

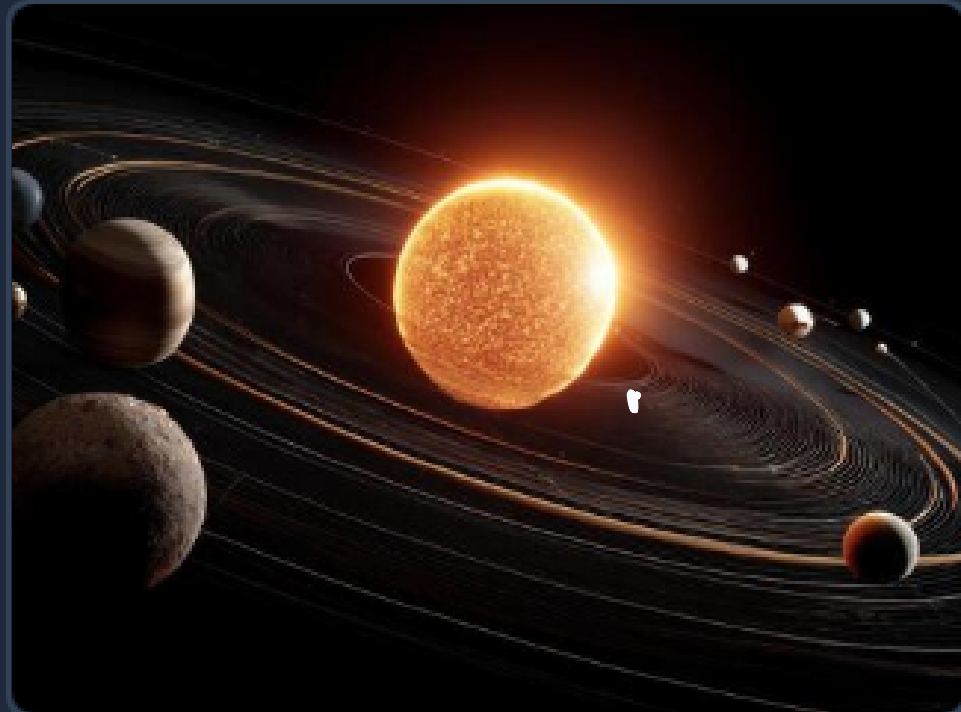
Chapter 2: Intellectual Revolutions

Global Paradigm Shifts & The Philippine Science and Technology
Agenda

Global Paradigm Shifts

Nicolaus Copernicus - mathematician - astronomer

Charles Darwin → theory of evolution by natural selection



Copernican

Shifted humanity from the center to a peripheral position in a vast, heliocentric cosmos.



Survival of the fittest Darwinian

Redefined our biological origins and highlighted our interconnected place within the natural world.



Sigmund Freud Freudian Father of

Unveiled the unconscious mind, offering an entirely new vocabulary for understanding human motivations.

Psychoanalysis

ptolemaic model - earth centered
heliocentric - sun-centered → De revolutionibus orbium coelestium

The Information Age

- computer 1971

first microprocessor
- Intel

Driven by the invention of the microprocessor, this revolution has radically transformed global society.

While extending human brainpower and connecting the globe, it introduces complex challenges like cybercrime and the loss of individual privacy.



Philippine S&T Agenda

Forestry

disaster risk reduction
growth of S&T
2002-2020

Department of Science & Technology

- ▶ **DOST Leadership:** Guiding national policy and project management for scientific advancement.
- ▶ **Technological Self-Reliance:** The core strategic focus of the National Science and Technology Plan.
- ▶ **Centers of Excellence:** Building advanced, government-funded facilities for biotechnology, nanotechnology, and genomics.
- ▶ **Harmonized Agenda:** Solving immediate national problems related to inclusive growth and disaster risk reduction.



Five government-funded centers of excellence
- Bio tech, nano tech, genomics,

Empowering Human Capital

8k + 2k



Tech Transfer Act (2011)

Creates a robust framework for the ownership and commercialization of intellectual property originating from government-funded research.



S&T Scholarships

Expands funding and dramatically strengthens science and mathematics teaching in secondary schools to nurture future innovators.



PSHS System

Offers specialized, top-tier education and scholarships to students uniquely gifted in science and mathematics across the country.

1 star = 84k

Chapter 3: **S&T for National Development**

Human Flourishing & The Pursuit of the Good
Life

Science for Change (S4CP) ^{DOE} → Country competitive World program

Higher Education collaborative R&D



NICER & RDLead

Capacitating Higher Education Institutions and bringing in top-tier experts to elevate regional research capabilities nationwide.



CRADLE Program

Fostering powerful, synergistic collaboration between academic institutions and local companies to catalyze real-world innovation.



