

Annual Report 2021



Excellent Research

Management and Service

with Efficiency Technology

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**Abstract** 



Providing academic services and professional skills to society is one of the four interrelated missions stated in the strategic plan of Thammasat University. The excellence in academic services and professional skills is the thing that the university has tried to pursue along with the excellence in research and educational management.

Being in charge of providing services and educational support for external organizations on behalf of the university, Thammasat University Research and Consultancy Institute (TU-RAC) has done research and has provided research management services for government sectors, state enterprises, private organizations, and international organizations. For the complete satisfaction of the service users, TU-RAC has been committed to providing prompt and quality academic services which are of great benefit to each organization and help fulfilling the needs of service users through efficient information technology. By providing research management services for government sectors, state enterprises, private organizations, and international organizations, TU-RAC is considered a linchpin which has satisfactorily carried out the university policy of disseminating knowledge and research in various fields to the society and is one of the sectors which promotes the vision of Thammasat University: "Leadership through World-Class Education and Research"

On the occasion of TU-RAC's anniversary, I would like to express my appreciation to the government sectors, state enterprises, private organizations, and international organizations for the confidence in TU-RAC services. Also, I would like to thank the board of committee of TU-RAC, instructors, researchers and all TU-RAC staff for the support and participation which has contributed to outstanding performance of TU-RAC.

G. Win.

# Message from the Director

Before I was appointed as the Director of Thammasat University Research and Consultancy Institute (TU-RAC), I had noticed some issues of sluggishness, incomprehensibility and unconventionality in the services of TU-RAC. As a researcher, I certainly had expected efficient services, management, coordination, and administration. However, after 7 months as the director, I have realized that TU-RAC has to deal with demands not only from researchers from different faculties and sectors, and the university's Board of Directors, but also from external organizations and research grants. There is no doubt it is a challenge

to work for TU-RAC. Working here is not so pleasant. That is why TU-RAC has a high workforce turnover and not many people (have to) work here for the university, for their family, for personal or any other reasons. This is what that I have learnt.

I hope to "improve" the image and "change" TU-RAC in many ways. I would like to encourage 1) publicity 2) proactive roles 3) dissemination of knowledge, and 4) more public relations channels. Also I would like to 1) issue and revise regulations 2) develop skillful staff 3) build on better IT system 4) increase workforce and their welfare, and 5) create positive working environment. These are the 9 aspects of improvement and changes I hope to see during my 3 years as the Director of TU-RAC. In order to achieve my ambition, it is my priority to learn the basic internal working processes of TU-RAC. I have to manage my time efficiently amongst TU-RAC daily activities, my faculty work, my ongoing research, and my family and personal tasks. To work towards my goals, I especially need cooperation from the Deputy Director (Assoc. Prof. Dr. Vannapar Tirasangka), the Manager (Dr. Somsunee Duangkae), the Head of the 4 divisions, and all TU-RAC staff. Moreover, the "office management" should be fair and systematic. The "service administration" should be rapid and accurate. The "financial administration" should be effective. The staff should be efficient. Special projects should be proactive and promote positive image (for TU-RAC). Finally, research work should be widely disseminated. These are the things I would like to see.

I have set 7 outcome indicators which are researcher satisfaction, numbers of complaints, performance, numbers of new researchers, project value, numbers of client jobs, and workplace happiness. These are goals that I and the administrative team will desperately try to achieve through any crises. Based on the performance in this year, the message from the Director next year and the following years should show changes in better ways.

Finally, with the understanding from all researchers, my determination, and the cooperation from all TU-RAC staff, I would like to assure you that this year is the year of planting. Next year will be the year of growing and the following year will be the year of harvesting. I would like to thank the Rector for the confidence in me. Also I would like to thank the Chairman and the Board of Directors for supervising the work of TU-RAC.

Associate Professor Dr. Teera Sindecharak Director of TU-RAC

# Message from the Chairman

Research is the basis of knowledge development for small, medium and large organizations, including government sectors, state enterprises, and private sectors. As the central office of Thammasat University which helps administer research projects from external organizations, Thammasat University Research and Consultancy

Institute (TU- RAC) was established. TU-RAC has offered research management and consultancy services which provide solutions to problems for government sectors, state enterprises, private sectors, and international organizations.

TU-RAC has maintained the standard in academic services and internal management and has tried to improve its services in order to fulfill the needs of the service users. It has provided accurate, convenient, rapid, and transparent services through efficient IT. During the spread of Covid19, TU-RAC has adjusted administration and internal management to work from home policy. TU-RAC has also developed proactive services for external organizations. The efficient services of TU-RAC indicate the standard of TU-RAC.

Last year's performance of TU-RAC was another satisfying success. On behalf of TU-RAC, I would like to thank every organization for the confidence in TU-RAC services. I also would like to thank the board of directors, instructors, researchers, and TU-RAC staff for unstinting support. I am confident that TU-RAC will continuously improve its services to fulfill the needs of service users, instructors and researchers, and will always efficiently perform an essential role assigned by the university in research management and consultancy.

Associate Professor Dr. Weeraya Chim-oye

Weeraya Chimoye

Chairman

Board of Directors of TU-RAC







# Associate Professor Dr. Weeraya Chim-oye Position Chairman of the Board

#### **Education**

- D.Eng. Geotechnical Engineering, Hiroshima University, Japan 1999.
- M.Eng. Civil Engineering,
   Kasetsart University,
   Thailand 1993.
- B.Eng. Civil Engineering,
   Kasetsart University,
   Thailand 1990.



# Professor Dr. Praipol Koomsup Position Committee Member

- Ph.D. in Economics,Yale University.
- M.A. in Economics,
   Thammasat University.
- B. Econ.,
   Western Australia University.



# Professor Dr. Siriwan Suebnukarn Position Committee Member

#### **Education**

- Doctor of Philosophy, Asian Institute of Technology,
   School of Engineering and Technology,
   Information Management.
- Master of Science, Asian Institute of Technology,
   School of Engineering and Technology, Information Management.
- Certificate in Clinical skill program,
   World Society for pd Health Care, Osaka, Japan.
- Graduate Diploma in Clinical Science,
   Chulalongkorn University, Faculty of Dentistry, Endodontology.
- Doctor of Dental Surgery, Prince of Songkla University, Faculty of Dentistry.



- Fellowship in Interventional Cardiology,
   Concord General Hospital and Royal Prince Alfred Hospital, University of Sydney.
- Cardiology Fellow, Division of Cardiology,
   Department of Medicine, King Chulalongkorn Memorial Hospital.
- Internal Medicine Resident, Department of Medicine,
   King Chulalongkorn Memorial Hospital.
- Medical Student, Faculty of Medicine,
   Chulalongkorn University.







## Associate Professor Dr. Dumrong Adunyarittigun Position Committee Member

#### Education

- B.A. (English) (Second Class Honors)
   Silpakorn University, Thailand.
- M.Ed. (Reading Education)
   Towson State University, USA.
- Ph.D. (Curriculum & Instruction) (Reading Education)
   University of Maryland College Park, USA.



# Associate Professor Dr. Thira Jearsiripongkul Position Committee Member

- Dr.-Ing. in Applied Mechanics (Dynamics),
   Technische Universitaet Därmstädt,
   Därmstädt, Germany.
- M. Eng. in Mechatronics School of Advanced
   Technologies (Exchanged Program), Asian Institute
   of Technology, Bangkok, Thailand. Technical University
   Hamburg-Harburg, Hamburg, Germany.
- B. Eng. in Mechanical Engineering,
   King Mongkut's University of Technology Thonburi,
   Thailand.



# Associate Professor Roj Khun-anake Position Committee Member

#### **Education**

- B.Sc. (Environmental Science),
   Thammasat University, Thailand.
- M.S. (Environmental Science),
   Chulalongkorn University, Thailand.



# Assistant Professor Dr. Supachai Srisuchart Position Committee Member

- Ph.D. (Economics),
   University of Hawaii at Manoa.
- Master of Economics (English Program)
   Thammasat University.
- Bachelor of Commerce (Finance and Banking)
   First Class Honor, Thammasat University.
- Economics (Business Economics),
   Sukhothai Thammathirat University.









# Assistant Professor Dr. Tavida Kamolvej Position Committee Member

#### Education

- Doctor of Philosophy, Public Administration & Public Policy, Graduate School of Public and International Affairs, University of Pittsburgh, USA.
- Graduate Certificate in Public Management,
   University of South Florida, USA.
- Master of Public Administration,
   Thammasat University, Thailand.
- Bachelor of Art (first class honor), Public Administration (Major), Human Resource & Organization Management (Minor), Thammasat University, Thailand.



# Associate Professor Dr. Somchai Supattarakul Position Committee Member

- Ph.D. (Accounting),
   University of Texas at Austin, U.S.A.
- Master of Professional Accounting,
   The University of Texas of Austin, USA.
- Certificate in Auditing,
   Thammasat University, Thailand.
- Bachelor's Degree Program in Accounting,
   (First class honors), Thammasat University,
   Thailand.



## Dr. Surapit Promsit Position Committee Member

#### Education

- Ph.D., University of Technology Sydney, Australia.
- MBA, University of Western Sydney, Australia.



# Associate Professor Dr. Teera Sindecharak Position Committee Member and Secretary

- Ph.D. (Demography), Institute for Population and Social Research, Mahidol University, Thailand.
- M.S. (Applied Statistics) Master of Science
   (Applied Statistics), Faculty of Science and Technology,
   Thammasat University, Thailand.
- B.Sc. (Statistics) Bachelor of Science (Statistics),
   Faculty of Science and Technology,
   Thammasat University, Thailand.









Associate Professor Dr. Vannapar Tirasangka

Deputy Director

- B.A. (Law), Thammasat University, Thailand.
- M.A. Public law and Environmental law
   (D.E.A. de droit Public et Droit de l'environnement),
   University of Nantes, France.
- Doctorat en droit (Mention très honorable à l'Unanimité des membres du jury),
   University of Nantes, France.

### **TU-RAC Staff**



Manager
Miss Somsunee Duangkae

### **Project Management Division**



Head of Project Management
Miss Wanna Keawpuang



Miss Namtip Meekanthong



Miss Sasinon Limpawat



Miss Suchittra Paochuad



Miss Sirinapa Permsakunsin



Miss Napaporn Sompakdee



Miss Peangnapa Suksompong



Miss Rasamee Pimwanwong



Miss Thippawan Tongdee (During February

11, 2019 to February 6, 2021)



### TU-RAC Staff



Head of Planning and Development

Miss Kantima Pongsak

# Planning and Development Division



Miss Suwannee Tiwatansakul



Miss Hathaichanok Poomsalai



Miss Warittha Thaibure



Miss Pathomgant Bunnag



Miss Pornpun Sangketkarn









Miss Morakot Buamrungsin



Miss Thipsuwan Jammuen



**Special Projects Division** 

Mr. Titiporn Aumrueangsri



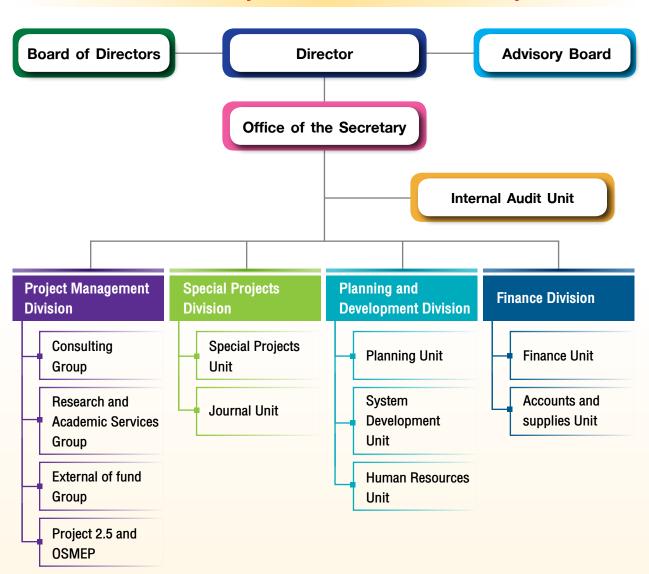
Acting Head of Special Projects
Miss Yuphonrat Phongnairat



### **Organization Structure**

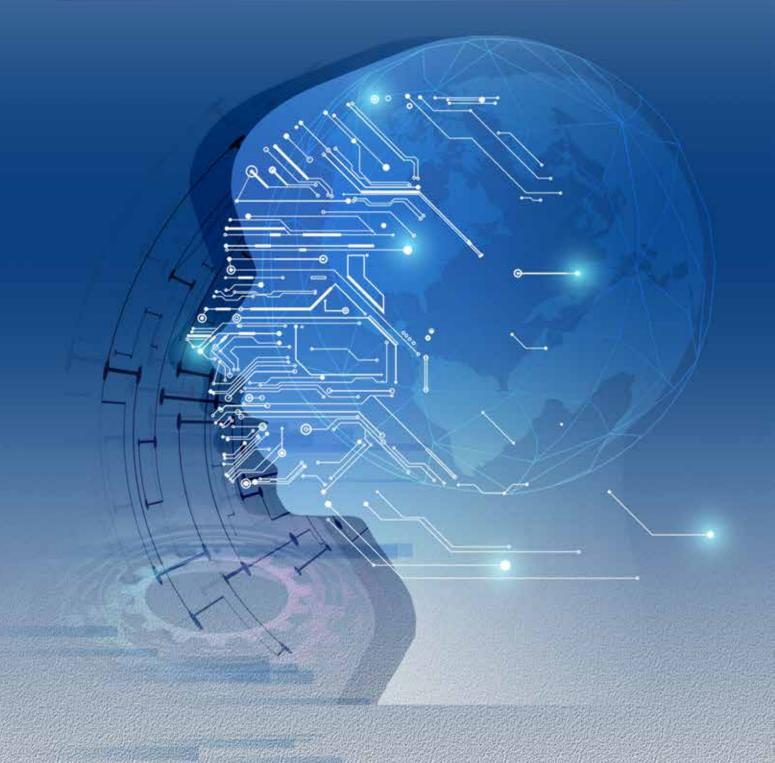
Thammasat University Research and Consultancy Institute (TU-RAC) operates under the management of the Board of Directors with the Rector as chairman. The Board of Directors is responsible for making the Institute's policies and plans which comply with Thammasat University's policy guidelines and the Institute's establishment objectives. The executive director oversees and supervises the general management of the Institute and is the chief of all its staff. The deputy director assist the excutive director to management of the Institute. The manager is appointed by the Rector and is responsible for supervising the staff's performance of their duties and assisting the director in overseeing the general management. The organizational structure of the Institute is as follows:

### **Thammasat University Research and Consultancy Institute**





# **Organization Background**



### **Organization Background**

The twenty-first century is an age of information and technology. The strengths and weaknesses of any organizations depend on the information they acquire. That is, information is one crucial factor that enables government organizations, state enterprises, and private organizations to effectively adjust themselves to current rapid changes promptly. Therefore, rapid accessibility to reliable information can give organizations the edge over others, making them stronger and more likely to be successful. Research properly conducted according to research methodologies is an important tool for organizations to gain accurate, clear, and reliable information. Research also contributes to the accumulation of information and knowledge necessary for the development of the country.

Thammasat University realizes the significant role of research as a source of new knowledge essential to the progress of organizations. In addition, the university has a strong commitment to provide the academic services to society and various organizations. As a consequence, the university established the Research and Consultancy Institute or TU-RAC which aims at providing research services on the university's behalf. It is an autonomous Institute, making its operation flexible. TU-RAC is the university's only Institute that is allowed to provide services in conducting research, consultancy, and seminars and training programs to government organizations, state enterprises, and private organizations on behalf of Thammasat University.

The Institute's research projects are implemented by the university's highly experienced faculty members from various fields of study such as social science and science. These researchers integrate knowledge from different fields and establish new concepts which can be applied to real situations. They have been highly recognized as outstanding researchers in the academic world. This ensures the Institute's ability to provide services of the highest quality in conducting research, consultancy, and seminars and training programs.

### MISSION

TU-RAC provides services related to research management and administers research works conducted under Thammasat University. TU-RAC is an independent agency with flexibility in its operation. The authority and duties of TU-RAC are stipulated by Thammasat University Regulations 2019 in regards to research and consultancy services as follows;

- 1. To perform research works and provide research consultancy as requested by government and private sectors, international organizations, legitimate agencies and individuals.
- 2. For research works consultancy for partner universities, TU-RAC have exclusive authority on behalf of Thammasat University.
- 3. Agreements made for research and consultancy services with Thammasat University is to be signed by Director of TU-RAC who is officially the representative of the Rector of Thammasat University.



### **VISION**

TU-RAC: Excellent Research Management and Service with Efficiency Technology



TU-RAC's performance is based on the following eight core values:

Unity

Sincerity and Integrity

Problem-solving ability

**Diversity of opinions** 

Achievement-oriented teamwork

**Expertise** 

Innovation

Systematic thinking and decision-making

### **Key Success Factors (KSFs):**

- 1. Improving a comprehensive information system
- 2. Promoting personnel's potential
- 3. Promoting operational effectiveness

The Institute had set up an operation plan for the 2021 fiscal year in accordance with its strategic plan. Its operational evaluation will follow "the philosophy of the organization's working improvement system (Ed PEx)" based on 4 aspects of the evaluation framework:

#### The Effectiveness of the Institute's Mission (45%)

- 1. The increase in the percentage of the project's value compared to the previous year [25%]
- 2. The increase in number of the projects compared to the previous year [10%]
- 3. The number of researchers submitting their work to the Institute [10%]

#### The Quality of Service (20%)

Satisfaction level of people served [20%]

#### The Development of the institute per hundred (20%)

- The percentage of the staff improved in accordance with human resource competency development plan [4%]
- 2. The percentage of the success in comprehensive information system development plan [4%]
- 3. The percentage of the success in knowledge management activities [3%]
- 4. The percentage of the success in implementing the annual action plan [9%]

#### The Operational Efficiency (15%)

- 1. The average percentage of resource efficiency [3%]
- 2. The percentage of the success of the projects in accordance with organization governance policy [4%]
- 3. The average percentage of the success in accordance with the set time standard of the supporting process [5%]
- 4. The weighted average percentage of completion on the risk management plan [1%]
- 5. The percentage of the target group learning the news from the Institute [2%]



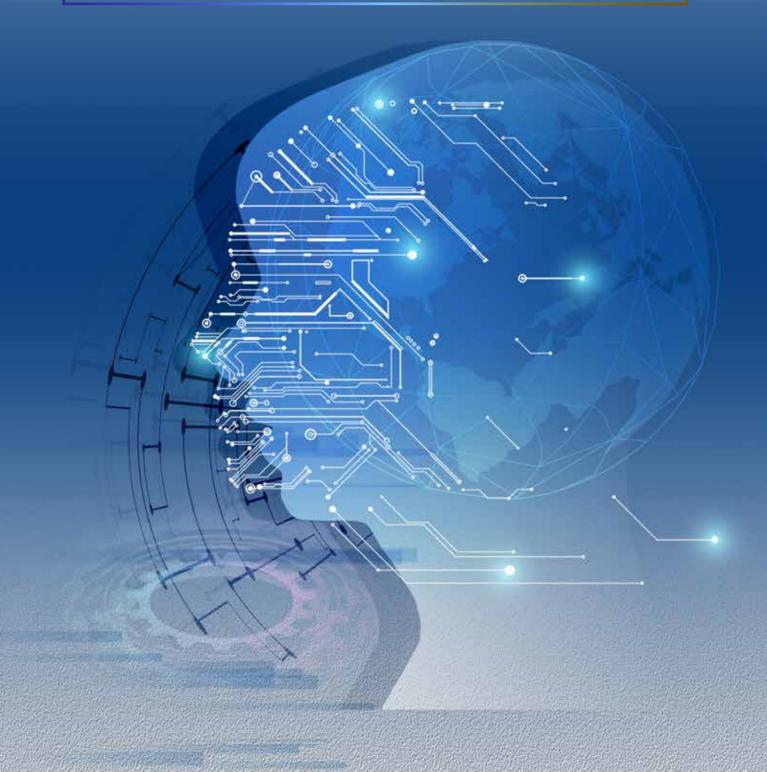
### The Consultancy Registration

TU-RAC registered to become a provider of consultancy services with the Thai Consultant Database Center, Ministry of Finance, on October 6, 2000, under the registration number 668. At present, TU-RAC is a registered consultant in 19 areas as follows:





# Operating Results in the Fiscal Year 2021

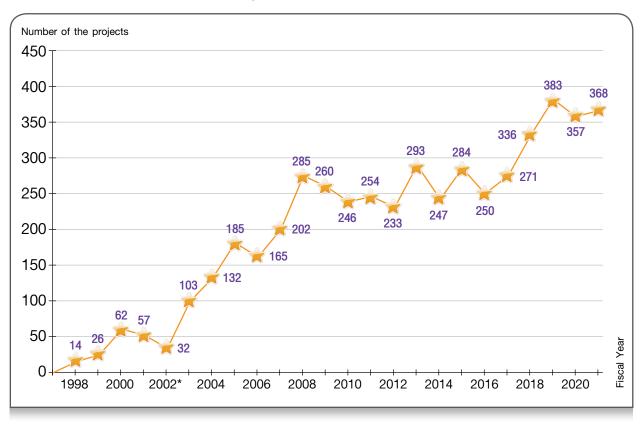




### Operating Results in the Fiscal Year 2021

In the fiscal year 2021, the public and the private organizations which consider TU-RAC a credible and trustworthy Institute commissioned the Institute to implement 368 projects.

