CREATING NEW SPACE POLICY: THE MALAYSIAN APPROACH

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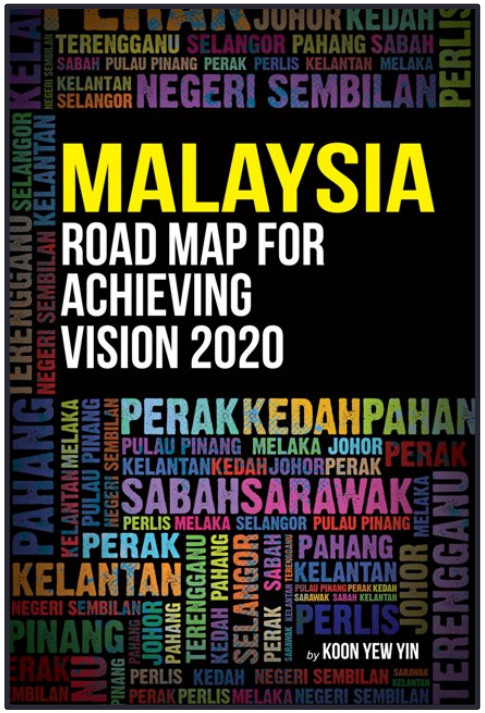
Topics of discussion

- Malaysia’s Vision for Space
- The Malaysian National Space Policy
- Process flow
- Some reflections

PART 1:
MALAYSIA'S VISION FOR SPACE

Malaysia's Vision 2020

- Catalysed by Prime Minister Mahathir Mohammed in late 80's
- Formally tabled at Parliament in 6th Malaysia Plan in 1991
- Vision to become a developed nation by 2020



Challenges (1)

Challenge 1: Establishing a united Malaysian nation made up of one Bangsa Malaysia (Malaysian Race).

Challenge 2: Creating a psychologically liberated, secure and developed Malaysian society.

Challenge 3: Fostering and developing a mature democratic society.

Challenge 4: Establishing a fully moral and ethical society.

Challenge 5: Establishing a matured liberal and tolerant society.

Challenge 6: Establishing a scientific and progressive society.

Challenge 7: Establishing a fully caring society.

Challenge 8: Ensuring an economically just society, in which there is a fair and equitable distribution of the wealth of the nation.

Challenge 9: Establishing a prosperous society with an economy that is fully competitive, dynamic, robust and resilient.

Challenges (2)

- **<u>Challenge 6</u>: Establishing a scientific and progressive society**.

"*The sixth is the challenge of establishing a scientific and progressive society, a society that is innovative and forward-looking, one that is not only a consumer of technology, but also a contributor to the scientific and technological civilization of the future*."

- Mahathir bin Mohamad (PM 1981-2003)

Timeline of Space Activities

- Setting up foundation for education in space
  - National Planetarium (1986)
  - Incorporation of space in the school curriculum (1990)
  - Public outreach

Timeline

- Private sector ownership of communications satellite (1996)
- Establishing remote sensing data receiving facilities (1999)
- Launching of microsatellite program (1996) and Malaysia's first remote sensing satellite (TiungSAT, 2000)
- World's first RS satellite to near equatorial orbit (RazakSat, 2009)

Timeline

- Establishment of National Space Agency

  2002

Mission: To establish the governance infrastructure to enable Malaysia to become a responsible actor in space; and to lay the foundation for a sustainable space program and viable space industry

