (6) Key Development areas (KDA) to develop space science and technology.
“The Philippines will focus on space applications that can preserve and enhance the country’s national security and promote development that is beneficial to all Filipinos.”

- commits the country to become a space-enabled nation by 2020;

- future space development will focus on addressing critical national issues such as food security, territorial integrity, disaster management, social inclusivity and communication gap;

- access to satellites plays a key role, thus, the Philippines will launch and maintain several nano- and micro-satellites for multi-spectral Earth observation, provide maritime domain awareness and monitor vital natural resources.

- the Philippines will also launch a geosynchronous telecommunications satellite by 2022 for civil and military use.
KDA 1: National Security and Development

- Development of precision agriculture to increase agricultural productivity through extensive crop monitoring surveys, accurate yield estimation, farm mechanisation and automation;

- Effective resource planning and management using remote sensing data to harness and utilise the country’s rich biodiversity and natural resources;

- Access to satellite navigation systems to monitor air, land and sea transportation throughout the archipelago;

- Develop indigenous satellite and launch vehicle technology through continuous R&D as the country’s niche in the global space community and guarantee that the Philippines will have continuous access to space;
Preserve and enhance the country’s national security and promote development beneficial to all Filipinos

Legislation of the National Space Development and Utilization Policy

National Space Agency IRR

KDA 1. National Security and Development

Outputs

Phase 1 of the National Space Complex

Launched TALA-1 using commercial launcher

Developed BITUIN-1, local microsat for communication and navigation

Developed TALA-1, first nanosat for remote sensing

Launched TALA-2 to 5 for nanosat constellation

Applications of TALA-1 data

Developed TALA-2 to 5 nanosats for 24/7 PHL surveillance

Applications of microsat data

TALAMPAD nano-sat constellation for tele-education & telemedicine

Launched TALA-6 to 10 nanosats for 24/7 PHL surveillance

Launched TALA-6 to 10 nanosats

S&T Investments & Activities

STA Roadmap (2015-2020)

2015

PHL Earth Data Resource Observation Center

2016

2017

2018

2019

2020
KDA 2: Hazard Management and Climate Studies

“The Philippines will develop and utilize space science and technology applications to enhance its hazard management and disaster mitigation strategy as well as ensure the nation’s resiliency to climate change.”

- proper utilisation of remote sensing data to address gaps in the country’s disaster management and risk mitigation strategy;

- development of space-based information system and data-sharing protocols under the National Space Agency in cooperation with other government agencies and academic institutions to ensure that information is easily available to key users and decision makers;

- focus on utilisation of space information for climate studies and enhance the country’s adaptability to climate change;

- create extension programs to bridge the gap between national agencies and LGUs on using remote sensing data for disaster response and management;
KDA 2. Hazard Management and Climate Studies

Outputs

Hazard maps using locally acquired satellite data
Space information system and data sharing protocols

Decision support system for resources management using space-based information
Space-based information for local land-use planning and development

Climate change resilient communities utilizing space technology (e.g. DIWATA and PEDRO)

Enhanced monitoring system for GHG, sea-surface temperature and other climate conditions.
Persistent monitoring of climate conditions using TALA nanosatellite constellation.

S&T Investments & Activities

STA Roadmap (2015-2020)

2015
2016
2017
2018
2019
2020
“To spur rapid scientific growth, the Philippines will focus on conducting research and development endeavours in vital areas of space science, technology and allied fields.”

- develop satellite building capabilities from nano-satellites to geosynchronous satellites;

- launch of a long-duration micro satellite constellation with optical, radar and AIS capabilities;

- creation of satellite AIT facilities, ground receiving stations and data archive centres;

- establish astronomical observatories and space centers for basic research in astronomy and astrophysics;

- develop the necessary infrastructure, capabilities and partnerships for launch vehicle development;
Spur rapid scientific growth, the Philippines focus on conducting R&D endeavors in vital areas of space science, technology and allied fields.