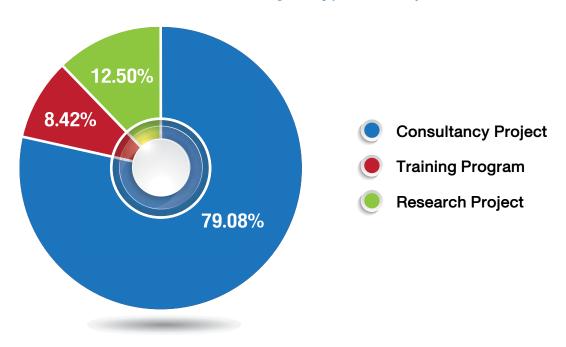
### The Number of Projects in the Fiscal Years 1998-2021



Note: \* The budget was allocated for 4 months (June 1-September 30, 2002) due to the budgeting system adjustment.

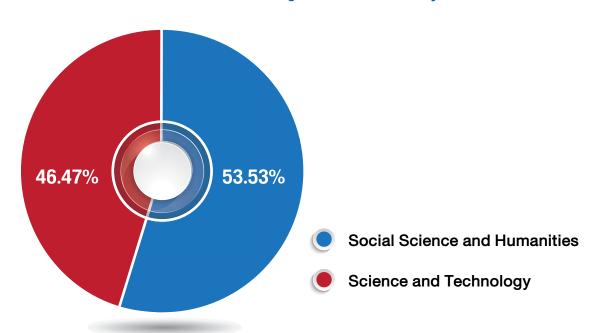
In the fiscal year 2021, the Institute's projects were divided into three main categories: 291 consultancy projects or 79.08% of total project; 31 training programs or 8.42% of total project; and 46 research projects or 12.50% of total project value.

### Percentage of Project in the Fiscal Year 2021 Classified according to Types of Projects



The fiscal year 2021 projects classified according to fields of study are as follows: 197 projects in social science and Humanities or 53.53% of total project and 171 projects in science and technology or 46.47% of total project value.

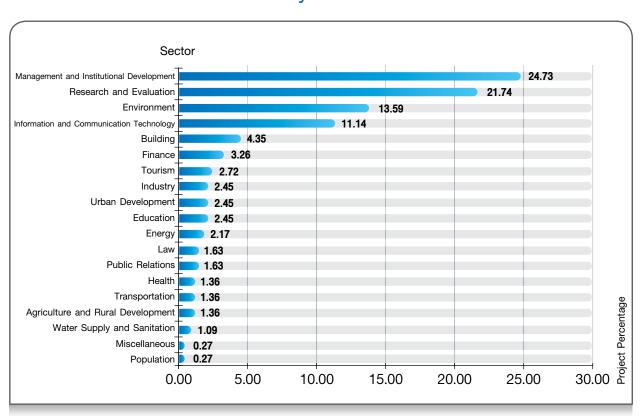
Percentage of Project in the Fiscal Year 2021 Classified according to fields of study



in Miscellaneous Sector.

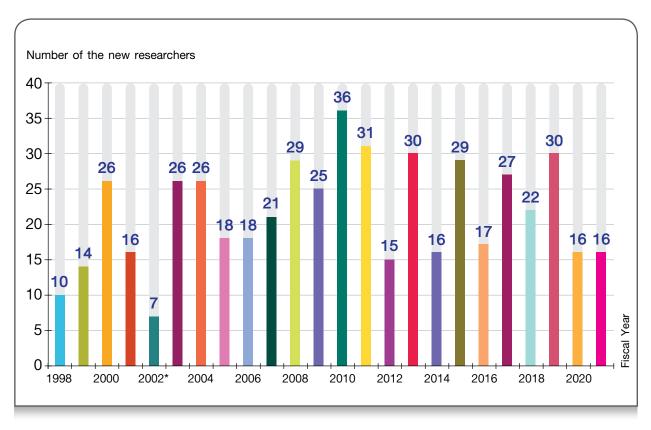
In the fiscal year 2021, the proportion of project values according to the areas in which TU-RAC registered as a consultancy service provider with the Thai Consultant Database Center, Ministry of Finance, is as follows: 24.73% in Management and Institutional Development Sector 21.74% in Research and Evaluation Sector 13.59% in Environment Sector 11.14% in Information and Communication Technology Sector 4.35% in Building Sector 3.26% in Finance Sector 2.72% in Tourism Sector 2.45% in Education Sector 2.45% in Urban Development Sector 2.45% in Industry Sector 2.17% Energy Sector 1.63% in Public Relations Sector 1.63% in Law Sector 1.36% in Agriculture And Rural Development Sector 1.36% in Transportation Sector 1.36% in Health Sector 1.09% in Water Supply And Sanitation Sector 0.27% in Population Sector and 0.27%

# Percentage of Project in the Fiscal Year 2021 Classified according to the Areas in which TU-RAC Registered as a Consultancy Service Provider



The Institute started operating on research projects in the fiscal year 1998. There were only 10 chief researchers. At present, there are a total of 397 chief researchers responsible for projects under TU-RAC coordination. Every fiscal year, the number of new researchers under TU-RAC coordination has increased. In the fiscal year 2021, there were 16 new researchers.

# The Number of New Researchers that Increases Each Year During the Fiscal Years 1998-2021



Note: \* The budget was allocated for 4 months (June 1-September 30, 2002) due to the budgeting system adjustment.



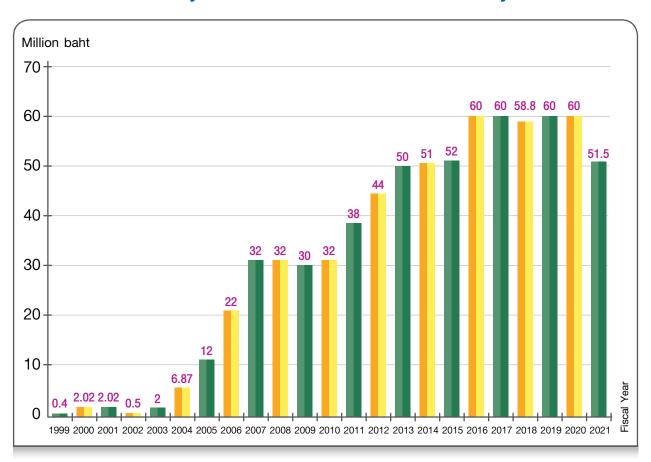
# Money remitted to Thammasat University



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Thammasat University Research and Consultancy Institute has continuously remitted the residual income from the Institute's operation to Thammasat University every year to support the university's research development, the teaching and learning as well as various other activities. In the fiscal year 2021, the Institute allocated its residual income of 51.5 million baht to the university.

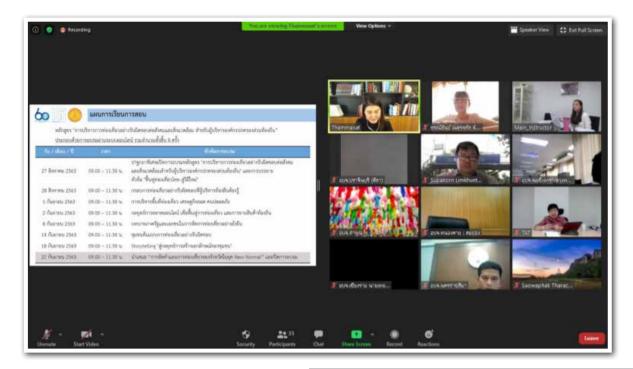
### Money remitted to Thammasat University





# Project Activities Thammasat University





### The Training Program

"Tourism Management with Social and Environmental Responsibility for Local Administrators"



Tourism Authority of Thailand allowed TU-RAC to organize a training program entitled "Tourism Management with Social and Environmental Responsibility for Local Administrators." This training program was intended to provide the participants with knowledge in all dimensions of tourism and more understanding in mechanism of tourism industry, and to apply the acquired knowledge and experiences in their work accordingly to the world tourism trends.







# The Training Program "BBL Strategic Thinking" 14<sup>th</sup> - 15<sup>th</sup> September 2020

Bangkok Bank Public Co., Ltd. allowed TU-RAC to organize a training program entitled "BBL Strategic Thinking" from 14<sup>th</sup> to 15<sup>th</sup> September 2020. This training program was designed to help the staff of the company to learn and understand strategic thinking both in theory and in practice accordingly to the approach of the company in promoting work efficiency with strategic thinking.





# The Training Program "MTP for Boonrawd OGSM"

MTP Solution Co., Ltd. allowed TU-RAC to organize a training program entitled "MTP for Boonrawd OGSM" from 26<sup>th</sup> to 27<sup>th</sup> November 2020. The training program was intended to help the staff of the company to learn



and understand strategic thinking both in theory and in practice accordingly to the approach of the company in promoting work efficiency with strategic thinking.

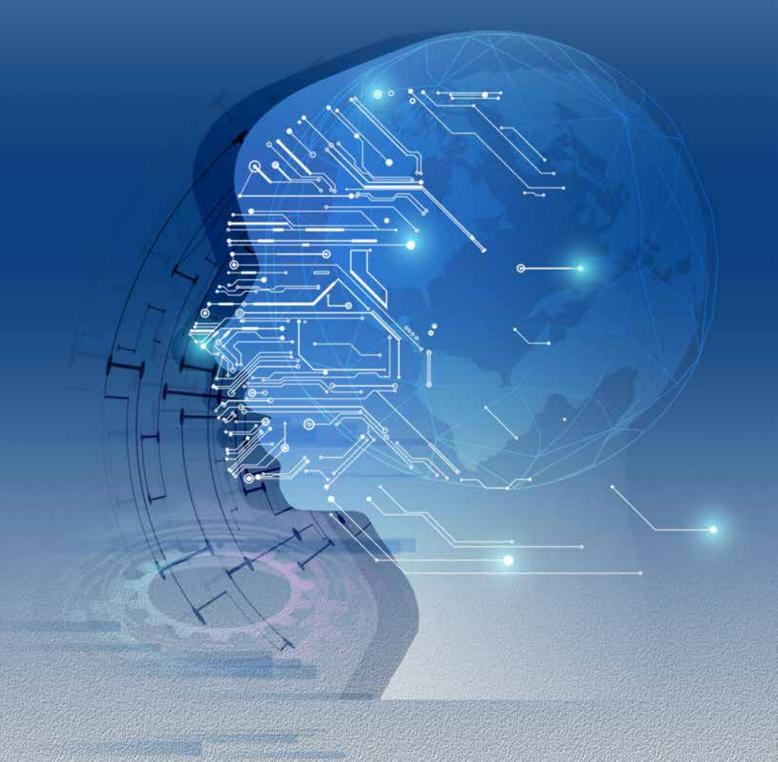








## **TU-RAC Activities**



### **Board of Directors Meeting**

On 22<sup>nd</sup> February 2021, Professor Dr. Somkit Lertpaithoon was the Chairman of the Board of Directors Meeting held in Kukrit Pramoj Room, Thai Khadi Research Institute, 9<sup>th</sup> floor, Anekprasong 1 Building at Thammasat University, Tha Prachan Campus.

















### Bathing Rite for Buddha Image on Songkran Festival 2021

On the occasion of Songkran Festival, Assoc. Prof. Dr. Teera Sindecharak, the Director of TU-RAC, Dr. Somsunee Duangkae, the Manager of TU-RAC, and the staff of TU-RAC performed bathing rite to the replica of the Emerald Buddha in front of TU-RAC office on 8<sup>th</sup> April 2021 as an auspicious start to the Thai New Year.











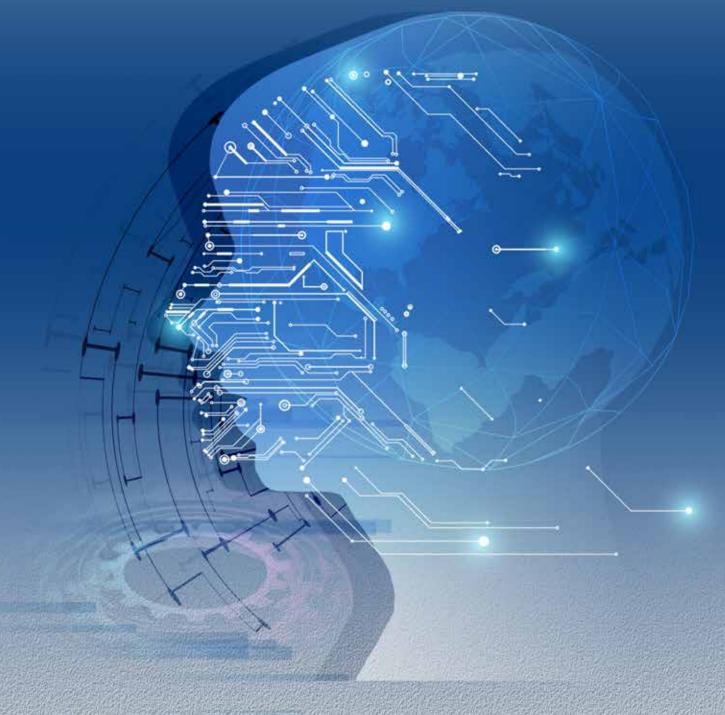








## **TU-RAC** Researchers



## Faculty of Law

### Professor Narong Jaiharn

Oganization	Project
Rights and Liberties Protection Department	The study of suitable for the promulgation of Law to promote human Rights plan mechanism phase 2
	The Research Project on Study to Drafting Anti-discrimination Act
Department of Groundwater Resources	A study of reviewing draft Underground Water Law

#### Associate Professor Dr. Bhumindr Butr-Indr

Oganization	Project
Office of The National	2-Year Monitoring and Evaluation of Telecommunications
Broadcasting and	Master Plan No. 2 B.E. 2562-2566 (2019-2023) Project
Telecommunications	
Commission	

#### Associate Professor Dr. Nilubol Lertnuwat

Oganization	Project
Office of the Energy Regulatory	Study on Electricity Tariff Regulatory Framework under Energy
Commission (OERC)	Industry Act B.E. 2550

### Assistant Professor Dr. Surasak Boonrueang

Oganization	Project
King Prajadhipok's Institute	The Guidance and Approach for Analyzing Social Impact in the Process of Regulatory Impact Analysis

# Assistant Professor Dr. Naporn Popattanachai

Oganization	Project
Department of Water	Expenses for making an action plan to support the work under
Resources	division 6, Section 78 Conservation and Development of Public
	Water Resources

### Assistant Professor Sawatree Suksri

Oganization	Project
King Prajadhipok's Institute	Study the enforcement of the Gender Equality Act B.E. 2558 to assess the law's effectiveness

### Assistant Professor Teerarat Cherawattana

Oganization	Project
Office of the Energy Regulatory	Recommendation on Drafting Electricity Tariff Regulatory
Commission (OERC)	Framework Notification

# Faculty of Commerce and Accountancy

# Professor Dr. Arnat Leemakdej

Organization	Project
Bank for Agriculture and Agricultural Co-operatives	Joint Investment with Entrepreneurs in the Thai Agricultural Sector That Supports the Agricultural Sector and the Establishment of a BAAC Subsidiary company
Trade Policy and Strategy Office	Developing Blockchain Application to Enhance Trade and Economy Project Phase 2

### Professor Dr. Ruth Banomyong

Organization	Project
Yok Intertrade (Chiang Mai) Co., Ltd.	Logistics assessment for Yok Inter

### Professor Witawat Rungruangphon

Organization	Project
Thailand Science Research and Innovation	Make a budget allocation plan in the CIRC. And analyze the feasibility and risk of the budget plan of the agencies in the system, 2021
Agricultural Research Development Agency (Public Organization) : ARDA	Digital Action Plan Project for Agricultural Research Development Agency (Public Organization) in 3 Years (Year 2021-2023)
Office of National Higher Education Science Research and Innovation Policy Council	Impact Analysis and Integration of Projects on the Tourisum and Creative economy

### Associate Professor Dr. Alisara Charinsarn

Organization	Project
G-ABLE Co., Ltd.	Strategy Formation Workshop 2022
The Standard Co., Ltd.	The Standard Workshop
TNI and Associates Co., Ltd.	TNI SES 2020
Trax Intertrade Co., Ltd.	Strategic Thinking for Liberty Group 2021
P.S.P. Specialties Co., Ltd.	Strategic Business Planning Advisory
Facial Design Co., Ltd.	Business Strategy Advisory
1Moby Co., Ltd.	Business Strategy Advisory for 1Moby 2021
Somboon Advance Technology Public Company Limited	Business Strategy Advisory for SAT
MTP Solution Co., Ltd.	MTP Strategy Virtual Workshop
	MTP OGSM Regular
	MTP OGSM Inter
	MTP Super OIC 2020
	MTP Strategy Coaching for Tesco Director
	MTP for Boonrawd OGSM
	MTP YUM Consulting Follow-up
	MTP Strategy for Tesco Director
	MTP Strategy for Seamico
	MTP Big Data for Tesco
Acumen Plus Company Limited	Acumen PTT DDI 2020
Applied DB Public Company Limited	Business Strategy Advisory for ADB

#### Associate Professor Dr. Peter Ractham

Organization	Project
Manash University Malaysia	Sustainable Work through Women-in-tech Application for Older Women in Malaysia and Thailand : Integrating Action Research and Design Science Approach
National Research Council of Thailand (NRCT)	The Risk Management and Internationalisation Strategy for Thai University During Covid-19 Pandamic : A Case Study of Thammasat Business School

### Associate Professor Dr. Chaturong Napathorn

Organization	Project
Sports Authority of Thailand	Knowledge Management and Innovation Management Consultants Project, Sports Authority of Thailand 2021
The Government Lottery Office	Project of analysis of digital transformation affecting organizational structure and manpower management

### Associate Professor Dr. Kaewta Rohitratana

Organization	Project
Trade Policy and Strategy Office	Thailand's National Trade Strategy and Implementation Plan (2022-2026)

### Associate Professor Ramiha Pacharavanich

Organization	Project
The Treasury Department	An analytical study to set up criteria to develop and create value-added of unused Ratchaphatsadu land which is occupied by government agencies
National Housing Authority	NHA Property Analysis to Amending Property Regulations
State Railway of Thailand	Consultant for company establishment and selection of executives, employees, subsidiary companies to manage assets of the railway
Pattaya City Hall	Study the suitability, survey, design, and determine the investment model to develop Pattaya Hill as a new symbolic tourist attraction of Pattaya City. Bang Lamung District Chonburi
Songkhla Provincial Administrative Organization	Water Management Project in Songkhla Province No. 2