Timeline

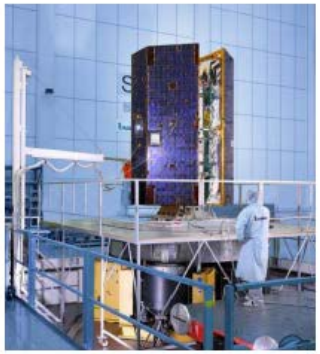
- Establishment of TT&C

  2004

Timeline

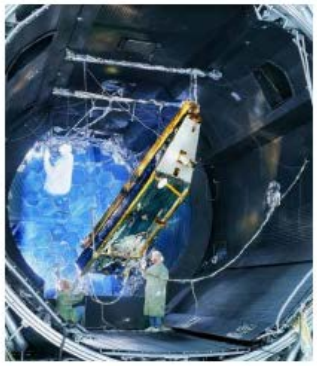
- AIT and labs

  2005 -



VIBRATION TEST SYSTEM

MASS PROPERTY MEASUREMENT SYSTEM



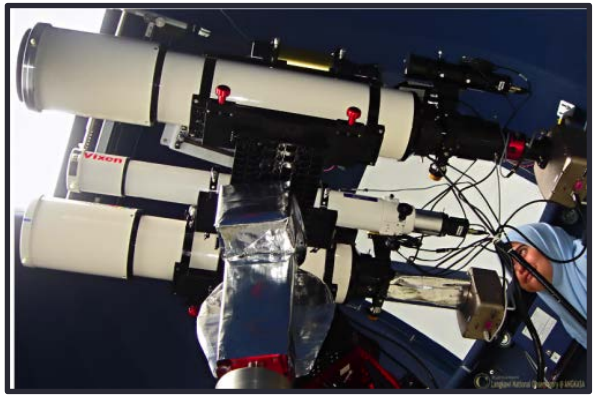
THERMAL VACCUM CHAMBER

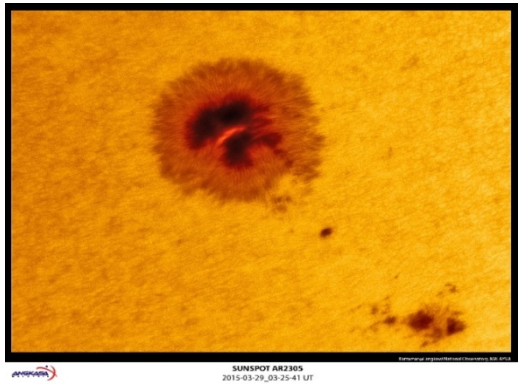
ACOUSTIC CHAMBER

EMC TEST FACILITY

Timeline

- Langkawi National Observatory 2005





Timeline

- ANGKASAWAN 2007

Sheikh Muszaphar

PART 2:
MALAYSIA SPACE POLICY

The National Space Policy

- Background
- Rationale
- Next Steps
- Objectives
- Issues
- Policy Thrusts
- Strategic Actions

Mission: To establish the governance infrastructure to enable Malaysia to become a responsible actor in space; and to lay the foundation for a sustainable space program and viable space industry

1996 (MEASAT)
2002 (ANGKASA

Background

- Global Picture
  - Space sector is indispensable
- National Picture
  - Vision 2020 Challenge 6 (contributor to technology) [1998 haze event]
  - Contribution to Malaysia's S&T, innovation, industry
  - Space sector has economic potential

Imperatives

- Space is a tool to support/contribute to other policies to achieve their goals

  (eg. agriculture, telecommunication, defence, education, etc.)
- Factor the current strengths of space sector
  - Space assets (MEASAT)
  - Infrastructure (ground stations)
  - Education (in the school, university, public)
  - Applications in government sector (NRE, defence, agriculture)
  - Science (astronomy, microgravity)
- Building a viable industry
  - ATSB
  - E&E (Sapura, Silterra)
  - Ramp-up needed to meet space international standards
- Positioning for the future

Rationale

Areas where Malaysia has capability

- National
- Regional
  - ASEAN (leading in microgravity science/human spaceflight)
  - Competitive in satellite technology/infrastructure
  - Science (observatory)
- International
  - Microgravity science – international network
  - Observatory part of international network

    Asteroid/solar observation/space weather)

Urgent Steps

- Need to:
  - Ratify (2) /accede (3) international treaties
  - Governance of national activities (national space act)
  - Set-up manufacturing standards – assembly, integration and test (spinoff to other industries eg. maritime/aerospace; SIRIM)
- International cooperation
  - Technology
  - Science
  - Applications

Objectives (of policy)

- To provide governance infrastructure for space sector (legal instruments, institutional arrangement, management practices)
- To utilize space to protect national interest and public good
- To develop sustainable, competitive, diverse space industry
- To develop national capabilities - asset, physical infrastructure, human capital, R&D
- To engage in/promote international cooperation

Policy Issues

Thrusts generated should:

- Capitalise on strengths and readiness
- Harness opportunities
- Overcome weaknesses

Policy Thrusts

T1 – Strengthen governance (including policy, law, regulations, guidelines)

T2 – Accelerate uptake of applications and services

T3 – Grow a domestic space industry that will support and sustain space sector

T4 – Establish Infrastructure (in space and on ground)