**KDA 3. Space R&D**

**Outputs**

- Site analysis for the National Astronomical Observatory and National Space Complex
- Pilot programs on STA for precision agriculture, environmental monitoring, fisheries and maritime navigation
- Transportation and location-based applications using global navigation satellite systems
- High-altitude UAVs for civilian and military communications.
- Launched National Astronomical Observatory and National Space Complex
- Space materials for satellites and launch vehicles
- Space projects in the Kibo module of the ISS through the Kibo-ABC Initiative.
- Space-based food production, medicine and microgravity applications

**Applications software using available satellite data from various sources**

**Equipment and building facilities for satellite R&D**

**STA Roadmap (2015-2020)**

- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
KDA 4: Space Industry Capacity Building

“The Philippines will create a robust and throng space industry to support the country’s space program through private sector involvement and cooperations.”

- focus on high-value space technology and services provided by a pool of talented and trained Filipino space scientists and engineers;

- provide incentives for current and future space companies in various forms (e.g. tax holidays, reduced tariffs etc.)

- the government will commit an amount of at least 1 Billion Pesos for developing a local space industry;

- provide government support for projects related to creation of upstream technologies such as satellites, ground systems and launch capabilities;

- inclusion of space personnel in Magna Carta for S&T Workers, exemptions from SSL and certain CS regulations for scientists and engineers working in the NSA and private space companies;
Create a robust and thriving space industry to support the country’s space program through private sector involvement and cooperation.

**Outputs**

- **Creation of Space Industry Development Agenda**
  - Incentive programs for space companies in the Philippines

- **Joint projects between academe-government-industry on development of microsatellites and geosynchronous satellites for national use**

- **Space Technology Industrial Park within or adjacent to the National Space Complex.**

- **Joint projects between academe-government-industry on development of rockets and launch vehicles**

- **Training and internship programs for students and educators.**

- **Local space industry catering to national and international clients.**

**S&T Investments & Activities**

- **STA Roadmap (2015-2020)**
  - **2015**: Creation of Space Industry Development Agenda
  - **2016**: Joint projects between academe-government-industry on development of microsatellites and geosynchronous satellites for national use
  - **2017**: Space Technology Industrial Park within or adjacent to the National Space Complex.
  - **2018**: Joint projects between academe-government-industry on development of rockets and launch vehicles
  - **2019**: Training and internship programs for students and educators.
  - **2020**: Local space industry catering to national and international clients.
KDA 5: Space Education and Awareness

“The Philippines aims to establish a sustainable pool of trained space scientists, engineers and communicators that will be critical for the country’s future space program and increasing public awareness on its value and benefits.”

- establish space education centres in key areas to educate the public on the benefits of a space program;

- Regular observance of events such as the National Astronomy Week and World Space Week;

- Provide training and continuing education program for future and in-service teachers on space science and technology;

- Integration of space science in the basic education curriculum, including development of materials suitable for Filipino students;
KDA 5: Space Education and Awareness

- Mandate HEIs to offer space science related subjects and degree programs (CODs and COEs);

- Provide local and foreign scholarships for students willing to pursue careers in space science and related fields;

- Creation of a university consortium to harmonise space research activities in the tertiary level;

- Create training programs in space industry companies to pave the way or employment of future space degree program graduates;

- Establish partnership programs with foreign universities and research institutions;
KDA 5. Space Education and Awareness

**Outputs**

- Highly trained HEIs with upgraded STA facility
- Instructional materials for space science and information
- Space Awareness Programs for teachers and the public

**S&T Investments & Activities**

- **2015**: Universities as Centers for Dev’t on STA
- **2016**: Establish Microsatellite Laboratory
- **2017**: Exchange programs with foreign universities and institutions
- **2018**: First regional space center in Palawan
- **2019**: MS / PhD Curriculum for Distance Learning Education
- **2020**: First regional space center in Cebu

**Development of expert manpower, curriculum and education materials at all levels**

First regional space center in Davao

Student internship employment programs
KDA 6: International Cooperation

“Through international partnerships and collaborations, the Philippines will become a key player in the ASEAN and global space community by providing significant contributions and capabilities on space science and technology applications.”