### Assistant Professor Dr. Suthikorn Kingkaew

Organization	Project
Department of Corrections	The feasibility study for the establishment of a special Industrial Community under the Department of Corrections

#### Assistant Professor Dr. Somboon Kulvisaechana

Organization	Project
Deposit Protection Agency (DPA)	Compensation Restructuring (Fiscal Year 2563)

# Assistant Professor Dr. Panuwong Kumpirarusk

Organization	Project
Office of Industrial	The Project of big data Management system to Enhance
Economics	Industrial competitiveness for the Fiscal Year 2021

# Assistant Professor Dr. Nopporn Ruangwanit

Organization	Project
The Metropolitan Electricity Authority	The 2021 Core Business Customer Satisfaction Survey (CSI)
Bank for Agriculture and	BAAC RM Platform Development
Agricultural Co-operatives	BAAC Smart Manager Development

# Assistant Professor Dr. Thanawut Limpanitgul

Organization	Project
The Metropolitan Electricity Authority	A Customer Satisfaction Survey of MEA Related Businesses : The year 2021
	MEA Service Touchpoint Quality Audit : The Year 2021
PTT Public Company Limited	Research and Analysis of the Restart Thailand Project
Office of the Permanent Secretary, Ministry of Tourism	and Sports Development of Tourism Operational Plan

# Assistant Professor Jittaporn Sriboonjit

Organization	Project
National Housing Authority	Feasibility study on National Housing Auithoning Pc2 project Bangplee Samutprakan
Port Authority of Thailand, Laemchabang Port	Public-private partnership : B2 Port Lamchabang Port

### Assistant Professor Dr. Duangjai Lortanavanit

Organization	Project
National Research Council of	Moving Retirees Forward : Reskill and Upskill to Enhance Job
Thailand (NRCT)	Prospects in the New Economy

# Dr. Somprasong Kosonboon

Organization	Project
TTT Holding Ltd.	TTT People Development
	TTT Training Project
Thiensurat Public Co., Ltd.	Strategy and Executive Training and Development Year 2021
Thonglor International Pet Hospital	Strategic Training and Consulting for TLPH

# Dr. Punjaporn Chinchanachokchai

Organization	Project
Office of National Higher	Consumers Gastronomy Tourism Behaviour on Online Platforms
Education Science Research	
and Innovation Policy Council	

# Faculty of Political Science

### Associate Professor Dr. Attasit Pankaew

Organization	Project
Excise Department	Project on alcoholic beverages' administrative management from logistic transition in Thailand
Institute for Good Governance Promotion	The project on enhancing the efficiency of government administration
Office of The National Broadcasting and	Code of Ethic and Guideline
Telecommunications Commission	A project to support people to thoroughly receive services in broadcasting businesses

# Associate Professor Dr. Supasawad Chardchawarn

Organization	Project
PTT Exploration and Production Public Company Limited	Project to Study and Income Survey of the Target Community Participation in Social Projects Under the Ocean for Life Strategy
Moral Promotion Center (Public Organization)	The Study of Concepts and Possibility to Employ the Social Credit System
Office of Justice Affairs	Collecting Data Indicators Based on Effective Crime Prevention Guidelines
Office of the Energy Regulatory Commission (OERC)	Evaluating the Performances of the Power Development Fund (Working Capital) for the Fiscal Year 2021
Office of the National Digital Economy and Society Commission	Project to Analyze Situation and Behavior of Juvenile to Prevent and Promote Awareness of Juvenile from Online Threats
Social Security Office	Evaluate the Effectiveness of Social Security Benefits in the Event of Senility
Office of the Permanent Secretary, Ministry of Labour	Project to Study Working Patterns, Employment, Welfare and Social Security for Elderly Workers

# Assistant Professor Dr. Sunida Aroonpipat

Organization	Project
Knowledge network institute of thailand	Policy-Research Managing Project for Administrative Branch

# Assistant Professor Dr. Puli Fuwongcharoen

Organization	Project
King Prajadhipok's Institute	Siam's First General Election: Origins, Institutional Structure, and Social Reactions

# Assistant Professor Dr. Tavida Kamolvej

Organization	Project
Department of Mineral	Resources Preparation of information for the national geohazard management guidelines
Administrative Strategy Division	The Development of 20 Years Bangkok Development Plan (phase 3) 2023-2027
National Innovation Agency (Public Organization) (NIA)	The Development of Training Program for Local Chief Innovation Network
The Public Relations Office, Office of the Permanent Secretary for the bangkok	The development of a 5-year Bangkok Public Relations Strategic Plan (2020-2027)
Anti-Money Laundering Office (AMLO)	AMLO Thailand Strategic Plan Project: AML/CFT Strategic Plan 2022-2027
Office of the National Security Council	A Consultation Paper on the Study of National Security and Threats for the design of Security Preparedness Framework 2023-2027

# Faculty of Journalism & Mass Communication

### Associate Professor Dr. Pornthip Pimolsindh

Organization	Project
NI.COM Co., Ltd.	Reach and Audience Evaluation Form, Phase 3
	Reach and Audience Evaluation Form, Phase 4

### Associate Professor Dr. Prapaipit Muthitacharoen

Organization	Project
Office of National Higher	Research driving for tourism and creative economy group,
Education Science Research	PMU C year 2021 to enhance the competitiveness of Thai
and Innovation Policy Council	tourism

### Assistant Professor Dr. Monaiphol Ronavej

Organization	Project
The Government Public	The Evaluation of Publicity Program on Management of Migrant
Relations Department	Workers for FY 2021

# Assistant Professor Dr. Adchara Panthanuwong

Organization	Project
The Government Public Relations Department	The Evaluation of Publicity Program on Preparation for Aging Society for FY 2021

# Faculty of Learning Sciences and Education

### Assistant Professor Dr. Kitti Kongtuk

Organization	Project
Equitable Education Fund	Developing a learning curriculum design tool that connects schools and communities

### Assistant Professor Dr. Phonraphee Thummaphan

Organization	Project
Equitable Education Fund	Research on curriculum development process

# Faculty of Science and Technology

### Associate Professor Dr. Supet Jirakajohnkool

Organization	Project
Biodiversity-Based Economy Development office	Consulting proposal to conserve and beneficial use of Biological Diversity in Privately Protected Areas (PPA) and Private-Land Conservation Areas (PLCA) Project

### Associate Professor Dr. Prapasri Theprugsa

Organization	Project
Huachiew Chalermprakiet University	Research and development to improve the quality of food products of community enterprises in Samut Prakan Province consists of 2 activities Activity 1 Application of Hurdle Technology in Production of Dried Gourami Fishin Retort Pouch to Extend Shelf Life at Room Temperature Activity 2 Research and development of in novative food products to create the identity of the small community enterprises in Samut Prakan province

### Associate Professor Dr. Dusit Athinuwat

Organization	Project
Counter Crime Planning Division Royal Thai Police	Smart Safety Zone for the Safety of People's Lives and Properties
National Research Council of Thailand (NRCT)	Technology Transfer for Creating Added Value of Agricultural Products to Create Community Product Identity, Increase Marketing Channels and Community Income
Agricultural Research Development Agency (Public Organization) : ARDA	Development of Standard Agronomic Practice and Extraction Technology of Thai Herb for Increasing Small Farmer Income

### Associate Professor Dr. Chiravoot Pechyen

Organization	Project
Gremedi Holdings Limited	Research & Development Of Bio-Based Materials And Processing For Cosmetic, Sensor, And Drug Applications
Siam Original Food Co., Ltd.	Human Potential Development for Increasing Effective Work

### Assistant Professor Dr. sangdao wongsai

Organization	Project
National Research Council of Thailand (NRCT)	Development of the digital knowledge management map for research Phase 2:16 KM and smart project monitoring

### Assistant Professor Dr. Suteera Vatthanakul

Organization	Project
Kashco Holdings Co., Ltd.	Sensory Test of Oat Milk Products
JSP Pharmaceutical Manufacturing (Thailand) Public Company Limited	Sensory Evaluation of 4 mix oil by using untrained panelists to determine the consumer perception of health benefits of 4 mix oil
Ode Plants Ltd.	Product development of barista oat milk and original oat milk

### Assistant Professor Dr. Wilawan Chuaboon

Organization	Project
National Research Council of Thailand (NRCT)	Soil detoxification with bio-product to degrade chemical and heavy metal residue for sustainable soil remediation

#### Assistant Professor Dr. Rawat Jaisutti

Organization	Project
SCG Packaging Public Company Limited	Electronic Nose for Monitoring Gas Concentration in Industry

### Assistant Professor Dr. Kittipong Chainok

Organization	Project
National Research Council of Thailand (NRCT)	Carbon Dioxide Capture in Ultramicroporous Metal-Organic Frameworks

### Mr. Attawut Wongpradit

Organization	Project
National Science and	Lamp cube LED model
Technology Development	
Agency	

# **Faculty of Engineering**

### Professor Dr. Nakhorn Poovarodom

Organization	Project
Pruksa Real Estate Public Company Limited	Measurement and Assessment of Vibration Impact of 2-storey Wooden House No. 1 (Nearby House of Chapter Chula Samyan Project)
	Vibration measurement of a two-story wooden house, 1 Naret road, Si Phraya, Bang Rak district, Bangkok
	Vibration inspection of a two-story wooden house (Chapter CU-Samyan project); phase 2

### Professor Dr. Phadungsak Rattanadecho

Organization	Project
National Research Council of Thailand (NRCT)	The Commercialized Drier Processing Using a Combined Unsymmetrical Double-Feed Asymmetric Microwave low Energy and Vacuum System for herbs and Medicine

### Professor Dr. Sanya Mitaim

Organization	Project
Department of Employment	Digital Development Plan for Department of Employment (3-year plan: B.E. 2566-B.E. 2568)
National Savings Fund	National Savings Fund
Expressway Authority of Thailand (EXAT)	Development of 5-year Long Term Strategic Stakeholder Engagement Master Plan (2022-2026)
The Transport Co., Ltd.	Development of 5-Year Digital Plan (2022-2026)
Thai Public Broadcasting Service	Information Technology Risk Assessment and Revision of IT Continuity Plan
Business Orgranization of the Office of the Welfare Promotion Commission for Teacher and Education Personal	Information and Communication Technology Consultancy

# Associate Professor Dr. Cattaleeya Pattamaprom

Organization	Project
Office of National Higher	Pilot-scale Production of Biobased and Biodegradable Plastic
Education Science Research	Bags from PLA/NR Blends
and Innovation Policy Council	

# Associate Professor Dr. Charturong Tantibundhit

Organization	Project
Fine Med Co., Ltd.	Development of Connection between AlChest4All and Fine Med Picture Archiving and Communication System (PACS) of Na Wang Hospital
	Development of Connection between AlChest4All and Fine Med Picture Archiving and Communication System (PACS) of Suwannakhuha Hospital
	Development of Connection between AlChest4All and Fine Med Picture Archiving and Communication System (PACS) of Had Samran Hospital
Udonthani Center Hospital	Development of Connection between AlChest4All and Picture Archiving and Communication System (PACS) of 150 Hospitals in Thailand
	Facilitating System for Doctor Note and Nurse Note Integrated with Speech Recognition for Thai Medical Transcription : Phase II
Central Chest Institute of Thailand	Development of Connection between AlChest4All and Picture Archiving and Communication System (PACS) of Central Chest Institute of Thailand
Office of National Higher Education Science Research and Innovation Policy Council	Automated Glaucoma Screening System Using Visual Field Based on Virtual Reality and Fundus Image Base on Deep Learning

# Associate Professor Dr. Chanathip Namprempre

Organization	Project
Tisco Financial Group Public Company Limited	ICT Consultancy

# Associate Professor Dr. Thira Jearsiripongkul

Organization	Project
Primestreet Advisery (Thailand) Co., Ltd.	EV Bus

# Associate Professor Dr. Nopbhorn Leeprechanon

Organization	Project
Department of Alternative Energy Development and Efficiency Ministry of Energy	Registering and Supervising Energy Management Auditing and Certification
King Prajadhipok's Institute	Al Research and Development for Procurement and Supplies Management Laws 2021

### Associate Professor Dr. Busaba Phruksaphanrat

Organization	Project
Expressway Authority of	Bangkok Expressway: Solving the expressway's traffic
Thailand (EXAT)	congestion problem

#### Associate Professor Dr. Phairat Usubharatana

Organization	Project
Port Authority of Thailand	Eco-Efficiency assessment project of Port Authority of Thailand in accordance with ISO 14045 Phase 2
Gulf BP Company Limited	Carbon Footprint for Organization Verification : Gulf BP Co., Ltd.
Selic Corp Public Company Limited	Carbon Footprint Verification for Organization Selic Corp Public Company Limited
THAI MFC Co., Ltd.	Carbon Footprint for Verification : Thai MFC Company Limited
Thai Optical Group Pcl	Carbon Footprint for organization Verification : Thai Optical Group Public Company Limited

# Associate Professor Dr. Phairat Usubharatana (Continued)

Organization	Project
Nova Organic Company Limited	Carbon Footprint for organization Verification : Nova Organic company limited
Betagro Agro Industry Company Limited	Carbon Footprint for organization Verification : betagro agro industry company limited
PTT Tank Terminal Co., Ltd.	Customer satisfaction Survey 2020
Fabrinet Co., Ltd.	Verify Carbon Footprint for Organization year 2020
Somboon Advance Technology Public Company Limited	Carbon Footprint of Product Verification : Somboon Advance Technology (SAT)
Ajinomoto Betagro Frozen Foods (Thailand) Co., Ltd.	Carbon Footprint for organization Verification
IRPC Public Company Limited	Carbon Footprint Verification for organization IRPC Public Company Limited

# Associate Professor Dr. Virote Boonyapinyo

Organization	Project
McDonald Steel Building Products Ltd.	Wind Load Study For Motijheel Station, Dhaka Mrt, Bangladesh, Project By Wind Tunnel Test
GSPS Holdings Co., Ltd.	Wind Load Study For Service Apartment Sukhumvit 53 Project By Wind Tunnel Test
The Worldmark Company Limited	Wind Load Study For Pattaya Worldmark Mixed-Use Project By Wind Tunnel Test-Additional Study
Tenth Avenue Co., Ltd.	Wind Load Study For Sukhumvit 10 Building Project By Wind Tunnel Test
Real Asset Development Co., Ltd.	Wind Load Study For Asiatique Thonglor Building Project by Wind Tunnel Test
Whizdom Pinnacle Corporation Company Limited	Wind Load Study For Whizdom Samyan Rama Iv Building Project By Wind Tunnel Test

# Associate Professor Dr. Virote Boonyapinyo (Continued)

Organization	Project
Windows view Co., Ltd.	Inspection And Evaluation Of Structural And Function Performance Of Facade System For Management Center Driving With A Gps System
Siam Metal Co., Ltd.	Inspection And Evaluation Of Structural And Function Performance Of Facade System For The Rice By Srisupharaj
	Inspection And Evaluation Of Structural And Function Performance Of Facade System For Queen Sirikit Convention Center
	Inspection And Evaluation Of Structural And Function Performance Of Facade System For Temple
	Inspection And Evaluation Of Structural And Function Performance Of Facade System For Krungsri Rama 3 Tower
SAHA Capital Tower Co., Ltd.	Wind Load Study For Saha Capital Tower By Wind Tunnel Test

# Associate Professor Dr. Weerachai Anotaipaiboon

Organization	Project
Sports Authority of Thailand	Survey of requirement and expectations of customers and stakeholders of sport Authority to Thailand, fiscal year 2021
Traffic and Transportation Department	Project to Study Survey and design the control and management center for traffic technology and safety system of Bangkok Metropolitan
Office of the Public Sector Development Commission	National Digital Trade Platform
Social Security Office	Enterprise Architecture (EA) design for social security office

### Associate Professor Dr. Weerachai Asawamethapant

Organization	Project
Sports Authority of Thailand	An organizational architecture and digital action plan to drive the National Sports Development Fund towards becoming a
	Digital Organization

# Associate Professor Dr. Sayan Sirimontri

Organization	Project
Sang Fah Construction and Engineering Co., Ltd.	Load Testing of connection between precast concrete wall and post tension slab
SST Professional Co., Ltd.	Effect of 25 ton truck load testing on the retaining wall
Playing cards Factory	Enterprise Architecture Governance & Development : EA

# Associate Professor Dr. Harnpon Phungrassami

Organization	Project
Rubber Authority of Thailand	Eco-efficiency assessment project of Rubber Authority of Thailand (Fiscal year 2021)
Bangkok Synthetics Co., Ltd.	Carbon Footprint Verification for Organization Bangkok Synthetics Company Limited (branch 00002)
	Carbon Footprint for organization Verification : Bangkok Synthetics Co., Ltd.
Gulf NC Co., Ltd.	Consulting Project for Carbon Footprint of Product Gulf NC Company Limited
Fuel Pipeline Transportation Limited	Carbon Footprint for Organization Verification
Shin-Etsu SiliCones (Thailand) Co., Ltd.	Carbon Footprint for Organization Verification
Thai MMA Co., Ltd.	Carbon Footprint for Organization Verification: Thai MMA Company Limited (Methyl Methacrylate Factory)
	Carbon Footprint for Organization Verification: Thai MMA Company Limited (Continuous Acrylic Sheet Factory)
Thai Aviation Refuelling Co., Ltd.	Carbon Footprint for Organization Verification: TARCO
Thai Polyethylene Co., Ltd.	Carbon Footprint for Organization Verification : Thai Polyethylene Co., Ltd.

