



ASPIRING FOR INDUSTRIAL UPGRADE: HOW CAN STI FORESIGHT FIND ITS LEGITIMACY TO INFORM A MIDDLE-INCOME TRAP COUNTRY?

WITH CASE STUDIES ON LIFE SCIENCES

Dr. Nares Damrongchai
CEO, Thailand Center of Excellence for Life Science

Futures of STI and foresight: contribution to strategy formulation, International
Symposium for NISTEP's 30th Anniversary, Tokyo, 1 November 2018



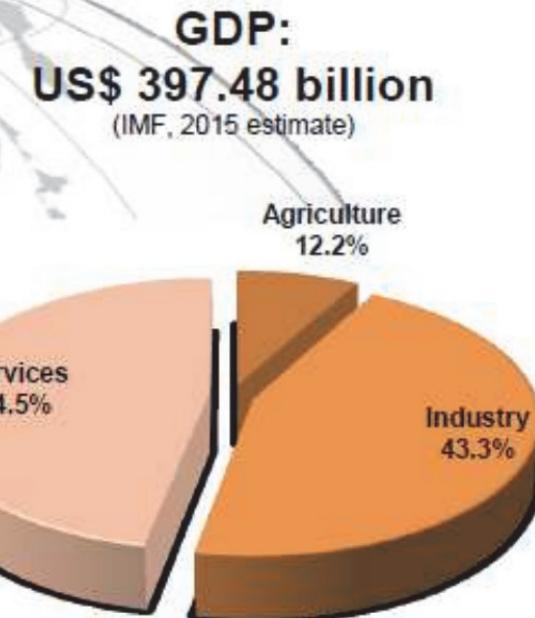
OUTLINE

- Purpose and overview
- Focusing on health futures and life sciences
- Contribution to strategy formulation



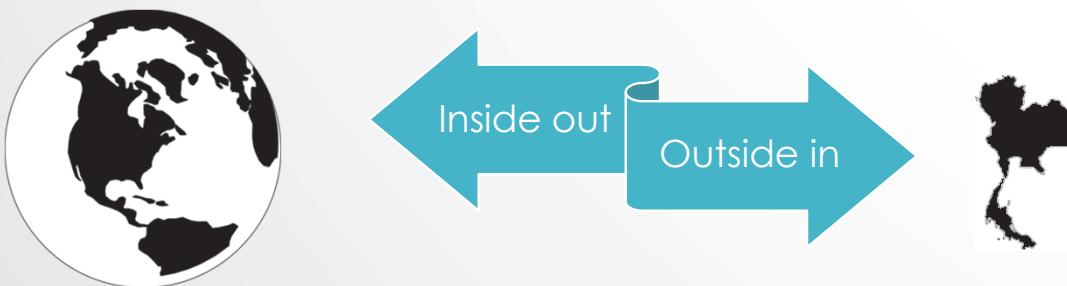
Thailand Context

- An upper middle income economy
- ASEAN's 2nd largest economy
- Total population of 67.2 million (2014)
- GDP per capita (nominal) US\$ 5,771 (IMF, 2015 estimate)
- World's largest natural **rubber** producer and exporter (WTO, 2013)
- World's largest exporter of **cassava** products (FAO, 2013)
- World's 2nd largest **rice** exporter (WTO, 2013)
- World's 2nd largest **sugar** exporter (WTO, 2013)



THAILAND'S INTERNATIONALIZATION

- International migration
 - Labor migration (case of Northeast Thailand)
 - Inter-marriage (case of Northeast Thailand)
 - War or other disasters etc.
- Transnational tourism
 - Long stay tourism
 - Nursing homes for retired international citizens
- Education integration
 - Among ASEAN members
 - International schools from western countries
- Foreign business and investment
 - Japanese and Chinese business community