T5 – Develop talent

T6 – Promote the development of space science and technology

T7 – Engage in and promote international cooperation and diplomacy

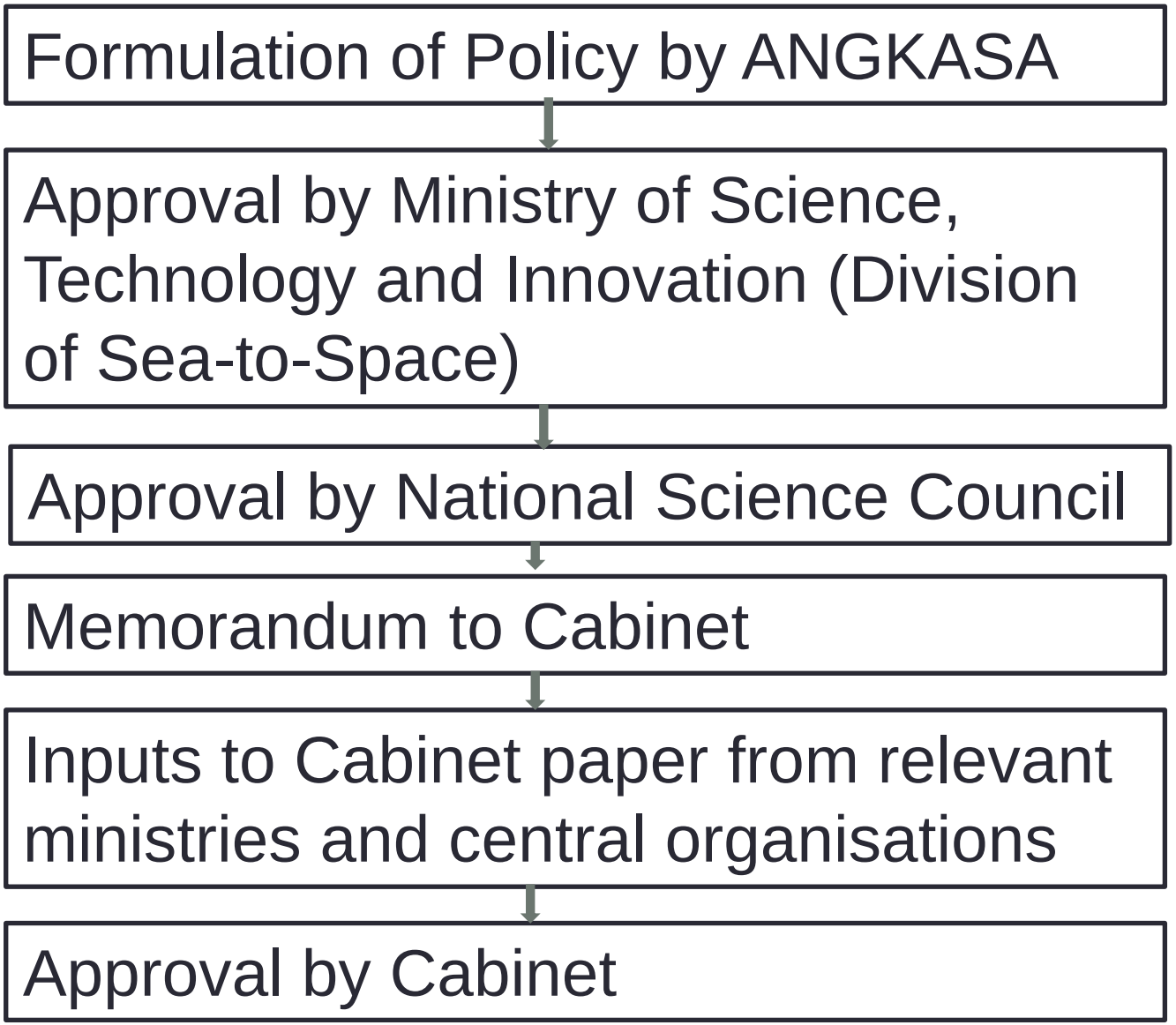
Strategic Actions

Priorities formulated according to:

- Necessity
- Readiness

PART 3:
PROCESS FLOW

Process Flow



PART 4:
REFLECTIONS

Reflections

- Positioning the Malaysian Space Sector
  - To meet national objectives

    (i) space policy (since 2002)

    (ii) National space Act (since 1996)
  - In the global landscape

- Current focus:

  Positioning Malaysia in 2050 (space is a subset)

Current focus

- Positioning Malaysia in 2050 (space is a subset)
  - Society and culture
  - Economics and finance
  - Geopolitics
  - Science and technology

THANK YOU

- Fulbright Scholar Program
- SPI
- ASM