# Associate Professor Dr. Harnpon Phungrassami (Continued)

Organization	Project
Thai Optical Group Pcl	Carbon Footprint for Organization Verification: Thai Optical Group Public Company Limited
Bangkok Aviation Fuel Services Public Company Limited	Carbon Footprint for Organization Verification Project 2021 : Bangkok Aviation Fuel Service Public Company Limited
BST Elastomer Co., Ltd.	Carbon Footprint for organization Verification : BST Elastomers Public Company Limited
Teck Bee Hang Co., Ltd. (Narathiwat Branch)	Carbon Footprint for Organization verification: Teck Bee Hang (Narathiwat Branch)
Teck Bee Hang Co., Ltd. (Pattani)	Carbon Footprint for Organization Verification Project 2020 : Teck Bee Hang (Yang Thai Paktai) Company Limited (Pattani)
Teck Bee Hang Co., Ltd. (Surat Thani Branch)	Carbon Footprint for Organization Verification Project 2020 : Teck Bee Hang (Yang Thai Paktai) Company Limited (Suratthani)
Siam Agro-Food Industry Public Company Limited	Carbon Footprint for organization Verification
Sermsuk Public Company Limited	Carbon Footprint for Organization Verification Project 2021 : Sermsuk Public Company Limited
Haadthip Public Company Limited	Carbon Footprint for Organization Verification Project 2020 Haad Thip Public Company Limited (Hat Yai Factory)
Inoue Rubber (Thailand) Public Company Limited	Carbon Footprint for organization Verification: Inoue Rubber (Thailand) Public Company Limited
SCG Ceramics Public Company Limited	Validation of Thailand Voluntary Emission Reduction Program (T-VER); SCG Ceramics Public Company Limited (Hin Krong Factory)
	Eco Factory
Oishi Trading Company Limited	Carbon Footprint for Organization verification: Oishi Trading Co., Ltd. (Wang Muang Branch)
	Carbon Footprint for Organization Verification : Oishi Trading Company Limited (Amata Nakorn Branch)
	Carbon Footprint for Organization verification oishi Trading Company Limited (Navanakorn Branch)

# Associate Professor Dr. Harnpon Phungrassami (Continued)

Organization	Project
Oishi Food Service Company Limited	Carbon Footprint for Organization Verification Oishi Food Service Company Limited
Banknote management group Bank of Thailand	Carbon Footprint of Banknote
Thailand Greenhouse Gas  Management Organization  (Public Organization)	Science-Based Target 2021
The Liquor Distillery	Carbon Footprint of Product Verification
Organization	Eco-efficiency assessment project in Fiscal Year 2021, Liquor Distillery Organization, Excise Department, Ministry of Finance

### Associate Professor Dr. Apiwat Muttamara

Organization	Project
Sports Authority of Thailand	Consultant to review the National Sports Development Fund
oports Authority of Thalland	Strategic Plan for A.D. 2022-2025

# Associate Professor Dr. Uruya Weesakul

Organization	Project
Department of land transport	A Study of the Structure of the training course for the return of points
Department of Highways	The analysis of highways network conditions to improve the efficiency of highways maintenance budgeting 2021
Department of Rural Roads	Integration Geo Informatics
Office of The Basic Education Commission	Expanding The Results of Unplugged Coding Learning Provision in Computing Science for Grade 1-3 Students in Chaiyaphum, Kalasin and Loei Provinces
Energy Policy and Planning Office, Ministry of Energy, Thailand	Pilot Use Case Developing Utilization of Electricity Data in Energy Policy and Governance Analysis

#### Assistant Professor Parichat Chuenwatanakul

Organization	Project
Foundation For Industrial	The Project to Upgrade Food Processing Industry by Introducing
Development National	the Standards of Productivity and Innovation as a Tool to
Food Institute	Increase Capacity, Fiscal Year 2021

# Assistant Professor Dr. Krit Jiamjiroch

Organization	Project
National Research Council of Thailand (NRCT)	Ultra low-power battery charger using energy tree-based (UBCT): First UBCT in Thailand

### Assistant Professor Dr. Jakkra Chuanasa

Organization	Project
National Science and	Lip sync Robot
Technology Development	
Agency	

# Assistant Professor Dr. Phisan Kaewprapha

Organization	Project
Office of the National Digital Economy and Society Commission	Sound Data Services Platform
Office of Trade Competition Commission	Digital Master Plan for Office of Trade Competition Commission (OTCC) (2021-2023)

### Assistant Professor Dr. Witawats Satasook

Organization	Project
Sports Authority of Thailand	Selection Examination to be inducted as Sports Authority of Thailand's officer
Department of Alternative Energy Development and	Project to Promote and Support Energy Efficiency at Group of schools under the royal patronage
Efficiency Ministry of Energy	

### Assistant Professor Dr. Winai Raksuntorn

Organization	Project
Department of Highways	Asset management practices and data set to develop an asset cost management system for the Office of Highways Traffic Weight Control
	Study the design of traffic light structures at intersections to improve visibility and support intelligent signal management and evaluate project outcomes
Inter City Motorway Division, Department of Highways	Traffic Data Analysis and Data Collection on the Motorway Number 7 and 9
	Traffic Data Analysis and Data Collection on the Motorway Number 7 and 9
Sports Authority of Thailand	Analyze and evaluate the model to develop the model and operating guidelines of the Sports Association of Thailand.

# Assistant Professor Dr. Supakit Prueksaaroon

Organization	Project
The Government Public	Studied and proposed the improvement and integration of
Relations Department	databases of news, media and centralization databases within
	the government public relations department responsibilities

# Dr. Choompol Boonmee

Organization	Project
Department of Intellectual Property	Information and Communication Technology Consulting Project for Department of Intellectual Property In fiscal year 2021
Phitsanulok Pittayakom School	Research Project of CCTV Camera System of Phitsanulok Pittayakom School
Office Of The Permanent Secretary Ministry Of Education	Consultant to Prepare Platform Development Standards of the Ministry of Education

### Dr. Pornrapeepat Bhasaputra

Organization	Project
Department of Alternative	Energy Conservation and Renewable Energy in the Palace:
Energy Development and	Phase VI
Efficiency Ministry of Energy	

# Dr. Warounsak Liamleam

Organization	Project
Major Development Public	Evaluation of Tap Water Quality in Manor Sanambinnam
Company Limited	condominiums in Accordance with Water Quality Guidance of
	Metropolitan Waterworks Authority (MWA)

### Tustha Sriwalai

Organization	Project
Department of Rural Roads	The Development of Data Standard for central database of Department of Rural Roads

### Watchara Amasiri

Organization	Project
Office of The National Broadcasting and Telecommunications Commission	Training to Develop the Potential of Radio Communication Staff to Create a Network of Volunteer Radio Communication Staff in the Event of a Disaster or Emergency
National Research Council of Thailand (NRCT)	Young Scientist Competition : YSC (Central Area)
Office of National Higher Education Science Research and Innovation Policy Council	Mobile telecommunication laboratory using amateur radio and social learning

# Faculty of Fine and Applied Arts

# Assistant Professor Dr. Anucha Thirakanont

Organization	Project
Thai Media Fund	The Route of the Khon in Thailand
Designated Areas for Sustainable Tourism Administration (Public Organization)	Feasibility Study of the potential cities to be developed and nominated for the Creative Cities Network of UNESCO

# Faculty of Liberal Art

### Associate Professor Danai Preechapermprasit

Organization	Project
Biodiversity-Based Economy	Green area mapping project outside conservation area/community
Development office	economic map for the year 2021

#### Assistant Professor Dr. Songchai Thongpan

Organization	Project
King Prajadhipok's Institute	A Research Project to Promote the Roles of Local Government
	Organizations in Reducing Inequality at the Local Level

#### Dr. Wasinee Wannasiri

Organization	Project
Thailand Greenhouse Gas Management Organization (Public Organization)	The Greenhouse Gas Inventory from Spatial Land Use at Province level

# **Faculty of Economics**

# Associate Professor Dr. Chanin Mephokee

Organization	Project
Department of Employment	A study of outsourcing service to produce work permits and providing services for obtaining work permit applications for working foreigners
Marine Department	Contract design, survey, design for the dredging and maintenance project of the main rivers at the Chi River, Mun River, Loei River and Songkhram River, totaling 200 kilometers distance, Waterway Development and Maintenance Office No. 8, Khon Kaen Province
	Study, Survey and Homeport Designed for Cruise Terminal, The Upper Gulf of Thailand
	Feasibility Study for the Establishment of Cruise Terminal on the Andaman Coastline
Office of The National Broadcasting and Telecommunications Commission	Survey and Analysis of Digital Platform Service Providers in Thailand

# Associate Professor Dr. Chaiyuth Punyasavatsut

Organization	Project
Equitable Education Fund	a model of poverty screening for students in general and vocational secondary education

### Associate Professor Dr. Tatre Jantarakolica

Organization	Project
Office of The National	Telecommunication Industry landscape and analysis
Broadcasting and	
Telecommunications	
Commission	

### Associate Professor Dr. Peera Charoenporn

Organization	Project
Department of Environmental Quality Promotion	Program Evaluation of Department of Environmental Quality Promotion (Environmental Research, Technology and Innovation Program)
Office of Industrial Economics	The Industrial Development Implementation Planning under the Circular Economy Concept in Provincial Cluster-level

# Associate Professor Dr. Suphat Suphachalasai

Organization	Project
Office of The National	Study the impact of broadcasting business And television
Broadcasting and	business towards Thai society and economy after the transition
Telecommunications	to digital system
Commission	

# Assistant Professor Chol Bunnag

Organization	Project
Rajabhat Rajanagarindra University	Driving Sustainable Development Goal : RRU
Office of the auditor General Thailand	Review of knowledge and implementation Status on Monitoring of the Sustainable Development Goals (SDGs) and the Integration of SDGs in the Budgetary Process in Thailand
Office of the Permanent Secretary, Ministry of	Synthesis of the high-level researcher training of Ministry of Social Development and Human Security
Social Development and Human Security	The Making of Social Situation Report 2019-2020 (Specific Procurement)

# Assistant Professor Dr. Kaewkwan Tangtipongkul

Organization	Project
Office of National Higher Education Science Research and Innovation Policy Council	Project title Utilizing the Potential of Higher Education technology and innovation To enhance learning and work for the elderly

#### Assistant Professor Dr. Damisa Mookmanee

Organization	Project
Sports Authority of Thailand	Procurement of Consultancy Services for the Feasibility Study of Worthiness and Impacts on the Service Upgrading Project of Sport Authority of Thailand 'Smart Nation Sport Park', Phase 2 of the Fiscal Budget 2021 (B.E. 2564)
Office of Transport and Traffic Policy and Planning (OTP)	Study the Policy to Reduce Energy Consumption in the Transport Sector

### Assistant Professor Dr. Pracha Koonnathamdee

Organization	Project
Hydro and Agro Informatics Institute	Impact Evaluation of Hydro and Agro Informatics Institute projects

# Assistant Professor Dr. Phongthorn Wrasai

Organization	Project
Creative Economy Agency (Public Organization)	Creative City Index

### Assistant Professor Dr. Pawin Siriprapanukul

Organization	Project
Playing cards Factory	Study Incentive Compensation Improvement Options and Employee Welfare and Executive Playing Card Factory

#### Assistant Professor Dr. Wasin Siwasarit

Organization	Project
Social Security Office	An analysis of the various significant risks associated with the employer's contribution

# Assistant Professor Dr. Supachai Srisuchart

Organization	Project
Department of Employment	A study to increase benefits and extend coverage to members of Overseas Workers Welfare Fund and improve the contribution rate to the fund for each job seeker
Office of the Permanent Secretary, Ministry of Social Development and Human Security	Cost Effectiveness Evaluation of the Technical Promotion and support office, Region 1-11
The Government Lottery Office	GLO Strategic Planning in the context of CSV framework

# Assistant Professor Dr. Anan Pawasutipaisit

Organization	Project
Provincial Waterworks Authority	A Survey of satisfaction and engagement of customers and stakeholders of the Provincial Waterworks Authority Fiscal Year 2021
Institute of Scientific and Technological Research	A survey of expectations, satisfaction, dissatisfaction, needs and loyalty of current customers towards TISTR products, technologies and services
Social Security Office	Social Security Office (SSO) service-user satisfaction survey in 2021

# Assistant Professor Dr. Anin Aroonruengsawat

Organization	Project
Office of the Permanent	Evaluating the Implementation of Ministry of Social Development
Secretary, Ministry of	and Human Security Strategic Plan
Social Development and	
Human Security	

### Dr. Kiatanantha Lounkaew

Organization	Project
National Astronomical Research Institute of Thailand (Public Organization)	Performance Evaluation of National Astronomical Research Institute of Thailand (Public Organization) and Operation Plan for 2022-2027
Health Systems Research Institute	SROI Analysis of Employment Generation Innovation
Thailand Arbitration Center (THAC)	Evaluation of Training Effectiveness and Satisfaction of THAC Services
Equitable Education Fund	Youth Career Readiness Analysis : Phase 2
Office of The National Anti-Corruption Commission (ONACC)	Performance Evaluation of NACC Phase 3 (2017-2021)
Office of the Permanent Secretary, Ministry of Tourism and Sports	Development of Tourism Indicators under National Strategy
Office of the Permanent Secretary, Ministry of Social Development and Human Security	Effectiveness of Societal Transformation
Geo-Informatics and Space	Kok Nong Na Model Social and Economic Impact Analysis
Technology Development Agency	Assessing the Added Economic and Social Value of the GISTDA's mission
Digital Government Development Agency (Public Organisation) (GDA)	Cost Effectiveness Analysis of Digital Government Agency

# Dr. Kiatanantha Lounkaew (Continued)

Organization	Project
Office of the Education Council	Provincial Human Resource Development Program
Office of Agricultural Economics	A Study on Crop Insurance Development
Designated Areas for	3D game development
Sustainable Tourism  Administration	SROI Evaluation of DASTA
(Public Organization)	Feasibility Study of Coworking Space and Creative Space in Loei
	Promotion and Impact Evaluation Platform for Creative and Cultural Tourism

### Mr. Nondh Nuchmorn

Organization	Project
Knowledge network institute of thailand	Knowledge Management for the Utilization of Policy Researches under the draft 13 <sup>th</sup> National Development Plan Framework

# Faculty of Architecture and Planning

### Associate Professor Dr. Peeradorn Kaewlai

Organization	Project
CP Future City Development Corporation Limited	Consultant for Design Competition Management for Transit-Oriented Development (Makkasan Area)
Thailand Knowledge Park	The Development Guidelines For Building Chachoengsao A Sustainable Learning City
Yala City Municipality Office	Masterplanning, Landscape Improvement, and Design of Bedroom Community Market
The Secretariat of the House of Representatives	Consultant to formulate a parliamentary museum master plan
Thailand Convention & Exhibition Bureau (Public Organization)	Economic Impact and Social Impact Assessment before Diamond of The Salt Festival

### Associate Professor Dr. Pawinee lamtrakul

Organization	Project
Office of National Higher	Mechanisms of Public Participation to Promote The Local
Education Science Research	Economic Development Through The Learning Spaces Of
and Innovation Policy Council	Pathum Thani Province

### Assistant Professor Dr. Jaturong Pokharatsiri

Organization	Project
Designated Areas	Preliminary inventory-making of cultural heritage in Chiang Khan
for Sustainable Tourism	Town for sustainable tourism destination management
Administration	
(Public Organization)	

### Assistant Professor Dr. Daranee Jareemit

Organization	Project
National Science and Technology Development	Promoting Urban Ventilation and Air Quality by Urban Geometries  Design
Agency	ŭ

# Assistant Professor Dr. Supreedee Rittironk

Organization	Project
National Housing Authority	The Survey and Community Database Preparation in the Project of Revitalizing Huai Khwang City

# Dr. Surapit Promsit

Organization	Project
Department of Women's Affairs and Family Department (DWF)	The Training Program for Department of Women's Affairs and Family Development Regulations of 2021 (Batch 25)
Department of Energy Business	Human Resource Development & Strategic Development for enhancing organizational Capabilities
Tourism Authority of Thailand	The Efficiency Evaluation of Tourism Authority of Thailand's Internal Communication (2021)
	The 2021 Tourism Authority of Thailand (TAT) External Communication Evaluation Project
Expressway Authority of Thailand (EXAT)	EXAT Reskill & Upskill Program for Transformation and Change
Airports of Thailand Public Co., Ltd.	The project of information perception of the target group on internal and external public relations media for the fiscal year 2021
The SUPPORT Arts and Crafts International Centre of Thailand	The SUPPORT Arts and Crafts International Centre Of Thailand
The Energy Fund Administration Institute (Public Organization)	Regulations & Policy on HRM & HRD of Oil Fuel Fund Office (OFFO)

# Dr. Surapit Promsit (Continued)

Organization	Project
Office of Insurance Commission	3-Year Strategic Planning Project for the OIC Advanced Insurance Institute (2022-2024)
The Board of Investment of Thailand	Satisfaction, dissatisfaction, and the needs of service recipients and stakeholders for the service of the Office of the Board of Investment (BOI), fiscal year 2021
Office of the Permanent Secretary, Ministry of Social Development and Human Security	Executive Training Program for MSDHS of 2021
Office of the Permanent Secretary, Ministry of Energy	Developing Anti-Corruption Efficiency and Promoting Ethics, Ministry of Energy
Office of the Permanent Secretary, Ministry of Industry Thailand	Operation Tracking and Evaluation Application Supported by the Thai SMEs Development Fund Fiscal Year 2021
Thailand Convention &	Thailand Convention & Exhibition Bureau (Public Organization)
Exhibition Bureau (Public Organization)	International Convention Strategic Plan

# Faculty of Socaiology and Anthropology

### Associate Professor Dr. Teera Sindecharak

Organization	Project
Industrial Estate Authority of Thailand	Satisfaction and Engagement Survey of IAS Officer/Employees in 2021
Social Security Office	Employment Beneficial Insurance Development for sustainable Labour Resources

#### Associate Professor Dr. Anusorn Unno

Organization	Project
Outcome Delivery Unit 4.0	Let's Finish It in Our Generation : Thai Youth Movements in Contemporary Socio-political Contexts

#### Assistant Professor Dr. Tiamsoon Sirisrisak

Organization	Project
The Office of Takhli Municipality	Strategic planning for the development of Takhli Smart City

### Assistant Professor Akkaranai Kwanyou

Organization	Project
Legal Execution Department	The survey of confident of Thai people and to increase efficiency for servicing following 4.0 Civil System of Legal Execution Department in Fiscal 2021

# **Faculty of Social Administration**

# Assistant Professor Ronnarong Jundai

Organization	Project
Community Development Department	Indicator and Questionnaire on Basin Minimum need (BMN) and Preliminary Village-Level Information (Kor Chor Chor Song Kaw) Project for Application on National Economic and Social Development Plan, 13 <sup>th</sup> Edition (2022-2026)
Department of Empowerment of Persons with disabilities	Academic Services Project: Study of Improving Disabled People's Care during the Covid-19 Virus Outbreak
Department of Cultural Promotion	Promote the Potential of Cultural Networks for Sustainable Cultural Management Fiscal Year 2021
Equitable Education Fund (EEF)	The program management for the first and second (continued) teacher school quality programs in 2021
Equitable Education Fund	The supporting and expanding results of spatial study management
Thai Health Promotion Foundation	Development of System and Mechanisms to Participation of Social Safety Net for Support Primary Health System in COVID-19

# Assistant Professor Dr. Puchong Senanuch

Organization	Project
Department of	The Study of Concepts and Possibility to Applying Mechanism
Women's Affairs and Family	of Social Credit System
Department (DWF)	

# Assistant Professor Dr. Saowathan Phoglad

Organization	Project
Office of the Permanent	Evaluation of the developmental performance of the health
Secretary, Ministry of Justice	service systems for prisons

### Karuna Chaisai

Organization	Project
Equitable Education Fund	Community based tourism development By Hug Green: Tambon BannKiw, Maetha, Lampang

# Patcha Jeungklinchan

Organization	Project
Equitable Education Fund	Support Volunteer Project

# Arreerat Adisaidachcharin

Organization	Project
Office of the Permanent	Preparation on Fund Strategic Plan for Prevention and
Secretary, Ministry of	Suppression of Human Trafficking (B.E. 2022-2025)
Social Development and	
Human Security	

### Faculty of Public Health

#### Associate Professor Dr. Warawut Suadee

Organization	Project
Expressway Authority of	The Study on the Environmental Impact Monitoring Program of
Thailand (EXAT)	Expressways in Bangkok and Vicinity and Toll Gate Areas for
	the Fiscal Year 2021

### Faculty of Dentistry

#### Assistant Professor Dr. Piyaphong Panpisut

Organization	Project
National Science and	The development of intelligent shade and color matching system
Technology Development	for dental restoration
Agency	

### Faculty of Medicine

#### Sira Nanthapisal

หน่วยงาน	Project
PMU C-Competitiveness	The study of immunogenicity and safety of heterologous Sinovac
	and ChAdOx1 nCov-19 prime-boost COVID-19 vaccines at
	interval 3-4 weeks vaccination program

### **College of Innovation**

#### Associate Professor Dr. Jirapon Sunkpho

Organization	Project
Inter City Motorway Division,	Operation Support and Maintenance of Intercity motorway
Department of Highways	Information Systems

#### Associate Professor Dr. Orpan Khongmalai

Organization	Project
Raydant International Co., Ltd.	A Study Project on Strategic Planning of National Preparedness for Disaster Management by Integrated Digital Solution
Thai Health Promotion Foundation	Program Evaluation of Health Professional Alliance on Tobacco Control of Thailand
Office of Small and Medium	Creating Startups: SME-Early Stage All Stars
Enterprises Promotion	Entrepreneurial development project : branding and business partnership for sustainable competitive advantage

#### Assistant Professor Dr. Kriengkrai Watanasawad

Organization	Project
Office of the Permanent	Thailand's Strengthening National Identity Five-Year Action Plan
Secretary, Prime Minister	(2023-2027)
Office	

#### Assistant Professor Dr. Chayakrit Asvathitanont

Organization	Project
State Railway of Thailand	The study of Value Creation Development on Thailand Eastern Economic Corridor for Traffic Business Cluster, State Railway of Thailand
Office of The National Broadcasting and Telecommunications Commission	The monitoring and evaluation of important policies for spectrum allocation for public or citizens' benefits