BIST Program

Elevating industrial capacity by helping private companies seamlessly acquire novel, strategic technologies and advanced equipment.

Heche
Centers in the region for R&D
R&D → research & development

Patent

advanced equipment
patent rights

Industry
Program

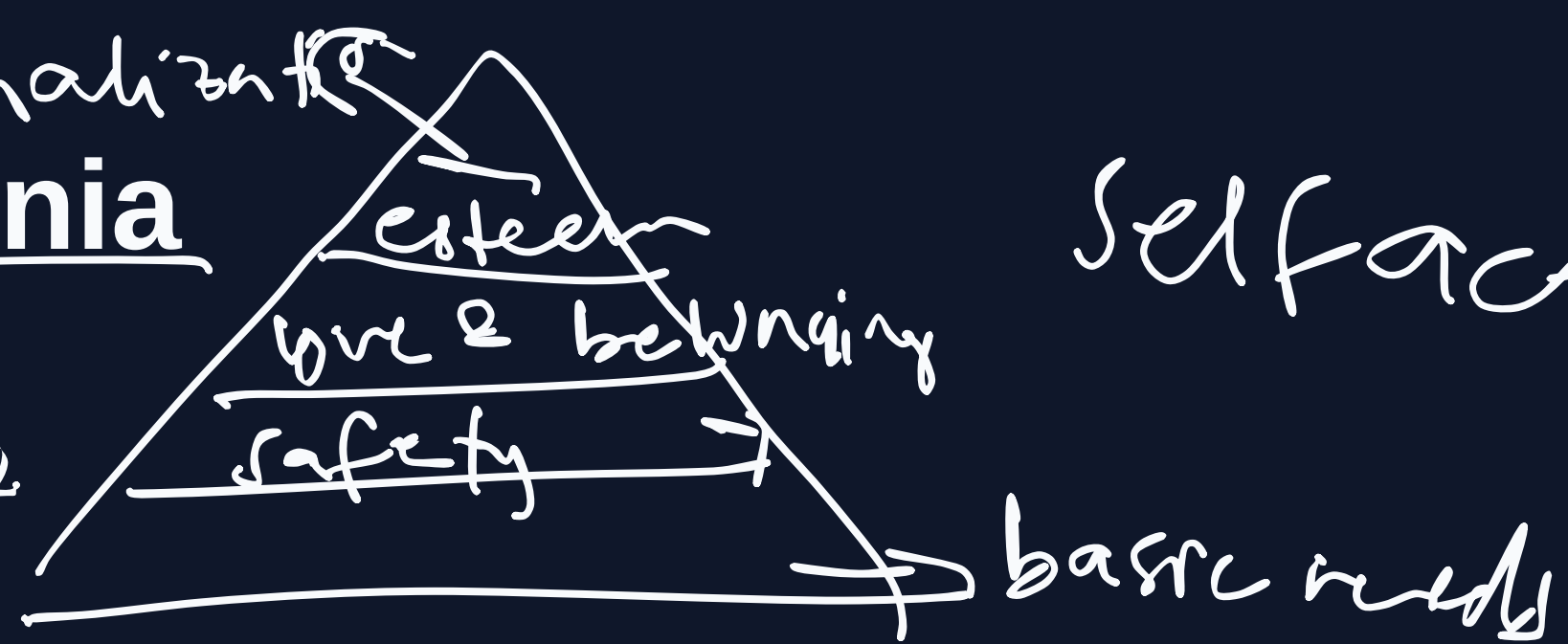
Advanced Transportation

- ▶ **Hybrid Electric Road Train (HERT):** A trackless, hybrid solution designed natively to enhance public transport efficiency.
- ▶ **Automated Guideway Transit (AGTS):** Conceptualized to drastically curb heavy traffic and dangerous air pollution in Metro Manila.
- ▶ **Cost-Effective Innovation:** Functions similarly to a standard monorail but at a fraction of the cost, feeding existing transit lines.



The Essence of Eudaimonia

theory of needs
→ may be



Happiness consists in achieving, throughout a lifetime, all the goods that lead to the perfection of human nature and the enrichment of human life.

— ARISTOTLE

positive social
↓
have a well life
flourishing → positive functioning
psychological → long term
process

The background of the image shows the dark silhouettes of several trees against a twilight sky. The sky transitions from a deep blue at the top to a warm, yellowish-orange glow near the horizon. The trees are mostly without leaves, with intricate branch structures visible. One tree in the center-left has a thick trunk and many bare branches reaching upwards. Other trees are visible in the foreground and background, creating a sense of depth.

Flourishing in the Modern World

To fully achieve eudaimonia today, one must deeply immerse themselves in science to navigate our complex times and unlock humanity's true potential for self-actualization.

Image Sources



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