- ratification of the four remaining international space treaties;

- establish bilateral and multilateral agreements for cooperation with other nations to impart mutual scientific and technological benefits;

- pursue possible areas for collaboration to address security and other issues in the SEAsian and Asia-Pacific region.

- Active participation in regional and international organisations such as UNOOSA, IAU, IAF and APRSAF;

- Host major international conferences starting with the APRSAF in 2016;
KDA 6. International Cooperation

Outputs

- Established linkages with space agencies and organizations
- Inform the International Telecommunications Union on the intent of the Philippines to utilize its allocated orbital slot within the next seven (7) years.
- Signed Missile Technology Control Regime Agreement to facilitate rocket technology transfer.
- Joint partnership for the development of TALA nanosat
- Bilateral agreements with foreign space agencies
- Hosting of the 70th International Astronautical Congress
- Multi-lateral regional agreements for partnerships, technology exchange programs and joint space projects.

S&T Investments & Activities

STA Roadmap (2015-2020)

- Proposal in Hosting the International Astronomical Union General Assembly
- Bilateral agreements with foreign space agencies
- Hosting the 23rd Asia Pacific Regional Space Agency Forum
- Joint partnership for the development of TALA nanosat

2015

2016

2017

2018

2019

2020
Space Development Long Term Goals

Indigenous Satellite Development Capability

Indigenous Rocket and Missile Launch Capability

Space Technology Applications for Nation-Building

Pool of Civilian and Military Experts

Robust and Thriving Space Economy
The National Space Agency
The National Space Agency

To implement and realize the goals of the National Space Development and Utilization Policy, the Philippines will create a **National Space Agency (NSA)** that will:

- serve as the country’s sole agency responsible for addressing all space-related issues and promote the development of space science and technology;

- unify all national space activities by coordinating with existing government units to provide a framework for a cohesive and harmonious cooperation;

- be responsible for ensuring the country’s space development goals for the next 5-10 years are achieved;
Vision and Mandate of the NSA

“The National Space Agency will be the country’s sole agency responsible for addressing all space-related matters and issues.”

The official functions of the NSA are:

1) Implement the National Space Development and Utilization Policy;
2) Coordinate all space activities of various sectors and stakeholders in the Philippines;
3) Promote the growth of space technology through research and development;
4) Establish programs that would develop space education and promote public awareness;
5) Foster the creation of a robust and vibrant local space industry;
6) Provide appropriate and accurate advice to the President of the Philippines and other government agencies on space-related issues and concerns.
Office of the Director General

The National Space Agency will be headed by the Director General who will have the following duties and responsibilities:

1) Ensure that the NSDUP is properly implemented and its goals are achieved;
2) Ensure that the mandate and functions of the NSA are properly executed;
3) Shall have full control and supervision over the work of the NSA;
4) Shall represent the country in the international space community;
5) Shall have the authority to enter into agreements with foreign space agencies, organisations and/or institutions on behalf of the Philippines;
6) Shall have a position equivalent to a Cabinet Secretary serving a duration of six (6) years irrespective of administration change with no prejudice on reappointment;

The Office of the DG shall perform the administrative function of the NSA with the IRR to be drafted within 90 days upon creation of the Agency.
Space Advisory Board

The Space Advisory Body (SAB) will serve as the main consultative body of the NSA and will takeover the mandate and functions of the current COSTA. It will be composed of:

- Director General, National Space Agency (Chairman)
- Chairperson, Senate Committee on Science and Technology
- Chairperson, Lower House Committee on Science and Technology
- Secretary, Department of Science and Technology
- Secretary, Department of National Defense
- Secretary, Department of Transportation and Communication
- Secretary, Department of Agriculture
- Secretary, Department of Environment and Natural Resources
- Secretary, Department of Education
- Secretary, Department of Foreign Affairs
- Secretary, Department of Trade and Industry
- Commissioner, Commission on Higher Education
- Director General, National Security Council
- Director General, National Economic Development Authority

Members will serve for 6 years unless withdrawn. The SAB shall provide recommendations for the revision of the NSDUP every 10 years.
Office of the Deputy Director for Space Research and Development (DD-SRD)

The DD-SRD shall be in charge of developing the capabilities of the country in fundamental and applied space science. He/she shall serve as the OIC in the absence of the DG and shall be selected from a list of qualified applicants. His/her term shall be co-terminus with the DG.

The DD-SRD shall handle three (3) units focused on basic and applied researches in space science and education:

- Astrophysical Research Division (ASTRO)
- Space Technology Research and Innovations Division (STRID)
- Space Education and Awareness Promotions Division (SEAPD)
The Astrophysical Research Division shall focus on conducting research in the field of astronomy and astrophysics.

- The ASTRO shall absorb functions of the Astronomical Services Unit of PAGASA which will be fully transferred upon creation of the NSA;

- Shall conduct researches that will increase the knowledge and understanding of the Earth and the Universe and its potential impact to future applied R&D.

- Shall maintain a network of astronomical observatories and computing facilities through the country for its research activities;
The Space Technology Research and Innovations Division shall conduct research in aerospace, astronautics and related fields to spur the development of space-based assets and capabilities.

- Shall conduct researches in areas necessary for space development such as material science, fuel technology, aerospace engineering etc.;

- Shall manage facilities for space systems assembly, integration and testing as well as maintain and operate test launch sites;

- Shall takeover and absorb the space development functions of PADC;
Space Education and Awareness Promotions Division (SEAPD)

The Space Education and Awareness Promotions Division shall focus on developing and promoting space education to Filipino students on all year levels as well as the general public.

- Shall provide short and long-term education and training programs for various levels in astronomy and space science in partnership with DepEd, CHED and SEI;

- Shall provide scholarships for local and foreign studies in space science and related fields (in cooperation with SEI);

- Shall conduct public awareness and promotions program to increase public appreciation of space science and technology;

- Shall absorb the function of the Philippine Space Science Education Program of SEI and takeover the management of the Manila Planetarium and PAGASA Planetarium.
Office of the Deputy Director for Space Utilization and Applications (DD-SUA)

The DD-SUA is tasked to develop programs for the utilisation and application of space science and technology to address national issues. Thus, it is in charge of ensuring that the benefits derived from SSTA is maximised and utilised efficiently. His/her term shall be co-terminus with the DG.

The DD-SUA shall handle four (4) units focused on effective space utilisation and application programs:

- Space Security Division (SSD)
- Space Communications and Navigation Division (SCOND)
- Earth Observation and Satellite Information Division (EOSID)
- Space Industry Development Division (SIDD)
Space Security Division (SSD)

The Space Security Division shall be responsible for the development of space-related technologies for national security and military applications. The SSD shall:

- work in close coordination with DND and NSC on space-related programs that can affect the country’s national security;

- be composed of civilian and military personnel and will be subject to security clearances prior to employment;

- be accessible only to SSD personnel and top NSA officials only.
Space Communications and Navigation Division (SCOND)

The Space Communications and Navigation Division shall utilise space-based communication and navigation with focus on civilian applications. The Division will:

- focus on research and development of technologies such as satellite broadcasting and communication, GNSS applications, tele-medicine, tele-education etc.