#### Assistant Professor Dr. Chaiwat Oottamakorn

Organization	Project
Department of trade negotiatons	Consultant Project for Information Technology and Telecommunication at Department of Trade Negotiations
Dhanarak Asset Development Co., Ltd.	The design for Smart City master plan of Government Complex Zone C
Bureau of the Budget	Consultant Project for analyzing and designing New e-Budgeting system
Office of the National Digital Economy and Society Commission	Thailand Digital Outlook 3
Office of Permanent Secretary Ministry of Commerce	Security and Project management consultant for ministry of commence 2021

#### Assistant Professor Dr. Nopphon Tangjitprom

Organization	Project
Thai Media Fund	Develop Online Tools to be Used to Explore Issues Related to Media in Various Dimensions
Biodiversity-Based Economy Development office	Consulting for Review and Preparation of the 20-year/5-year Action Plans (2023-2027) of Biodiversity-Based Economy Development Office (Public Organization)

#### Assistant Professor Dr. Poomporn Thamsatitdej

Organization	Project
National Innovation Agency (Public Organization) (NIA)	The Development of National Innovation organization databases phase 1

#### Assistant Professor Dr. Wasinee Noonpakdee

Organization	Project
Office of The National	Hiring of a Consultant for Monitoring and Evaluation of the
Broadcasting and	NBTC's Performance and Administration of the Communication
Telecommunications	Line Organization and the Underground Communication Cable
Commission	System Installation

#### Assistant Professor Dr. Sarawut Ramjan

Organization	Project
Department of Health	Outsourcing services to analysis & design a platform of surveillance & health for reduce the risk and the health effects each age, families & sensitive groups
Airports of Thailand Public Co., Ltd.	Airports of Thailand Public Company Limited Innovation Master Plan 2021-2025

#### Assistant Professor Dr. Suwan Juntiwasarakij

Organization	Project
Department of Industrial Promotion	Potentialization of e-Commercial Competitiveness and Readiness: Surviving and Thriving on Online Marketing 2.0 amidst the COVID-19 pandemic with D-Prompt Strategies
Industrial Promotion Center Region 10	Promote and support the application of digital technology Activities to develop SMEs management potential with digital technology

#### Assistant Professor Dr. Anyanitha Distanont

Organization	Project
Utokapat Foundation under Royal Patronage of H.M. the King	Community Water Resource Management (CWRM) Monitoring and Evaluation Project 2021 (Southern Area)
Office of Small and Medium Enterprises Promotion	Increase the potential of doing business for small entrepreneurs : Activities to increase the potential of online entrepreneurs with Digital Marketing for fiscal year 2021

#### Dr. Manit Satitsamitpong

Organization	Project
Department of Industrial Promotion	Enhancing Products to Global Market Project

#### Dr. Ajchara Phu-ang

Organization	Project
Digital Economy Promotion Agency	Hands-on Data Science and Machine Learning

#### Raweewan Sap-in

Organization	Project
Thai Media Fund	Media Production for Early Childhood Phase 2

### Puey Ungphakorn School of Development Studies

#### Assistant Professor Weeraboon Wisartsakul

Organization	Project
Thai Health Promotion Foundation	The Evaluation of the project to enhance the model of community health to reduce the impact of alcohol and problems of family violence
National Innovation Agency (Public Organization) (NIA)	Honor the king's Legacy project is the competitive of social innovation business plan
Office of Social Enterprise Promotion	The Project of Strategic Development and Policy Formulation for National Social Enterprise Promotion Plan
National Health Security Office	The evaluation and implementation of the local government organizations Funds under support National Health Security Office (NHSO) project

#### Dr. Kanokwara Phuangprayong

Organization	Project
National Innovation Agency	Social Innovation Driving Unit Central Area Owner for Fiscal
(Public Organization) (NIA)	Year 2021

#### Dr. Kedkun Srakawee

Organization	Project
Designated Areas for	Social Impact Assessment (SIA) Consulting Project, the
Sustainable Tourism	development of community-based tourism Fiscal Year 2021 by
Administration	Designated Areas for Sustainable Tourism Administration
(Public Organization)	(Public Organization)

#### Dr. Sanit Noonin

Organization	Project
Department of Industrial Works	Promote Industrial Plant to Corporates Social Responsibility- Department of Industrial Work
	The Development of Eco Industrial Network (Eco Network)

#### Mr. Setthapoom Buathong

Organization	Project
Electricity Generating Authority of Thailand (EGAT)	The study in Social Impact Assessment (SIA) and Social Return on Investment (SROI) of CSR project of EGAT
Agricultural Research Development Agency (Public Organization) : ARDA	A consulting project to conduct an analysis of the social impact of training courses to enhance research skills

### Chulabhorn Internation College of Medicine

#### Dr. Chalirmporn Atasilp

Organization	Project
Health Systems Research	Pharmacogenetics of 5-Fluorouracil and clinical impact in
Institute	Thai colorectal cancer patients

### College of Interdisciplinary Studies

#### Professor Sakchai Lertpanichpun

Organization	Project
Office of the Permanent Secretary, Ministry of Justice	The Monitoring and Evaluate the Trainees in the Morale Project in Adopting Sufficiency Economy Philosophy in Prisons

#### Associate Professor Dr. Tatchalerm Sudhipongpracha

Organization	Project
Health Systems Research Institute	Policy Analysis and Policy Design for the Transfer of Subdistrict Health Promotion Hospital to Provincial Administrative Organizations (PAOs)
Thai Public Broadcasting Service	Analysis of the "Listen to the Voices of Thailand" by Thai PBS

#### Associate Professor Dr. Phakpoom Tippakoon

Organization	Project
Knowledge network institute of thailand	The project of research knowledge management for policy utilization under the high-quality society and security framework

#### Associate Professor Dr. Sustarum Thammaboosadee

Organization	Project
Knowledge network institute of thailand	The Enhance of Social Security Protection to Universal Social Security

#### Assistant Professor Dr. Wasit Limprasert

Organization	Project
The Fine Arts Department	Big Data Fine Art 3
Department of International Trade Promotion	Trade Analytics for SMEs
National Science and Technology Development Agency	Nectec Data Modeling

#### Pol.Maj. Dr. Chavanut Janekarn

Organization	Project
Asia Internet Coalition	Innovative Policy Approaches to Thailand's Digital Economy
Department of International Economic Affairs	The potential for international market expansion of Thai Halal Industry
AstraZenca (Thailand) Ltd.	The impact of COVID-19 on the Thai economy and the arrival of COVID-19 Vaccine
Knowledge network institute of thailand	The Exploration of Non-executable Properties in the Legal Execution Procedure for the Asset Management Development
Office of Justice Affairs	Crime Victimization Survey 2020

#### Dr. Thanyaporn Soontornthum

Organization	Project
Office of the Civil Service	A study to prepare proposals for evaluating the achievement
Commission (OCSC)	of ethical promotion strategy in government agencies

### **Drug Discovery and Development Center**

#### Dr. Sumet Kongkiatpaiboon

หน่วยงาน	ชื่อโครงการ			
Khaolaor Laboratories Co., Ltd.	Training the Basic Technique in Thin-Layer Chromatography for Herbal Quality Control			

### Sirindhorn International Institute of Technology

#### Associate Professor Dr. Bundit Limmeechokchai

Organization	Project
The United Nations  Development Programme  (UNDP) Thailand	National GHG Mitigation and Inventory Expert (Energy Sector)
Thailand Greenhouse Gas Management Organization (Public Organization)	Greenhouse Gas Reduction Potential under Thailand Energy Scenarios
	Development of GHG Inventory in the AFOLU sector and Mitigation Mechanism of ThaiLand
	Development of GHG Inventory in the AFOLU sector and Mitigation Mechanism of ThaiLand

#### Associate Professor Dr. Suthathip Suanmali

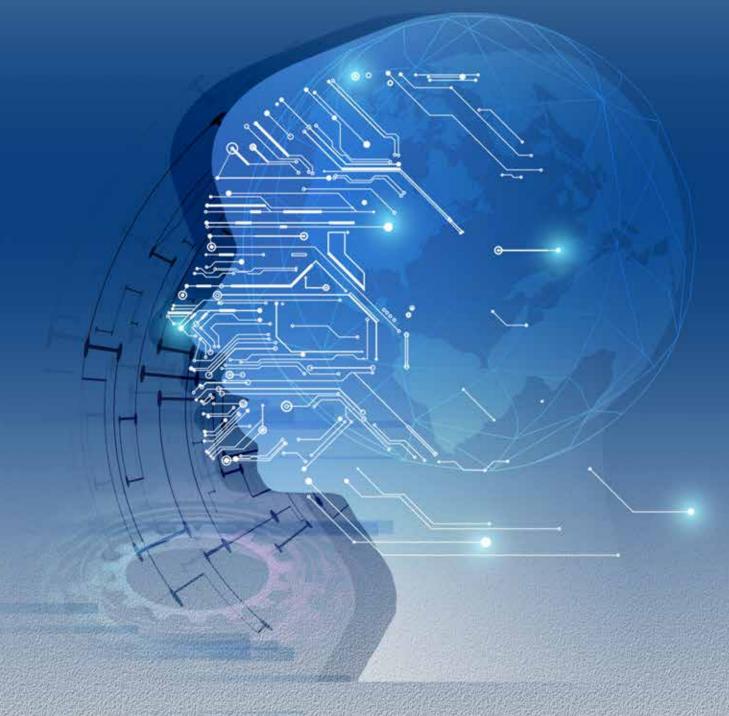
Organization	Project		
Industrial Estate Authority of Thailand	Water Supply Management Plan in EEC and its Business Opportunity		

#### Assistant Professor Dr. Teerayut Horanont

Organization	Project		
Hydro and Agro Informatics	Development of Information and Geospatial Database (GIS)		
Institute	System for Water Management		



# Independent Auditor's Report TU-RAC



### **Independent Auditor's Report**

#### To the Board of Director of Thammasat University Research and Consultancy Institute

#### **Opinion**

I have audited the accompanying financial statements of **Thammasat University Research and Consultancy Institute (TU-RAC)** which comprise the statement of financial position as at September 30, 2021 the related statement of revenues and expenditures and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

In my opinion, the aforementioned financial statements present fairly, in all material respects, the financial position of **Thammasat University Research and Consultancy Institute** as at September 30, 2021, and the revenues and expenditures for the year then ended in accordance with Financial Reporting Standards for Non-Publicly Accountable Entities.

#### **Basis for Opinion**

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of TU-RAC in accordance with the Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Thai Financial Reporting Standards for Non-Publicly Accountable Entities, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing TU-RAC's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the TU-RAC to cease operations, or has no realistic alternative but to do so.

#### Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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As part of an audit in accordance with Standards on Auditing, I exercise professional judgment and maintain professional skepticism throughout the audit. I also :

- Identify and assess the risks of material misstatement of the financial statements, whether due to
  fraud or error, design and perform audit procedures responsive to those risks, and obtain audit
  evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting
  a material misstatement resulting from fraud is higher than for one resulting from error, as fraud
  may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal
  control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures
  that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the
  effectiveness of TU-RAC's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on TU-RAC's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause TU-RAC to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the
  disclosures, and whether the financial statements represent the underlying transactions and events
  in a manner that achieves fair presentation.

I communicate with management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Panard Panmanee;

(Mrs. Panarat Panmanee)
Certified Public Accountant (Thailand)
Registration No. 2870

17 Soi 7 Seri 8,Suan Luang, Bangkok. October 22, 2021

## THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE STATEMENT OF FINANCIAL POSITION

#### AS AT SEPTEMBER 30, 2021

	Note	2021	2020
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	3	274,566,165.00	255,035,283.09
Temporary investment	4	6,465,563.60	9,109,191.38
Advance researcher		3,058,000.00	7,394,545.00
Accrued research receivable		378,261,035.25	272,481,853.26
Accrued fee research receivable		28,124,670.84	26,056,060.49
Retention receivable		8,775,500.68	7,167,504.85
Contract guarantee	5	923,420.00	351,000.00
Other current assets	6	865,983.84	797,968.98
TOTAL CURRENT ASSETS		701,040,339.21	578,393,407.05
NON-CURRENT ASSETS			
Deposit Pledged by Guarantee Obligation	7	5,273,048.94	2,576,128.94
TOTAL NON-CURRENT ASSETS		5,273,048.94	2,576,128.94
TOTAL ASSETS		706,313,388.15	580,969,535.99

## THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE STATEMENT OF FINANCIAL POSITION (Continued)

#### AS AT SEPTEMBER 30, 2020

	Note	2021	2020
LIABILITIES AND FUNDS			
CURRENT LIABILITIES			
Accrued research expenses		448,963,229.32	343,333,940.51
Accrued bonus		959,621.40	1,187,290.16
Other current liabilities	8	81,264,908.02	55,842,854.58
TOTAL CURRENT LIABILITIES		531,187,758.74	400,364,085.25
NON-CURRENT LIABILITIES			
Other non-current liabilities	9	i <del>-</del>	91,767.00
TOTAL NON-CURRENT LIABILITIES		-	91,767.00
TOTAL LIABILITIES		531,187,758.74	400,455,852.25
FUND			
Capital fund	10	1,115,070.00	1,115,070.00
Accumulated revenues over expenses	11	174,010,559.41	179,398,613.74
TOTAL FUND		175,125,629.41	180,513,683.74
TOTAL LIABILITIES AND FUND		706,313,388.15	580,969,535.99

## THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE STATEMENT OF REVENUES AND EXPENSES

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

	Note	2021	2020
REVENUES			
Research income		1,312,000,649.49	1,203,065,857.86
Research fee income		109,176,788.20	99,982,935.20
Other income		606,311.07	908,141.40
TOTAL REVENUES		1,421,783,748.76	1,303,956,934.46
EXPENSES			
Research payment		1,312,000,649.49	1,203,065,857.86
Operating expenses	12	100,771,805.64	106,660,539.39
TOTAL EXPENSES		1,412,772,455.13	1,309,726,397.25
NET REVENUES OVER EXPENSES		9,011,293.63	(5,769,462.79)

## THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE CASH FLOW STATEMENTS

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

2021	2020
9,011,293.63	(5,769,462.79)
4,336,545.00	(4,106,690.00)
(105,779,181.99)	267,084,577.72
(2,068,610.35)	19,984,460.38
(1,607,995.83)	3,356,316.02
(572,420.00)	644,740.00
(68,014.86)	(244,793.58)
(53,292.22)	(75,506.17)
105,629,288.81	(237,301,685.98)
(227,668.76)	(12,231.07)
25,422,053.44	16,215,701.48
(91,767.00)	91,767.00
33,930,229.87	59,867,193.01
(14,399,347.96)	(8,434,889.99)
19,530,881.91	51,432,303.02
255,035,283.09	203,602,980.07
274,566,165.00	255,035,283.09
	9,011,293.63  4,336,545.00 (105,779,181.99) (2,068,610.35) (1,607,995.83) (572,420.00) (68,014.86) (53,292.22) 105,629,288.81 (227,668.76) 25,422,053.44 (91,767.00) 33,930,229.87 (14,399,347.96) 19,530,881.91 255,035,283.09

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 1 GENERAL INFORMATION

The TU-RAC capital funds consists of two sourced: TU-RAC sponsor and Research fund. The funds, include its interest, are generally used for all the institute's purposes in order to accomplish the TU-RAC'S mission.

#### 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### 2.1 The Basis of Financial Statement Preparation

- In order to prepare the financial statements to comply with generally accepted accounting standards, The TU-RAC Institute's management had to make some estimated and suppositions which may have an effect on the amount shown for revenues, expenses, assets and liabilities and also on the disclosures concerning assets and contingent liabilities, therefore the actual result may differ from the estimated amount.
- The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.
- For the convenience of the user, an English translation of the financial statements has been prepared from the statutory financial statements that are issued in Thai.

#### 2.2 Revenue and Expenses

Revenues and expenses are recognized on accrual basis.

#### 2.3 Cash and Cash equivalent items

Cash and cash equivalent items include bank deposit in type of saving, current and not exceeding three-month fixed deposit with no guarantee obligation.

#### 2.4 A provision of liabilities

The TU-RAC Institute recognized in the balance sheet when The TU-RAC Institute has a present legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and where appropriate, the risks specific to the liability

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### **3 CASH AND CASH EQUIVALENTS**

(Unit: Baht)

	2021	2020
Petty cash	2,264.00	1,698.00
Bank Deposit		
Saving Account	274,563,901.00	255,033,585.09
Total	274,566,165.00	255,035,283.09

#### **4 TEMPORARY INVESTMENT**

(Unit: Baht)

	2021	2020
Fix Deposit 12 month TMB bank	6,465,563.60	9,109,191.38
Total	6,465,563.60	9,109,191.38

#### **5 CONTRACT GUARANTEE**

As of September 30, 2021 and 2020 The guarantee amount 923,420.00 Baht and 351,000.00 Baht as guarantee. The normal practice of the TU-RAC as follow:

	2021	2020
5.1 Research project of State Railway of Thailand	158,500.00	158,500.00
5.2 Research project of National Health Security Office	-	170,000.00
5.3 Research project of Department of Military Affairs	-	22,500.00
5.4 Research project of thoracic institute	14,000.00	-
5.5 Research project of Department of Water Resources	83,500.00	-
5.6 Research project of Pattaya City	293,420.00	-
5.7 Research project of Songkhla Provincial Administrative Organization	374,000.00	-
Total	923,420.00	351,000.00

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### **6 OTHER CURRENT ASSETS**

(Unit: Baht)

		2021	2020
6.1	Advance	75,953.67	35,115.98
6.2	Office material	371,711.63	274,982.71
6.3	Keepsake	287,351.77	351,775.80
6.4	Accrued interest income	75,503.49	136,094.49
6.5	Account receivable-ASS-RAC Fund	55,463.28	_
	Total	865,983.84	797,968.98

#### 7 DEPOSIT PLEDGED BY GUARANTEE OBLIGATION

As of September 30, 2021 and 2020 The TU-RAC Institute had Fix deposit amount 5,273,048.94 Baht and 2,576,128.94 Baht with in TMB bank public company limited. Past of these account be the pledges for bank guarantee which issued by the TMB bank related with normal normal business obligation as fallow:

	2021	2020
7.1 L/G Bureau of Community Industries Development	35,800.00	35,850.00
7.2 L/G Marine Department	3,780,500.00	1,128,530.00
7.3 L/G Metropolitan Rapid Transit Authority (MRTA)	1,281,800.00	1,281,800.00
7.4 L/G Bangkok Metropolis	129,948.94	129,948.94
7.5 L/G Moral Center (Public Organization)	45,000.00	-
Total	5,273,048.94	2,576,128.94

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### **8 OTHER CURRENT LIABILITIES**

(Unit: Baht)

		2021	2020
8.1 Accrued Audit fee		113,000.00	88,000.00
8.2 Accrued transportation ex	penses	170,555.00	69,712.00
8.3 Accrued fee payment		3,292,951.71	2,845,427.82
8.4 Accrued hire expenses		30,000.00	-
8.5 Accrued research text		1,694,395.00	1,909,425.00
8.6 Accrued TU Subsidy		75,945,896.17	50,897,289.76
8.7 Other expenses		18,110.14	33,000.00
Total		81,264,908.02	55,842,854.58

#### 9 OTHER NON CURRENT LIABILITIES

(Unit: Baht)

	2021	2020
Trade Payable-Asset Compensation Fund	-	91,767.00
Total	-	91,767.00

#### 10 CAPITAL FUNDS

(Unit : Baht)

		2021	2020
10.1	Fund from sponsored by TU	100,000.00	100,000.00
10.2	Fund from research fund	1,015,070.00	1,015,070.00
	Total	1,115,070.00	1,115,070.00

#### 11 ACCUMULATED REVENUES OVER EXPENSES

	2021	2020
Beginning accumulated revenues over expenses	179,398,613.74	193,602,966.52
Add Adjustment last year	(14,399,347.96)	(8,434,889.99)
	164,999,265.78	181,593,538.42
Add Net revenues over expenses	9,011,293.63	(5,769,462.79)
Ending accumulated revenues over expenses	174,010,559.41	179,398,613.74

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 12 OPERATING EXPENSES

		2021	2020
12.1	Salary expenses	7,640,128.34	6,993,891.00
12.2	Adminsistrative for director	560,000.00	600,000.00
12.3	Position allowance	296,000.00	276,000.00
12.4	Audit fee	113,000.00	88,000.00
12.5	Bonus for director	749,200.00	757,200.00
12.6	Pre-research proposal expenses	19,386.00	6,476.00
12.7	Other charge expenses	146,639.00	221,195.63
12.8	Staff seminar and training expenses	160,398.00	94,301.00
12.9	Welfares	335,853.46	358,122.20
12.10	TU Subsidy	76,548,606.41	77,355,207.01
12.11	Souvenir expenses	64,424.03	89,807.64
12.12	Meeting expenses	173,800.00	156,400.00
12.13	Hire expenses	148,400.00	244,253.33
12.14	TU-RAC seminar expenses	1,100.00	2,050.00
12.15	Annual report fee	104,510.00	220,070.00
12.16	Bonus expenses	2,656,303.00	2,084,816.50
12.17	ACF sponsor	5,005,800.00	9,968,448.76
12.18	Provident fund Susidy	4,007,086.23	4,724,566.88
12.19	Office supplies expenses	334,634.66	225,092.20
12.20	Utilities expenses	96,820.99	70,075.07
12.21	Transportation expenses	1,276,581.40	1,078,353.49
12.22	Business travelling oversea	14,875.70	439,414.80
12.23	Researcher's day expenses	-	234,150.00
12.24	Cleaning expenses	160,695.42	163,543.33
12.25	Other expenses	157,563.00	209,104.55
	Total	100,771,805.64	106,660,539.39



Independent
Auditor's Report
(Asset Compensation Fund of TU-RAC)



### **Independent Auditor's Report**

To the Board of Director of Asset Compensation Fund of Thammasat University Research and Consultancy Institute

#### **Opinion**

I have audited the accompanying financial statements of Asset Compensation Fund of Thammasat University Research and Consultancy Institute (ASS-RAC Fund) which comprise the statement of financial position as at September 30, 2021 the related statement of revenues and expenditures and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

In my opinion, the aforementioned financial statements present fairly, in all material respects, the financial position of **Asset Compensation Fund of Thammasat University Research and Consultancy Institute** as at September 30, 2021, and the revenues and expenditures for the year then ended in accordance with Financial Reporting Standards for Non-Publicly Accountable Entities.