EVOLUTION OF FUTURES METHODS

T. Kuosa / *Futures* 43 (2011) 327–336

333

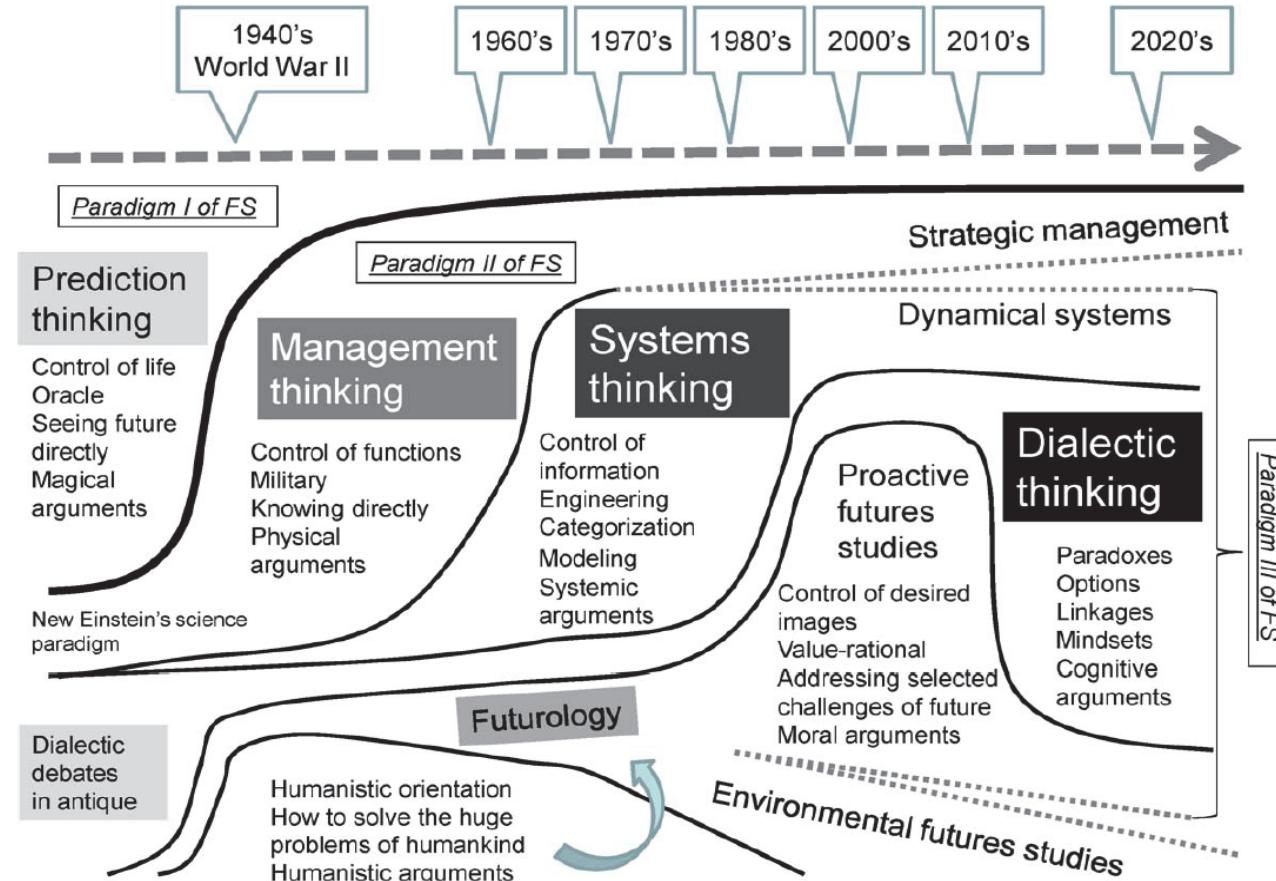
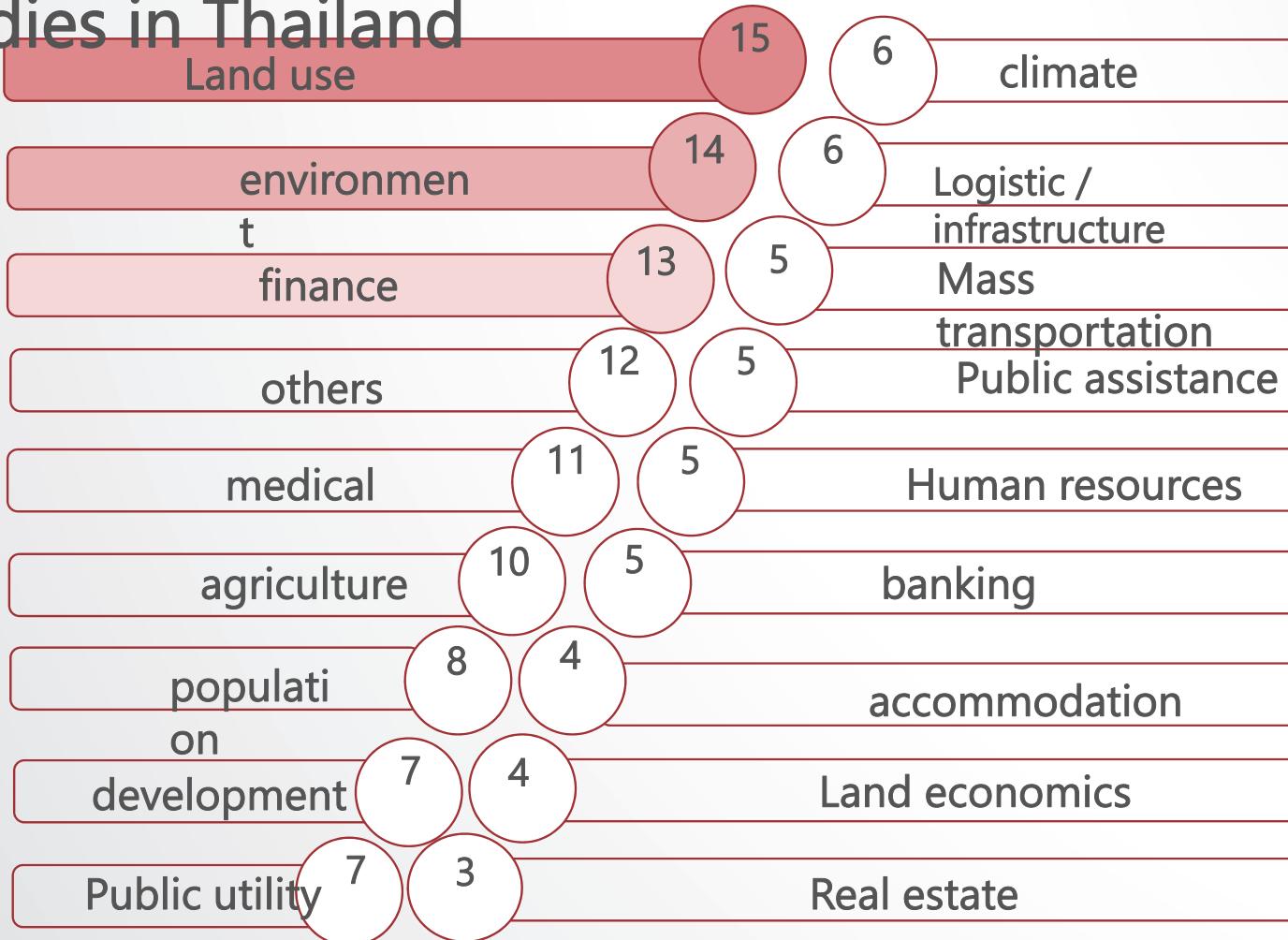