- share some resources with SSD for dual-use resources and applications but will operate independently without compromising security;
Earth Observation and Satellite Information Division (EOSID)

The Earth Observation and Satellite Information Division shall focus on applying remote sensing data for research and development. It shall:

- primarily focus on development of various space-based tools and applications that can assist decision-makers and LGUs;

- operate a network of ground receiving stations (in coordination with STRID);

- provide and maintain a central satellite data archive of the whole Philippines;

- coordinate with NAMRIA for data sharing and redundancy;

- provide satellite data to the Philippine government and local academic institutions;
The Space Industry Development Division shall focus on assisting local aerospace companies. The SIDD shall:

- provide capacity-gilding measures for local space companies;

- analyze and assess potential niche areas for local space industry development;

- coordinate with the ILCD for possible partnerships with foreign aerospace companies to enhance local research and technology transfer;
Office of the Deputy Director for Space Coordination and Linkages (DD-SCL)

The DD-SCL is tasked to coordinate space development and utilisation activities of the various units of the Philippines for efficient utilisation of space assets and infrastructure. It shall also be tasked to establish linkages and collaboration with foreign space agencies and institutions. His/her term shall be co-terminus with the DG.

The DD-SCL shall handle four (4) units focused on fostering local and international cooperation, technology transfer and collaborative projects.

- International Linkages and Cooperation Division (ILCD)
- Space Coordination Division (SCD)
- Regional Space Center Coordination Division (RSCCD)
- Space Regulation and Licensing Division (SRLD)
The International Linkages and Cooperation Division shall serve as the international liaison and coordination office of the NSA. The ILCD:

- shall establish and maintain linkages with foreign space agencies/organizations;

- shall institute cooperation agreements to boost technology transfer and partnerships;

- will monitor the activities of foreign space agencies in order for the NSA to be aware of any activity that is of interest or concern to the Philippines;
Space Coordination Division (SCD)

The Space Coordination Division is in charge of coordinating space-related activities with other government agencies and local institutions. The SCD shall:

- ensure that the various space activities of the government are in line with the NSDUP;

- facilitate and handle requests for assistance from government agencies and local institutions on space-related matters;

- shall refer the said concerns to the appropriate division or unit of the NSA;
The Regional Space Center Coordination Division shall maintain an network of space centres throughout the country. These centres shall operate as local data archive and space education centers. The RSCCD shall:

- initially establish Regional Space Centers in Cebu, Davao and Palawan and shall be expanded to one centre per region;

- provide satellite data to government units within their jurisdiction to facilitate rapid data dissemination;

- perform the functions of the other service Divisions within their jurisdictions if such functions are deemed necessary to be done outside the NSA Main Office (e.g. observatories, AIT facilities, launch centres etc.)
The Space Regulation and Licensing Division (SRLD) shall be in charge of regulating academic, government and private companies conducting space research to ensure that all activities are compliant with existing international and national space treaties/regulations. Furthermore, the SLCD shall:

- be in charge of assisting patent applications for locally-developed space technologies/applications;

- sales of satellite archive data provided by EOSID;

- management of satellite orbital allocation and official liaison to the International Telecommunications Union;

- conduct space object registration in compliance with the 1974 Registration Convention;
## Initial Appropriations

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Strategy for Legislation

The NSDUP and NSA shall be established through an Executive Order signed by the President of the Philippines.

Upon creation, the NSA shall establish its Implementing Rules and Regulations within 90 days.

The NSA shall push for the ratification of the four remaining international space treaties and other relevant agreement.

The NSA shall lobby for the formal legislation of the NSDUP and NSA in both the Lower and Upper House of the Philippine Congress.
The Philippines needs to address and embark on developing space technology to keep up with the rest of the world and to address national security issues.

Space technology can benefit both the military (intelligence gathering etc.) and civilians (disaster response etc.)

Local space technology would create a pool of local experts and remove the exposure of the Philippines in terms of access to space and satellites;

Developing space technology is highly beneficial and advantageous for the economy and the nation in the long run.

Having a space program is costly, but NOT having a space program is even costlier for the country.