#### **Basis for Opinion**

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the ASS-RAC Fund in accordance with the Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Thai Financial Reporting Standards for Non-Publicly Accountable Entities, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the ASS-RAC Fund's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the ASS-RAC Fund to cease operations, or has no realistic alternative but to do so.

#### Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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As part of an audit in accordance with Standards on Auditing, I exercise professional judgment and maintain professional skepticism throughout the audit. I also :

- Identify and assess the risks of material misstatement of the financial statements, whether due to
  fraud or error, design and perform audit procedures responsive to those risks, and obtain audit
  evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting
  a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may
  involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures
  that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the
  effectiveness of the ASS-RAC Fund's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ASS-RAC Fund's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the ASS-RAC Fund to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

(Mrs. Panarat Panmanee)

Certified Public Accountant (Thailand)

Panarol Panmanee:

Registration No. 2870

17 Soi 7 Seri 8, Suan Luang, Bangkok.

October 22, 2021

# ASSET COMPENSATION FUND OF THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE STATEMENT OF FINANCIAL POSITION

#### AS AT SEPTEMBER 30, 2021

	Note	2021	2020
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	3	27,147,152.51	28,133,445.14
Other current asset	4	3,457.79	3,708.89
<b>Total Current Assets</b>		27,150,610.30	28,137,154.03
NON-CURRENT ASSETS			
Building improvement and equipment-net	5	12,350,343.44	8,585,658.39
Other non-current asset	6	-	91,767.00
<b>Total Non-Current Assets</b>		12,350,343.44	8,677,425.39
TOTAL ASSETS		39,500,953.74	36,814,579.42

#### STATEMENT OF FINANCIAL POSITION (Continued)

AS AT SEPTEMBER 30, 2021

Note	2021	2020
7	55,463.28	_
	55,463.28	-
8	1,017,097.10	119,084.10
	1,017,097.10	119,084.10
	1,072,560.38	119,084.10
	1,021,701.88	1,021,701.88
	757,260.46	757,260.46
9	36,649,431.02	34,916,532.98
	38,428,393.36	36,695,495.32
	39,500,953.74	36,814,579.42
	7	7 55,463.28 55,463.28 8 1,017,097.10 1,017,097.10 1,072,560.38 1,021,701.88 757,260.46 9 36,649,431.02 38,428,393.36

# ASSET COMPENSATION FUND OF THAMMASAT UNIVERSITY RESEARCH AND CONSULTANCY INSTITUTE STATEMENTS OF REVENUES AND EXPENSES

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

	Note	2021	2020
REVENUES			
TU-RAC Subsidy		5,005,800.00	9,968,448.76
Other income		14,360.57	36,545.11
Total revenues		5,020,160.57	10,004,993.87
EXPENSES			
Operating expenses	10	3,287,262.53	1,587,418.84
Total expenses		3,287,262.53	1,587,418.84
NET REVENUES OVER EXPENSES		1,732,898.04	8,417,575.03

#### **CASH FLOWS STATEMENTS**

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

(Unit: Baht)

	2021	2020
Cash Flows From Operating Activities		
Net revenues over expenses	1,732,898.04	8,417,575.03
Adjustment cash received (used) from operating activities		
Depreciation-building	65,894.52	65,894.52
Depreciation-equipment	2,712,849.91	1,241,525.40
Depreciation-office equipment	5,524.14	7,958.59
(Profit) & loss from sale assets	1,808.38	(4,957.00)
(Increase) Decrease other current asset	251.10	(3,708.89)
(Increase) Decrease other non-current asset	91,767.00	(91,767.00)
Increase (Decrease) current liabilities	55,463.28	(1,088,642.00)
Increase (Decrease) Performance insurance	898,013.00	119,084.10
Net cash from operating activities	5,564,469.37	8,662,962.75
Cash Flows From Investing Activities		
Purchase office supplies	(5,782,612.00)	(106,747.96)
(Increase) Decrease work in process	(768,150.00)	(3,838,043.16)
(Purchase) sale office equipment	-	4,990.00
Net cash used in investing activities	(6,550,762.00)	(3,939,801.12)
Adjustment accumulated revenued over expenses	-	98,990.00
Net Cash and cash equivalents Increase (Decrease)	(986,292.63)	4,822,151.63
Cash and cash equivalents At The Beginning Of The Period	28,133,445.14	23,311,293.51
Cash and cash equivalents At The Ending Of The Period	27,147,152.51	28,133,445.14

The accompanying notes are an integral part of these financial statements.

#### NOTES TO FINANCIAL STATEMENTS

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 1 GENERAL INFORMATION

The ACF TU-RAC capital fund, have purpose to maintenance, renovate or repair the ACF TU-RAC's building and equipments. The funds, include its interest, are generally used for all the Fund's purposes in order to accomplish the The ACF TU-RAC'S mission.

#### 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICES

- 2.1 The Basis of Financial Statement Preparation
  - In order to prepare the financial statements to comply with generally accepted accounting standards, The ACF TU-RAC capital fund's management had to make some estimated and suppositions which may have an effect on the amount shown for revenues, expenses, assets and liabilities and also on the disclosures concerning assets and contingent liabilities, therefore the actual result may differ from the estimated amount.
  - The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.
  - For the convenience of the user, an English translation of the financial statements has been prepared from the statutory financial statements that are issued in Thai.

#### 2.2 Revenue and Expenses

Revenue and expenses are recogized on accrual basis.

#### 2.3 Cash and Cash equivalent items

Cash and cash equivalent items include bank deposit in type of saving, current and not exceeding three-month fixed deposit with no guarantee obligation.

#### 2.4 Building Improvement and Equipment and Depreciation

 Building Improvement, Equipments are record at cost on date the transaction occur after deducting accumulated depreciation. Deprecations are calculated on a straight line method based on their approximate useful life as follows:

Building Improvement 10 Year
Office Equipment 5 Year
Equipment 5 Year

- Gains and losses on disposals are determined by comparing proceeds with the carrying amount and are included in operating profit.
- Expenditure incurred in addition, renewal or betterment, which results in a substantial increase in an asset's current replacement value, is capitalized. Repair and maintenance costs are recognized as an expense when incurred. Expenditure incurred in addition, renewal or betterment, which results in a substantial increase in an asset's current replacement value, is capitalized. Repair and maintenance costs are recognized as an expense when incurred.

#### **NOTES TO FINANCIAL STATEMENTS (Continued)**

#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 2.5 A provision of liabilities

The ACF TU-RAC capital fund recognized when The ACF TU-RAC capital fund have a present obligation as a result of a past event, it is probable that on outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

#### **3 CASH AND CASH EQUIVALENT ITEMS**

(Unit : Baht)

Bank Deposit

Saving Account

Total

2021	2020
27,147,152.51	28,133,445.14
27,147,152.51	28,133,445.14

#### **4 OTHER CURRENT ASSET**

(Unit: Baht)

Accrued interest income

**Total** 

2021	2020		
3,457.79	3,708.89		
3,457.79	3,708.89		

#### NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 5 BUILDING IMPROVEMENT AND EQUIPMENT-NET

	As at 1 Oct 2020	Additions/ Transfer in	Disposals/ Transfer Out	As at 30 Sep 2021
Cost				
Building Improvement	1,765,249.06	-	5,067.11	1,760,181.95
Office Equipment	531,803.11	-	16,387.90	515,415.21
Equipment	9,479,203.90	10,126,186.00	125,033.68	19,480,356.22
Work in process	4,343,574.00	768,150.00	4,343,574.00	768,150.00
Total	16,119,830.07	10,894,336.00	4,490,062.69	22,524,103.38
Accumulated Depreciation				
Building Improvement	(1,555,645.49)	(65,894.52)	(5,066.11)	(1,616,473.90)
Office Equipment	(517,596.49)	(5,524.14)	(16,375.90)	(506,744.73)
Equipment	(5,460,929.70)	(2,712,849.91)	(123,238.30)	(8,050,541.31)
Total	(7,534,171.68)	(2,784,268.57)	(144,680.31)	(10,173,759.94)
Net	8,585,658.39			12,350,343.44
Depreciation for the Year Ending 30 September				
2021	2021 2,784,268.57			
2020				1,315,378.51

#### **6 OTHER NON-CURRENT ASSET**

(Unit : Baht)

 Z021
 Z020

 Account reeivable-TU-RAC
 91,767.00

 Total
 91,767.00

#### NOTES TO FINANCIAL STATEMENTS (Continued)

FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 7 TRADE AND OTHER ACCOUNTS PAYABLE

(Unit: Baht)

Account payable-TU-RAC

Total

2021	2020
55,463.28	-
55,463.28	-

#### **8 PERFORMANCE INSURANCE**

(Unit: Baht)

Performance insurance

**Total** 

2021	2020		
1,017,097.10	119,084.10		
1,017,097.10	119,084.10		

#### 9 ACCUMULATED REVENUES OVER EXPENSES

	2021	2020
Beginning accumulated revenued over expense	34,916,532.98	26,319,172.95
Add Adjustment last year	-	179,785.00
	34,916,532.98	26,498,957.95
Add Net revenues over expenses	1,732,898.04	8,417,575.03
Ending accumulated revenued over expenses	36,649,431.02	34,916,532.98

#### **NOTES TO FINANCIAL STATEMENTS (Continued)**

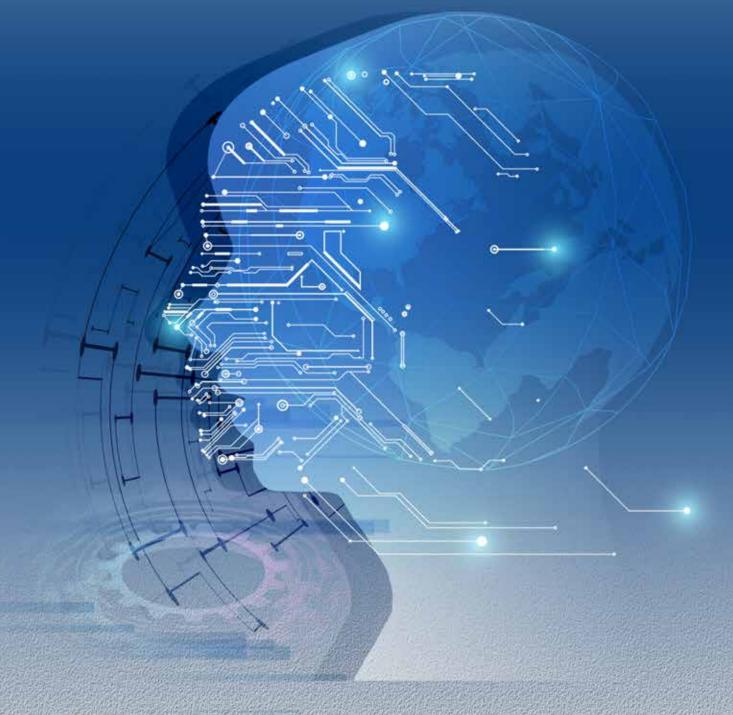
#### FOR THE YEAR ENDED SEPTEMBER 30, 2021

#### 10 OPERATING EXPENSES

		2021	2020
10.1	Depreciation-building Improvement	65,894.52	65,894.52
10.2	Depreciation-office equipment	5,524.14	7,958.59
10.3	Depreciation-equipment	2,712,849.91	1,241,525.40
10.4	Equipment maintenance expenses	50,880.00	28,390.00
10.5	Maintenance System expenses	450,305.58	243,618.30
10.6	Loss from disposal of assets	1,808.38	32.00
10.7	Other expenses	-	0.03
	Total	3,287,262.53	1,587,418.84



### Abstract -



#### Legal

#### King Prajadhipok's Institute

**Year** : 2020

Title : Analyze the draft of the annual expenditure budget bill for the year 2021

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Pawin Siriprapanukul

#### Abstract:

Long-term goals of conducting fiscal policy in Thailand have not changed. The goals are consistent with the National Strategy 2018-2037 of the country, which cover ensuring national security and public contentment, enhancing national multidimensional competitiveness, developing and strengthening human capital, promoting social cohesion and equity, achieving eco-friendly and sustainable development and growth, and improving and rebalancing the public sector. However, the COVID-19 and drought crises in 2020 present significant impacts to the national budget for the fiscal year 2021.

This report estimates that the Thai government will be in deficit of THB 653,489 million in fiscal year 2020 and of THB 690,967 million in fiscal year 2021. Coupled with the emergency decree authorizing the government to borrow up to THB 1.0 trillion, the public debt to GDP ratio is estimated to be at 60.1 percent at the end of fiscal year 2021. The ratio breaches the current ceiling set by the Monetary and Fiscal Policy Committee. Moreover, the report projects that the government will be in deficit throughout the fiscal years 2021-2028, which will raise the public debt to GDP ratio to 77.0 percent in 2028.

The higher level of public debt, especially in part of the central government debt, will constrain the national budget allocation in the future. In fiscal year 2028, the budget for principal repayments and interest payments is estimated to occupy up to 11.6 percent of the total amount of the budget. Moreover, 9.7 percent of the total budget would be allocated to the Local Administrative Organizations, leaving the amount left to manage with the long-term goals.

However, above all the current focus should be on tackling the COVID-19 crisis. Under the assumption that the government can contain the disease within the first half of 2020, the current amount of public resources will be enough. This report recommends that the government should (1) set the national budget for fiscal year 2021 at THB 3.3 trillion (2) keep the capital expenditures to be over 20 percent of the total budget (3) upgrade the public health capacity at least in the short-run (1 year) (4) keep the current alleviation measures in place (5) start planning for the stimulus packages to be implemented in the near future.

## Legal

### **Department of Business Development**

**Year** : 2020

Title : Leverage the management standard of wholesale and retail stores to gain competitiveness in 2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Professor Witawat Rungruangphon

#### Abstract:

Wholesale and retail business plays a vital role in the Thai economy. This sector ranks as one of the top 3 in Thailand with the highest number of SMEs. It is also a crucial tool for the government to support low-income people. These days, it is found that traditional wholesalers and retailers are facing many difficulties such as intense competition from convenience stores and modern retailers and a behavior shift in which buyers are gradually turning to online channels. These affect local businesses that have limited knowledge of struggling in an immerse risk of competitive disadvantage and may collapse. The Department of Business Development, therefore, had organized an activity named "Leverage the management standard of wholesale and retail stores to gain competitiveness" under the project "Strengthening the potential of Thai wholesalers and retailers to drive the regional economies." The activity

aimed to enhance the management standard in the wholesale and retail business to meet the criteria of DBD and led to a sustainable foundation economy as stated in the 2<sup>nd</sup> strategy of the Ministry of Commerce, which focuses on strengthening the foundation economy, and the 3<sup>rd</sup> strategy of the Department of Business Development, which emphasizes on initiating the entrepreneurial society for Thai SMEs.

Thammasat University Research and Consultancy Institute was assigned to carry out the activity "Leverage the management standard of wholesale and retail stores to gain competitiveness" in 2020. In this pursuit, twenty-six wholesalers and retailers from fourteen provinces in all regions have developed to meet the criteria, three of them have been selected as the best practice and the other three as high potential.

## Legal

## Thailand Institute of Justice (Public Organization)

**Year** : 2020

Title : Classifying Thai criminal laws to harmonize with the International Classification of Crime for Statistical

Purposes version 1.0 Phase 4

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Professor Narong Jaiharn,

Associate Professor Dr. Pokpong Srisanit, Assistant Professor Dr. Ronnakorn Bunmee

#### Abstract:

This Research project has two aims: firstly, to classification Thai criminal offences in Penal Code and others Acts harmonized to section 10 acts against the natural environmental and secondly, to explore an efficacy guidelines and the way to solve any problems in classification on left of others section of ICCS.

Methodology: the research has done in terms of qualitative research by (1) reviewing documentary: textbooks, Thai Supreme court decisions and legal information in website relating to the classification of offences under The International Classification of Crime for Statistical Purposes (ICCS) version 1.0. In addition, explores meaning and element of crimes in Thai and Foreign Penal Laws. (2) to classify offences in Thai penal laws which relate to sections 10 of ICCS and presenting to an experts seminar and get their comments and recommends to improve the final report of this research.

#### Research outcomes:

- 1. Section 10 can be fit under Penal Code and others Acts which had been enacted for several laws both offenses against natural resources and environmental. However, Thai law has not yet promulgated special offenses involving the movement or damping of wastes across national borders.
- 2. As for part of natural resources in section 10, most of Thai laws have been fit with ICCS section 10. However, Thai laws do not separate offenses against air pollution from noise pollutions as in ICCS. Moreover, Thai laws have no provision on dumping waste across national borders.
- 3. Section 10 can be relation to other section 06 08 09 but these should be fit in section 10 if the acts aim to focus to against natural environmental.

**Keywords**: The International Classification of Crime for Statistical Purposes, section 10 offenses against natural resources, offences against pollutions

## Legal

#### Office of the Constitutional court

**Year** : 2020

Title : The Constitutional Court Trial Under Section 144 of the Constitution of the Kingdom of Thailand

B.E. 2560 (2017)

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Supreeya Kaewla-iad

#### Abstract:

Section 144 of the Constitution of the Kingdom of Thailand, B.E. 2560 (2017) prohibits members of the House of Representative to motion to alter or add item or amount in an item to the appropriations bill. It also forbids any proposal, submission of a motion, or commission of any act, which may result in a direct or indirect involvement by members of the House of Representatives, senators or members of the ad hoc committee on studying appropriations bill in the use of the public expenditure. Section 144 further specifies sanctions against those who have violated the law and remedies for the State. The Constitutional Court has a competent jurisdiction to rule on these foregoing matters. This provision raises critical legal concerns, notably the interpretation of the phrase "commission of any act, which may result in a direct or indirect involvement by members of the House of Representatives, senators or members of the committee in the use of public expenditures". It also leads to problems in the application of sanctions and the remedies, as well as the competence of the Constitutional Court over cases where the Nation Anti-Corruption Commission submits its opinion to the Court. This research, as a result, studies the general principles of public law, specific principles of public finance law and relevant laws of foreign countries, namely the United Kingdom, France, Tunisia and Portugal.