Fig. 1. Evolution of futures studies.

THE PURPOSE OF FORESIGHT WILL GUIDE IT'S DESIGN, PROCESS AND IMPACT ASSESSMENT

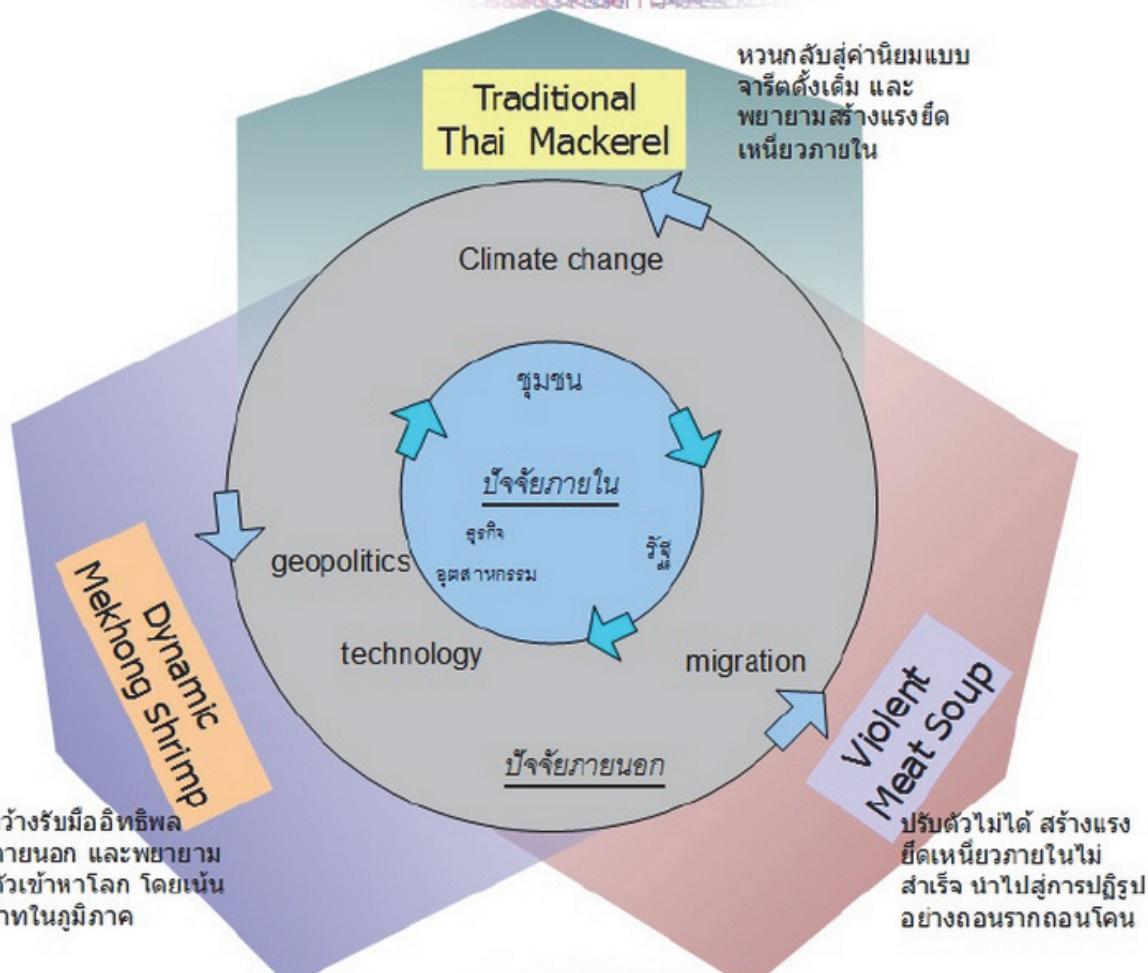
- Foresight is a multi-purpose concept and process.
- From government's point of view, foresight serves policy and strategy formulation from the big picture down to implementation level. For example:
 - To seek new policy options
 - To assess new and existing policy options
- How do we measure effectiveness of foresight?
 - Hint: The end-point depends on the purpose set at the starting point.
- In reality it is not that easy....

There are no less than 140 foresight / future studies in Thailand



Reviewed by Apiwat Ratanawaraha (unpublished, 2018)