According to the study, none of the selected foreign laws establishes the prohibition of any proposal, submission of a motion, or commission of any act, which may result in a direct or indirect involvement by members of the House of Representatives, senators or members of the ad hoc committee on studying appropriations bill in the use of public expenditures, including sanctions and remedial measures. However, based on the general principles of public law and specific principle of public finance law, the research team proposes that the interpretation of any commission of any act, which may result in a direct or indirect involvement by members of the House of Representatives, senators or members of the ad hoc committee on studying appropriations bill in the use of public expenditures, must adhere to the principle of separation of powers and the principle of conflict of interest. To avoid undue interference with an individual's rights and liberties, the sanctions and the remedial measures must be strictly applied. Moreover, due to an incoherence of the provision under section 144, the Constitutional Court cannot adjudicate the case of a motion to alter or add item or amount in an item to the appropriations bill, which is brought to the Court by the National Anti-Corruption Commission. This research, therefore, recommends amending section 144 of the present Constitution by prescribing the same principle as those enshrined in section 180 of the Constitution of the Kingdom of Thailand, B.E. 2540 (1997) and section 168 the Constitution of the Kingdom of Thailand, B.E. 2550 (2007), which is seen as the most suitable solution.

#### Office of Justice Affairs

**Year** : 2020

Title : The Development of the Pre-Release Programs

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Pongkrit Mongkolsink

#### Abstract:

#### The Development of Pre-Release Programs

The criminal justice system is inundated with drug offenders, and this has entangled the justice administration of the country throughout the system. Prisons are especially overburdened by the problem of prison overcrowding, but prisons cannot keep all inmates incarcerated for life. There must come a day when the inmates are released back into society. A majority of these inmates are drug offenders, and they amount to over 70 percent of the correctional population. The recidivism rate for drug offenders is the highest at 62.64 percent and 73.13 percent of those released from prisons and juvenile observation and protection centers, respectively. The high recidivism rate reflects that despite the continuous efforts of associated institutions to develop the pre-release program, there remains limitations, problems, and obstacles with the tools that prevents its success.

Therefore, research to develop tools that addresses the remaining limitations, problems, and obstacles will aid in the successful preparation of prisoners for release and prevent repeat offense. This will benefit prisons by easing the load on management. It will benefit inmates in terms of both their adjustment while in prison serving their sentence and their adjustment upon their re-entry to society after their sentence. It will also benefit the community and the society as a whole by returning rehabilitated individuals and preventing repeat offense.

The objectives of this research are to survey the pre-release program that the Department of Corrections is currently utilizing and study its limitations, problems, and obstacles in order to design and develop the pre-release program that enables prisoners to readjust to their new lives in society upon release and prevents recidivism. This research uses qualitative methods including interviews and focus groups. The target population consists of 689 people including administrators, practitioners, inmates, and entrepreneurs.

The study finds that there are many problems and obstacles affecting the success of the program at the policy level, the administration level, and stemming from the program itself. Therefore, the development of the pre-release program has been designed by giving considerations to the problems and obstacles found, theories, and exemplary pre-release programs from the United States of America and Singapore. The new program is designed as a series of programs, and each level has multiple programs ordered by level of difficulty. In addition, the programs are organized in 3 phases. They are modular, systematic, and incorporates a half-way house to seamlessly link the in care phase with the aftercare phase. With this design, the new pre-release program is comprehensive, enables systematic implementation of training and programs, and increases support for the aftercare phase. As a result, the new program provides many benefits including those presented below.

The benefits of this research includes

- Separating the correction program from the program for punishment. This prevents confusion between the two.
- Reducing the disjointedness of programs because it eliminates overlap in content that is often repeated in basic programs.
- Organizing programs by level of difficulty making low-level programs theory-based and high-level programs practice-based. This reduces the redundancy of theory-based training in programs.
- Emphasizing a design for the problems and needs of the inmates above a design based on the experience and expertise of administrators

- Varying the number of programs according to the number of problems and needs of the prisoners rather than the limitations of the prison
- Being better able to limit the number of inmates in training programs because there are several steps and levels available
  - · Seamless through care
- Reducing necessary paperwork for the release of inmates in special cases
- Motivating correctional officers to apply voluntarily and motivates inmates to be interested in participating because it creates real value in addition to reducing their sentence
- Being able to monitor and support inmates after unconditional release

### Health Systems Research Institute

**Year** : 2020

Title : The efficient procurement and distribution processes for Central Medicines Procurement in UC Scheme

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Pakorn Sermsuk

#### Abstract:

Central Medicines Procurement for National Health Insurance System began in 2008 after the National Health Security Office (NHSO) has set reimbursement for medical used in public hospitals. Starting from reimburse for medication that is used to treat diseases with high treatment costs (through the High-Cost Disease Fund), disease prevention vaccine (through the EPI Vaccine Fund which is in the normal budget) and medication for AIDS patients (through the AIDS fund) and others, currently NHSO has gone through the pooled-procurement process and distribution of these pharmaceuticals from central inventory to all public hospital all over the country.

Government audit agency. Few years ago, a sudden change in purchasing unit by take into consideration of auditor recommendation that the purchasing unit should be independent from funds holder to comply with good governance practice. The medicine procurement committee has established of a group of public hospitals, a public hospital network (NPHs), as a temporary purchasing unit and under the process of determining what is the appropriate structure and characteristics of purchasing unit should be and how the technology could help solving this issue.

**Demand forecast.** Under the overall procurement and distribution cycle, pooled-procurement supply chain processes, NHSO is responsible for preparing procurement plans by using last year medicine consumed as the baseline to forecast items and quantities to be purchased.

**Purchasing Unit.** Purchasing Unit is responsible for the procurement processes biding, tendering, or buying, etc. in accordance with government procurement policy and then the Pharmaceutical Organization is responsible for managing and monitoring central stock as well as manage to deliver according to the hospital order.

**Public Hospital.** Under this scheme, each public hospital must manage its own medical stock and under this policy, they are not allowed using government budget to buy such the items that that policy restricted to be in pooled purchase.

Replenishment and drug quality are issues within the supply chain processes. Tracking medicines lot number those are delivered to hospitals all over the country is needed in the case that any lots found expired or unmet quality, it must be replenished, return, or claim to the supplier who sell them. Central Procurement Monitoring System-CPMS will be implemented to track procurement planning, purchasing and distribution of medicines to the users (public hospital), but still one last mile problem.

This research emphasizes on the studies and analysis of procurement and distribution processes for Central Medicines Procurement in UC Scheme to seek for adjustment for concrete execution, and design and develop pilot system to monitor the medicine procurement and distribution. This includes studying and suggesting the integration of IT system development and procedure that

are relevant to procurement and distribution for Central Medicines Procurement. The study results are as followed:

Study results in guidelines for process adjustment: According to the comparison study between the process in nowadays and before 2017 fiscal year, the procurement and processes for Central Medicines Procurement are being under control of the fiscal year cycle, and sourcing in accordance with the Government Procurement Act in 2017. Some medical and supply lists have an inconsistent condition in supply chain that make them inconsistent with their operations, resulting in congestion. Take an example, as the temporarily drug shortage occurs, the demands in supplies from the market or the seller's drug storage will augment. Along with the impact on the balance of the fiscal year procurement, and demand planning and the drug storage administration of the next cycle.

Analytical results in the gap between procurement and distribution processes for Central Medicines Procurement in UC Scheme: The supply chain downstream is an untraceable system. It begins as hospital receive medical supplies all the way to dispensing medicines to the patient. Due to the Central Medicines Procurement in special project is one of the tremendous supply chains, each hospital has a distinguish drug management system. Despite the medical records are individually recorded, tracking the source of the medicine dispensation are inaccurate, which highly affected the qualitative management, for instance, drug lot tracking, expiration date on borrowing, returning, and changing medicine. Moreover, the drug codes that do not meet the similar standards and agreements are not contributed in every process in managing and monitoring level.

Analytical results in the comparison of a general practice and IT potentiality that needs to be developed: When contrasting the IT potentiality of an organization in the procurement and distribution of medicine, the are 3 major agencies are all possessed the nation-leading in IT potentiality. They can analyze, adapt, and develop IT system to accommodate the new arisen demand on time. Whenever the problem in medicine procurement and distribution processes have been discussed, IT system is the essential drive to resolve all the conflicts. Despite its explicit role and a lot of co-operated agencies, it was discovered an

ambiguous conclusion on the selection of the IT system's owner. This will affect the sustainability of system along with the usage expansion, development, and maintenance.

Analytical results in design and develop pilot system to monitor the medicine procurement and distribution: Research team have developed the sample screen of pilot system and represented the original screen to 3 dominant agencies, which are consisted of NHSO as a planner in medicine demand forecasting, Rajavithi Hospital as a procurement agency, and GPO as a seller agency. The design for 3 interrelated agencies can monitor the planning and procuring status, and also check the report overview. It has been recognized as a highly benefit function especially in cutting the delayed procedure from communication and confidential exchange of information with each other. Nevertheless, the pilot system has not been assigned to any agencies, it was temporarily installed at NHSO server, which situated in NGO office.

Policy Recommendation: The major problem is lack of host to implement IT, and information for management and monitoring. Hence, determining the stakeholder in different level of IT system explicitly will generate confidence for examination and evaluation of the medicine procurement and distribution cycle. Along with expanding the results of pilot system and conducting as mechanism to drive and administrate the cycle of procurement and distribution processes for Central Medicines Procurement in UC Scheme. It is done by regulate the approach and method in directing information in every single process in order to ensure that exchanged data are precise, trustworthy, compliant with the law, regulations, and notices that would shorten and smoothen the procedure, simultaneously.

Additional research topics: 1) Applied Global standard Pharmaceutical Product Code: GS1 Automatic Identification and Data Capture Standards in Healthcare.

2) Blockchain-based solution: A new ecosystem should be introduced to enable all stakeholders to share single trusted source of information on the procurement and distribution of the Central Medicines Procurement in UC Scheme using permissionless blockchain to solve the last mile problems within the procurement and distribution processes reconciliation.

### **Department of Cultural Promotion**

**Year** : 2020

Title : Project on Cultural Council Executive Structure Development through Local Network Collaboration

under the National Cultural Act 2010

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Ronnarong Jundai

#### Abstract:

The objectives of Cultural Council Committee Structure Development With Local Network Participation Project under the National Culture Act B.E. 2553 (2010) are: to build a sample cultural council and propose an applicable policy to be developed or improved the operations of provincial cultural councils; develop courses on cultural council committee structure development with local network participation under the National Culture Act B.E. 2553 (2010); evaluate the acknowledgement and understanding of the culture's council operations, the application of the policy on a local level, and factors that lead to the success of the operations with local network participation that subsequently leads to the improvement of the cultural council committee structure to be strengthened and effectively self-manage. The scope on the content on the differences between National Culture Act B.E. 2553 (2010) and Chambers of Commerce Act B.E. 2509 (1966) and issues and obstacles in the operations of cultural council under the National Culture Act B.E. 2553 (2010), and study the guidelines/ methods on building network participation and produce courses on cultural council committee structure development with local network participation under the National Culture Act B.E. 2553 (2010). Furthermore, a seminar should be held to publicize and transfer knowledge on cultural council committee structure development with local network participation under the National Culture Act B.E. 2553 (2010)

for 8 times in 8 provinces including Nan, Pitsanulok, Nakhon Ratchasima, Srisaket, Bangkok, Chonburi, Phatthalung, Krabi. This research is both a qualitative and quantitative research conducted on the studies on documents, formal interviews, setting up seminars with honorable figures, workshop, and surveying the awareness from participants. Each stage will have a private, public and people sectors of 30 representatives per stage, 280 representatives in total. Quantitative analysis uses descriptive statistics and qualitative analysis uses content analysis.

Research results found that cultural council committee comprises of Thailand Cultural Council, provincial cultural council, 1 province each, district cultural council, 1 district each, and sub-district cultural council, 1 sub-district each. The cultural council holds the status of a private organization that operate cultural works under the supervision of Department of Cultural Promotion. It comprises of committee members and members from representatives of organizations that operate cultural works or relevant agencies that are within the cultural network such as public sector network, private sector network, community sector network, business sector network, local experts and academic sector network. The Cultural Council is responsible for proposing opinions or suggestions to the committee regarding using the National Culture policy and model scheme as the core for exchanging experiences and knowledge and guideline

on cultural works. It is done through cultural networking process, accumulating resources, personnel and workforces from agencies and organizations to operation cultural works, promote, support and participate in the activities of party organizations and cultural network to culturally preserve, develop, create, exchange, inherit and monitor, publicize activities and operational outcomes of party organizations and cultural network. When comparing with "chambers of commerce" under the Chambers of Commerce Act B.E. 2509 (1966), it is found that provincial chambers of commerce can be established one office per province. The provincial chambers of commerce in Bangkok shall be called Thai Chambers of Commerce. The international chambers of commerce can be established one chamber per country. This is different from cultural council that operates at sub-district and district level. Chambers of commerce is considered an institute established to promote trading, services, freelancing, industry, agriculture, finance or economy. As such, it is a specific networking unlike cultural council that operates with the aim to preserve or rehabilitate traditions, local wisdom, local and national arts and cultures, and coordinate cultural works which rely on the participation of civil society and the people.

As for the outcome of the development the courses on workshops, academic seminars, on the publication and transfer of knowledge on cultural council committee structure development with local network participation under the National Culture Act B.E. 2553 (2010) through brainstorming from cultural experts, experts on participation promotion and network reinforcement, representatives from Department of Cultural Promotion, it is found that the course is 6 hours (1 day) long comprises of subject on policy on cultural operations/background and importance of cultural council towards the preservation of local culture (1 hour 30 minutes); subject on creating local income from cultural capital (1 hour 30 minutes); subject on organization administration that achieve sustainable success and self-reliant (2 hours); activities that reinforce the relationship and power of the network (30 minutes); summary activity and evaluation (30 minutes). From the evaluation on the individual understanding based on a given rating scale, it is found that 273 participants (97.50 percent) have high level of understanding and 7 participants (2.50 percent) have moderate level of understanding. There is no participant who has little understanding. It is also found that for the opinions toward joining the cultural network with cultural council 196 workshop participants gladly participate as a network (70.00 percent).

Furthermore, it is found that strong cultural council must seek a method to enable local people to participate in the nurturing and preserving culture. There has been a revision on the national model scheme, Ministry of Culture model scheme, relevant laws as well as main emphasis or the need to drive forward provincial works. A subsequent overall analysis has been conducted to determine the focus points or main emphasis in driving forward works. To drive forward works, concepts need to be integrated to enable implosion and integrate forces from culture networks. Collective planning, direction setting on the operations, prioritization, situational analysis, contributing and supporting factors are required. Then a vision for provincial cultural council must be set by collaborating with different sectors to drive forward its culture-related works. The responsibility is divided into sections starting from "advisory system" that will provide suggestions, support and promotion and work together as a network with local universities and provide academic advice. Private sectors including industrial federation, board of trade, companies and shops are to take part in accumulating fund in local areas to drive forward cultural council works. They are to recognize village experts and emphasize their importance in rehabilitating, inheriting and preserving local wisdom, culture and tradition. Provincial culture office must work in tandem and collaboratively with cultural council.

As part of the policy proposal and application on the development or improvement of cultural council committee structure, there should be a regional cultural council to allow for exchanging and learning of ideas and enable collective sharing of local culture in surrounding areas. There should be a networking and providing knowledge to youth to progress and develop culture-based products in the long run.

#### Office of Industrial Economics

**Year** : 2020

Title : The Special Economic Zones (SEZs) Marketing and Public Relations Project

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Professor Witawat Rungruangphon

#### Abstract:

The Special Economic Zone (SEZ) is a spatial development policy that the Thai government attaches great significance to. Its objective is to develop new economic areas around the Thai border as an Economic Gateway to connect neighboring countries by taking advantage of the connectivity within the region. The SEZ will help to spread prosperity into the areas, reduce income inequality, and improve the living standards of Thai people, which proclaims from the government's commitment to promoting the strength of all ten provinces and will effectively drive marketing operations and public relations yearly to reap concrete results. Thus, it is crucial to have appropriate and effective marketing and public relations schemes as the vital empirical factors driving the policy.

The Division of Industrial Policy at the Office of Industrial Economics, therefore, saw the essential to conduct "The Special Economic Zones (SEZs) Marketing and Public Relations Project" to oversee the marketing plan and publicize the areas. This project applied effective marketing and public relations strategies to generate collaboration and further leads to a widespread and

continuing acceptance of precepts in the relevant areas. The project relied on the proper use of media, a step-by-step communication plan, tactics to attract potential investors, as well as unique and distinguished activities.

Thammasat University Research and Consultancy Institute was assigned to carry out "The Special Economic Zones (SEZs) Marketing and Public Relations Project" have performed in both collecting and examining fundamental data and relevant research results that related to the SEZs policy, as well as interpreting the spatial potentials, possibilities, and difficulties in driving each province concerning the dimensions of economic, social, environmental and linkages between neighboring countries. The results have been reviewed and drawn up general marketing and public relations draft plans for the SEZs. Later, there were five focus group seminars organized under the project, one in each region, consisting of East, West, North, South, and Northeast, plus five in-depth interviews from relevant parties. The interview intended to brainstorm ideas and use information obtained to assist in the preparation of various schemes under the project.

### National Innovation Agency (Public Organization) (NIA)

**Year** : 2020

Title : Social Innovation Driving Unit (Central Region Owner)

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Dr. Kanokwara Phuangprayong,

Dr. Sanit Noonin,

Assistant Professor Weeraboon Wisartsakul

#### Abstract:

The objective of Social Innovation Driving Unit Project (Central Area) are to study the community context, to identify situation problem and potential of target communities in the central area, as well as to promoting youth and innovative entrepreneurs to use and expand their contribution to society and target community. Moreover, this project aims to build the social innovation ecosystems and provide guidance for development of social innovators and social start-up enterprises for systematic solving of social and environmental problems in the target community. This project was operated by using the incubation techniques through a consultation process and supporting the development of the concept. It consists of 2 main activities: 1) the social innovative entrepreneurship incubation program and 2) the youth social innovation competition project.

The performance of both projects was successfully completed. **The social innovative entrepreneurship incubation program** have 76 participants, and 11 projects

of social innovation were supported, divided into 4 types; 4 invention innovation projects, 3 platform innovation projects, 3 product innovation projects, and 1 concept or process innovation project. There were conducted in 9 provinces in the central area included Bangkok, Nonthaburi, Pathum Thani, Ratchaburi, Nakhon Pathom, Nakhon Sawan, Uthai Thani, Saraburi and Nakhon Nayok. The youth social innovation competition project, there were 20 teams participated in the project, and 11 projects of social innovation were supported, divided into 4 types; 6 invention innovation projects, 2 platform innovation projects, 1 product innovation project, and 1 concept or process innovation project, and were conducted in 9 provinces in Thailand included Bangkok, Samut Prakan, Pathum Thani, Samut Songkhram, Nakhon Sawan, Chonburi, Mukdahan, Surat Thani and Satun.