ภาพอนาคตประเทศไทย ในอีก 10 ปีข้างหน้า





น้ำพริกปลาทู



ต้มยำกุ้งน้ำตก



เกาเหลาไม่งอก

Food safety

Zoonotic EID

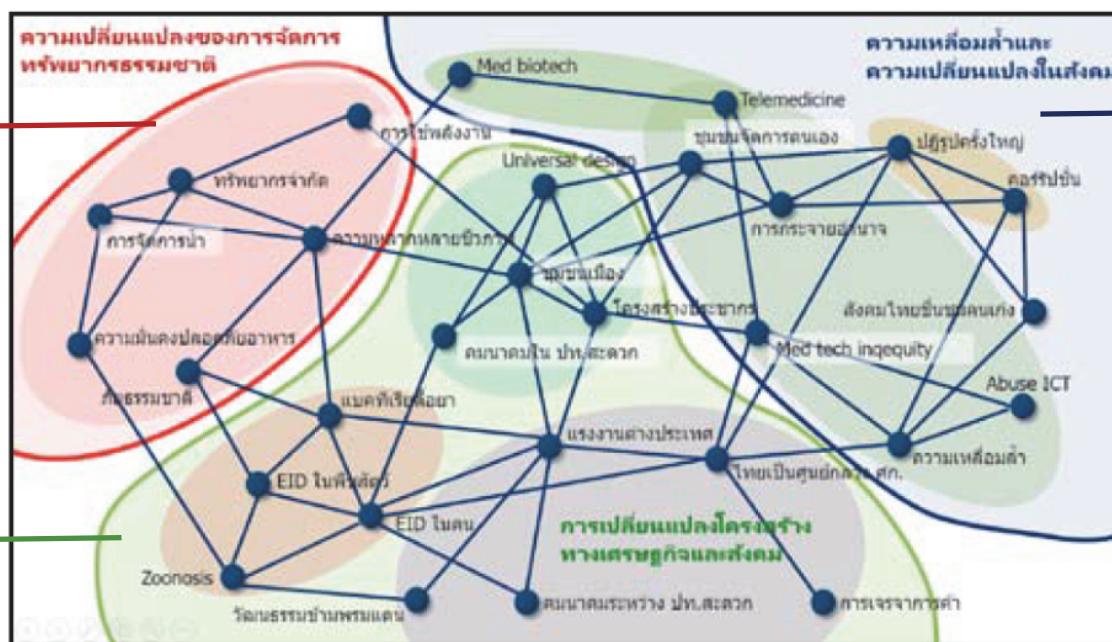
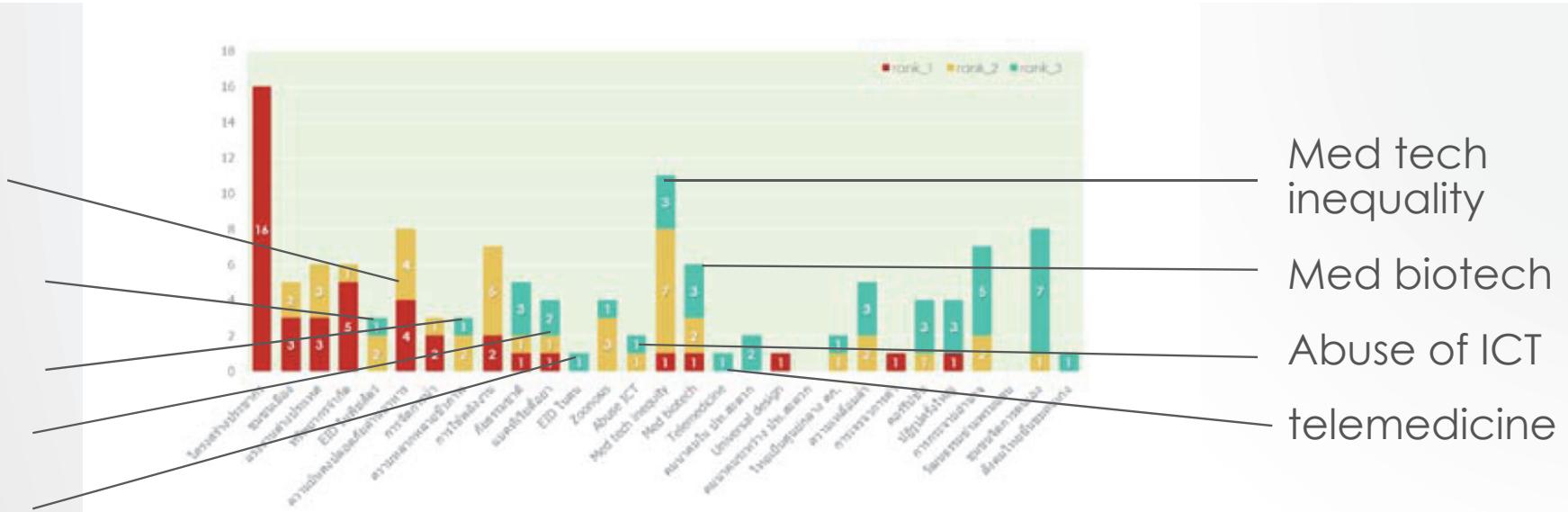
biodiversity

AMR

Human EID

Changes in natural resources management

Social and economic structure changes



Med tech
inequality

Med biotech

Abuse of ICT

telemedicine

Inequality and
social changes

3 Health System Scenarios



SOME GAPS IN THAILAND

- Institutions that conducts science and technology foresight
 - APEC Center for Technology Foresight (APEC CTF)
 - National Innovation Agency
 - CU Futures Lab
- And the gaps are....
 - Shortage of experienced experts or researchers with direct research work in this area
 - Communities are fragmented
 - Disconnected from global foresight or research community
 - Contributions to strategy formulation

THE KEYS TO CONTRIBUTION TO STRATEGY FORMULATION

- Increase and inform future-aware policy making through science and art
 - Institutionalization needed
- Nurture futures skill in young generation
 - *Futures Literacy - Embracing Complexity and Using the Future (Riel Miller)*
- Elect a leader who are also a futurists

ACKNOWLEDGEMENT

- APEC Center for Technology Foresight
- National Science Technology and Innovation Policy Office
- Thailand Research Fund
- Health System Research Institute
- Dr. Apiwat Ratanawaraha (Chulalongkorn University)