Keywords: Social Innovation Driving Unit,

Central Area

## Foundation of Thai Gerontology Research and **Development institute**

Year : 2020

Title Elderly care in the Government's Institutions

Citv Bangkok

Language

**Publisher** Thammasat University Research and Consultancy Institute

Researcher Associate Professor Dr. Wannalak Miankerd

#### Abstract:

Research on encouraging the development and monitoring of elderly school operations include the process to promote the establishment and development of elderly school in 4 regions within 10 provinces across the country. There are 4 steps 1) finding people and areas that are interested and understand the concept of elderly school 2) build the understanding about the administrative process of elderly school 3) mobilizes the working network from government, private and public sectors 4) course development in learning and teaching management. From monitoring the establishment of elderly school, it was found that there are 3 models of the elderly school establishment, government sector model, public sector model and the mixed model (government sector and public sector). For the result, it was found that the elderly school had a clear organizational structure and managed by the committee. Most elderly schools have sufficient budget resources. There are teaching and learning facilities that are suitable for each context. But having trouble in propelling their work due to lack of meeting mechanisms, supervision

for sufficient operation and the coordinator having too many routine tasks. However, the elderly school can develop the potential of the elderly making them more refreshing, energetic, and lively, also having better social relationship. There is a wide range of learning through exchange of experiences and learning from lecturers.

Regarding policy suggestions, the government, should determine the direction of elderly development by using the elderly school as a tool, should have their own central academic team to disseminate academic knowledge, should let the elderly school be a social area that allow people from other ages to share space with the elderly. For practical suggestions, the organization that established the elderly school should understand the concept and clearly set target for the elderly school in every dimension to all parties involved in the management and benefit from the elderly school. There should be more than one elderly school coordinator and assign the budget plan for the operation of the elderly school in the annual budget plan of the local government organization.

### Thai Public Broadcasting Service

**Year** : 2020

Title : Evaluating and Monitoring the social impact from the movement "Agricultural Chemical" of Thai PBS

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Wilaiwan Chongwilaikasem

#### Abstract:

Evaluating and Monitoring the social impact from the movement "Agrochemicals" of Thai PBS has 3 objectives 1) To assess social impact from driving the issue "Agrochemicals" of Thai PBS 2) To assess the value and social return from investment in driving the issue. "Agrochemicals" by Thai PBS 3) To analyze guidelines and recommendations for driving social issues appropriate for public media. By studying and analyzing the performance of public broadcasting organizations from documents "Agrochemicals and Parquart Year 2019", Executive Summary Document, "Book Keeping Agrochemicals and Parquat" information on the use of "Agrochemical Budget" and "Agrochemical Rating 2016-2019" and qualitative research and quantitative research that deals with driving issues by using the principles of direct benefits, indirect benefits, induced benefits.

The results of social compensation assessment from the issue driven "Agrochemicals" of Thai PBS found that Direct impact The value is 24,205,800 bahts. Indirect effect, the value is 957,106,000 - 988,192,000 bahts. The consequences, equal value 1,629,420,000 - 2,443,420,000 bahts and overall impact Equal value 2,610,731,800 - 3,455,817,800 bahts. Overall Impact after adjustment of the engagement ratio will be equal to the minimum 24,205,800 + (957,106,000 + 1,629,420,000) \* 0.2432 = 652,990,270.6 upper 24,205,800 + (988,192,000 + 2,443,420,000) \* 0.2431 = 858,430,677. Social compensation (SROI) is equal to the minimum 81 times 106 times the average ratio of 0.2431, meaning every 1 baht that Thai PBS invests in driving agrochemicals and will return approximately 81 bahts to 106 bahts for society. Therefore, supporting Thai PBS to

do so has a very high level of benefit to society. Thailand PBS contributes to the impact on the economy and society in the case of agrochemicals driving 24.32% (53.5/220). The assessors from 5 groups gave the greatest weight to involvement with Thai PBS. Followed by the research semester, NCC/TRF. Researchers with 20.9% participation (46/220) were consistent with the local interview.

In addition, the assessor assessed the success of the movement in six areas, covering (1) decreased patients (2) awareness of the population (3) increased income (4) lower production costs of agricultural products (5) safer health and (6) better welfare. This achievement assessment is to verify that the driving goals and cooperation goals of all sectors are consistent or not. Which was found to drive the issue of agricultural chemicals. The key issue was 87.5 percent of residents in the area were awake, followed by 84.09 percent of health safety and 78.4 percent of cases, respectively, while welfare issues for local residents improved. that those involved saw it as the bottom line of importance, 53.4 percent. The success issue in driving the issue of agricultural chemicals was found that this is consistent with the original intention that the participating agencies are trying to drive on this issue. With the aim of solving the health problems of the local people and the participation of Thai PBS causing the awakening of the people which is the most important goal Before it results in other goals. Therefore, the assessor concluded that Driving the issue of Thai PBS agricultural chemicals is resulting in both economic and social success in terms of value And create awareness among the people as well.

## **Department of Employment**

**Year** : 2020

Title : Compare and prepare the terms and scope of work under the private contractor project. Issuance

of a work permit and notification of alien work

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Winai Raksuntorn

#### Abstract:

The Department of Employment is planning to digitally transform its foreign workers administration operation by outsourcing the enrollment, document processing, and work permit issuing operations to a private operator. The outsourcer is responsible for establishing the enrollment office and developing e-services for work-permit

enrollment and issuing, which will improve the effectiveness of the entire foreign workers administration processes. The Terms of Reference is developed to detail the scope of outsourcing work and to ensure equal opportunity for every outsources pursuer.

#### Office of Justice Affairs

**Year** : 2020

Title : The Evaluation of The Results of Collecting and Analyzing The Indicators Efficiency of Criminal

justice Process

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Teera Sindecharak

#### Abstract:

The research paper aims to 1) present the performance results following the indicators from all of criminal justice agencies to determine baseline and benchmark in each indictor and evaluate the performance results of storage effect criminal justice in overall 2) to present the analytical results effect criminal justice in each dimension and show the strength-weakness and opportunities to develop criminal justice process 3) determine the direction and target to reform the criminal justice process and drive it following integrated national master plan and others in justice process of Thailand.

#### We found that

- 1) Many indicators can determine baseline and benchmark because we have sufficient and reliable data but some indicators we still cannot determine. However, the performance results in overall some better some worse from 2.1 indicators following 7 criminal justice frame.
- 2) The strength and weakness are presented and classified by each the structure of criminal justice agencies and efficiency of justice process which reflects the opportunities and threats to develop justice process. So, we can construct the strategies among SO, WO, ST and WT strategies by using TOWS technique.
- 3) The direction and target in criminal justice process reform should focus on how to reduce criminal, reform the process and employ the digital technologies.

### Office of the Army Secretary

**Year** : 2020

Title : Attitude and Opinion Survey of People to Image and Confident of Royal Thai Army in Fiscal year

2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Teera Sindecharak

#### Abstract:

This research aims to study the attitude and opinion of Thai people regarding the Thai Royal Army. The objectives of this study are 1) to study the attitude and opinion 2) to study the confident and expectation toward the role function and operation of Thai Royal Army and 3) to leading to determine the way for communication to the target population in the future.

We found that the previous image, current image, leadership of Thai Royal Army were good but the communication dimension was moderate. The confident toward Thai Royal Army was quite good in human resource, strategies and organizational culture but the dimension of social psychology was moderate. All dimension about role, function and outcome in expectation were quite high. We recommended that Thai Royal Army clearly should be made image more clearly and re-branding the bad image back especially, the transparency, the way of communication and process efficiency to communicate.

**Keyword :** Royal Army, Attitude, Image, Confident, Expectation

#### Office of the Education Council

**Year** : 2020

Title : Data collection and analysis of banking systems, credits, and mechanisms to drive the linkage

between sectors and labor/business sectors

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Dr. Kiatanantha Lounkaew

#### Abstract:

This study aimed at assessing current situation of the Thai Credit Bank System (TCBS). It began with reviewing international lessons on the design and implementation of the credit bank systems. The countries included in the exercise are Singapore, South Korea, Australia, United States, and the EU. The key findings from international experiences are: 1) successful credit bank system requires proper online infrastructure to store and share information related to learners' education credit records; 2) prospective learners understand the need to constantly update their skills to meet changing work environment; 3) the credit bank system should be developed on different learning platform both online and offline, allowing learners to opt the platforms that suit them best; 4) minimum standard must be observed for each credit module so as to allow it to be recognized by a broader set of learning institutions; and 5) a credit bank system based on networks of higher learning institutions perform better that the one provided independently by an institution.

The analysis of TCBS was based on both documentary evidence and in-depth interview with stakeholders, encompassing representatives from higher learning institutions, relevant government agencies, employees, and learners. It was found that, by and large, the TCBS was being implemented independently by higher learning institutions; many of which were still at their initial stages and were not ready for enrollment. In addition, there was a clear lack of understanding on the principle of TCBS among learners, some government and higher learning officials, as well as staff within the higher learning institutions. The more successful institutions in attracting sufficient number of learner to make the system economically viable were the ones who were able to identify potential learners they wished to serve; these successful institutions had developed multi-channel learning platform using the right mix of online and offline delivery of the course content.

### Department of Empowerment of Persons with disabilities

**Year** : 2020

Title : Evaluation of ASEAN Decade of Persons with Disabilities 2011-2020 for next phase mobilization

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Wilaiporn Kotbungkair

#### Abstract:

The Kingdom of Thailand, by the Department of Empowerment of Persons with Disabilities, Ministry of Social Development and Human Security, has played an important role in pushing forward issues and works related to persons with disabilities in ASEAN. Particularly, in 2011, Thailand's input on the Concept Note and Mobilization Plan on ASEAN Decade of Persons with Disabilities (2011-2020): the Thematic Years to Promote Disability Inclusive Development in ASEAN was presented during the 6th Senior Official Meeting on Social Welfare and Development (SOMSWD) and the 8th Senior Official Meeting on ASEAN Socio Cultural Community, held in Jakarta, Indonesia, leading to the official pronouncement of the ASEAN Decade for Persons with Disabilities (ADPD) (2011-2020) in the 19<sup>th</sup> ASEAN Summit, held in November 2011 in Bali, Indonesia, to provide a clearer direction on the implementation of the plan to empower disabled people at the ASEAN level. Following the proclamation of ADPD, efforts were made over the past 10 years to realize the Decade through relevant projects and activities both at the ASEAN and national levels. The works include, for instance, promoting access to the rights of persons with disabilities (PWD), creating societies that prohibit discrimination against PWDs, promoting disability inclusive development, and building awareness and positive perception towards disability, etc.

Thailand recognizes the importance of establishing a policy framework to advance PWD affairs in ASEAN to

ensure that disability issues are prioritized and developed in parallel with mainstream development. In addition, as ADPD is coming to an end in 2020, it is necessary to conduct a study on the Evaluation of the Implementation of the ASEAN Decade for Persons with Disabilities (2011-2020) and Future Mobilization Plan to provide empirical evidence for further advancing activities related to PWDs in ASEAN. This current study reviews and analyzes the implementation of ADPD (2011-2020) and its resulting outcomes across ASEAN region, reviews relevant mainstream development directions with a survey of data from 10 ASEAN member states, as well as formulates a plan for the next phase of ADPD to report to the SOMSWD.

The findings of the documentary study showed that one of the most significant international development frameworks-the Sustainable Development Goals-was consistent and interconnected with the Convention on the Rights of Persons with Disabilities, which has been ratified by all ASEAN Member States already. In addition, the results of the comparative synthesis of international, regional and ASEAN development frameworks showed that the development frameworks at all levels were well coherent. Therefore, should ASEAN happen to synthesize and address the ASEAN disability mobilization frameworks, disability mobilization in the region would not be placed as a second priority and could accommodate the synchronized

implementation of the Convention on the Rights of Persons with Disabilities and other development frameworks.

During the initial brainstorming sessions, stakeholders put in their comments on the gaps in the process of disability mobilization in the previous Decade, extended their concerns about the Covid-19 pandemic status which is an urgent matter that affects people around the world, and stressed on changes of social situations, particularly in terms of individuals, demographic shifts, capacity building for children with disabilities and social protection. The epidemic of this fatal communicable disease and economic situation affected trade and migration, reduction of inequalities and creation of equity in all dimensions, and mechanism systems and mobilization frameworks. It was proposed that ASEAN subregional common goals be considered, analyzed, synthesized and established in order to avoid any duplication of efforts and the same works as other international organizations. Instead, supports should be provided to ensure that operating systems and mechanisms are in place to enable a common subregional implementation framework. For instance, a coherent, harmonized yet flexible set of indicators should be established with clarity that takes into account the suitability and contexts of each Member State so that they can execute an effective disability mobilization framework. Additionally, systems and mechanisms that give all ASEAN countries a sense of ownership should be created. Since the current databases of persons with disabilities in ASEAN countries are not yet a single shared database and data are still nontransferable or unlinkable to facilitate the development of disability implementation, it is imperative, for the new decade of disability implementation, to push forward the creation of such databases at the national and regional levels. This will result in the formation of practice guides that are accurate and in accord with actual needs and situations. Eventually, practical information could be shared among ASEAN countries.

Based primarily on the documentary study findings and comments given by stakeholders during the initial brainstorming sessions, the authors can summarize the key areas for the mobilization framework of the ASEAN Decade of Persons with Disabilities (2021-2030) into 11 priorities: Priority 1: Ending poverty and hunger for all disabled

people; Priority 2: Social protection and social assistance; Priority 3: Quality education; Priority 4: Promoting access to health services and quality rehabilitation; Priority 5: Gender equality and children with disabilities; Priority 6: Employment and decent work; Priority 7: Accessibility; Priority 8: Participation of persons with disabilities; Priority 9: Eradicating all form of discrimination against persons with disabilities; Priority 10: Risk, disaster, and pandemic; and Priority 11: Disability statistics.

It is suggested that ASEAN establish overall development goals and indicators and encourage Member States to set their own indicators to evaluate their implementation of the ASEAN Decade that correspond with their respective contexts. The indicators might be classified into four tiers as follows:

Tier 4 Indicators: Evidence-based outcomes that demonstrate how well the persons with disabilities have benefitted from the implementation in accord with the set goals.

**Tier 3 Indicators:** Development and/or amendment of relevant laws, rules and regulations.

**Tier 2 Indicators :** Formulation of national policies/plans.

Establishment of mobilization and mechanism systems.

**Tier 1 Indicators**: Implementation of activities that are consistent with the priorities and goals.

It is proposed that the concept note and mobilization framework for the ASEAN Decade of Persons with Disabilities (2021-2030) be considered and approved by the ten Member States as well as be adopted by the ASEAN Summit 2021. In order to ensure a smooth, seamless continuity of the mobilization framework from the ASEAN Decade of Persons with Disabilities 2011-2020, it is recommended that the Senior Official Meeting on Social Welfare and Development (SOMSWD) should assume a role of coordinating mechanism in mobilizing the ASEAN Decade of Persons with Disabilities 2021-2030 while the ASEAN Intergovernmental Commission on Human Rights (AICHR) should take on a position of mechanism in impelling and monitoring the implementation to achieve the goals of the new Decade in the three pillars of the ASEAN Community.

## The Government Public Relations Department

**Year** : 2020

Title : Evaluation of Public Relations Programs for Aging Society Preparedness of Fiscal Year 2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Adchara Panthanuwong

#### Abstract:

The Evaluation of Publicity Program on Preparation for Aging Society FY 2020 is a survey research, using the questionnaire to collect data from 1,100 target samples. The samples consist of two main groups. The first group comprises pre-aging population (12-59 years old), and this group is divided further in two sub-groups of youth and the general public aged 12-49 years (331 samples) on the one hand and the general public aged 50-59 years (529 samples) on the other. The second group consists of the aging population aged 60 and above (240 samples).

The efficiency of the program is evaluated on four aspects: 1) exposure to information on preparation for aging society, 2) understanding of information on preparation for aging society, 3) confidence in information on preparation for aging society, and 4) utilization of information on preparation for aging society in daily life.

The finding reveals that the program has satisfied the criteria in all four aspects: with exposure to information on preparation for aging society accounting for 72.0% (compared to the set criterion of 71%), understanding of information on preparation for aging society accounting for 75.1% (compared to the set criterion of 69%), confidence in information on preparation for aging society accounting for 72.4% (compared to the set criterion of 67%), and utilization of information on preparation for aging society in daily life accounting for 73.9% (compared to the set criterion of 65%).

With regard to exposure to information on preparation for aging society, it is found that the issue that the target groups are most exposed to is the campaign for the general public to have proper healthcare behavior at every stage of life for sustainable health, while the issue that the target groups are least exposed to is the National Savings Fund for security when entering old age.

With regard to understanding of information on preparation for aging society, it is found that the issue that the target groups understand the most is that people at every stage of life should exercise preventive health care before the onset of disease, while the issue that the target groups show the least understanding is that the environment and amenities for older people should be physically safe and easily accessible.

With regard to confidence in information on preparation for aging society, it is found that the target groups have the most confidence in the accuracy of the information, followed by confidence in its objectivity and speed respectively.

With regard to utilization of information on preparation for aging society in daily life, it is found that the issue that the target groups make the most use of is health care, while the issue that they least utilize is about savings.

### The Government Public Relations Department

**Year** : 2020

Title : Evaluation of Publicity Program on Management of Migrant Workers for FY 2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Monaiphol Ronavej

#### Abstract:

The Evaluation of Publicity Program on Management of Migrant Workers for FY 2020 is a survey research, using the questionnaire to collect data from 1,265 primary and secondary target samples. The primary target group consists of 194 business operators that employ migrant workers and 564 migrant workers (Myanmar, Lao, and Cambodian) working in Thailand, while the secondary one comprises 305 members of the general public aged 26-50 years and 202 people aged 51 years and above. Data were collected during June-July 2020.

The efficiency of the program is evaluated on four aspects: 1) exposure to information about important government policy on migrant workers, 2) understanding of information about important government policy on migrant workers, 3) confidence in information about important government policy on migrant workers, and 4) utilization of information about important government policy on migrant workers.

The finding reveals that the program has satisfied the criteria in all four aspects: with exposure to information about important government policy on migrant workers accounting for 75.4% (compared to the set criterion of 75%), understanding of information about important government policy on migrant workers accounting for 76.4% (compared to the set criterion of 73%), confidence in information about important government policy on migrant workers accounting for 76.3% (compared to the set criterion of 71%), and utilization of information about important government policy on migrant workers accounting 75.0% for (compared to the set criterion of 69%).

With regard to exposure to information about important government policy on migrant workers, it is found

that three issues that the target groups are most exposed to are: correct legal registration of migrant workers, measures to solve problems faced by migrant workers as a result of the spread of COVID-19, and legal enforcement on the work of migrant workers respectively.

With regard to understanding of information about important government policy on migrant workers, it is found that three issues that the target groups understand the most are that the presence of legal migrant workers will assure everyone of society being safe and free from human trafficking, that the registration of migrant workers can be carried out at One Stop Service Centers for Migrant Worker Registration, and that migrant workers can have their work permit extended during the spread of COVID-19, respectively.

With regard to confidence in the information about important government policy on migrant workers, it is found that the target groups have the most confidence in the accuracy of the information, followed by confidence in its objectivity and speed respectively.

With regard to utilization of information about important government policy on migrant workers, it is found that most of the business operators support a good management system about migrant workers and support action that will improve their quality of life and enable them to live with others in society peacefully. Meanwhile, the majority of migrant workers are able to follow or advise others about general procedures or basic rules and regulations on migrant workers, while most of the general public can make use of the information on migrant workers in their conversation or exchange of opinions with others.

## Survey

## The Gem and Jewelry Institute of Thailand (Public Organization)

**Year** : 2020

Title : Study of Goldsmithing Techniques in Sukhothai Province

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Anucha Thirakanont

#### Abstract:

The continuity of the ancient history of Sukhothai is important background of the gold of Sukhothai. The unique art forms and motifs decorating the architectures and artworks from different periods are the inspiration for the goldsmiths to create their contemporary jewelry with traditional methods. The gold wire weaving, granulating, wire twisting, and enameling are major methods

employed by the goldsmiths. One of the important motifs is called "lai kruewan" of floral motif. This pattern was taken from the stucco relief decorating the external wall of the grand hall of Wat Nang Paya in the Si Satchanalai Historial Park. The general techniques of the handmade gold jewelry of Si Satchanalai include soldering, wiring, perforating, and enameling.

## **Information Technology**

### Thai Public Broadcasting Service

**Year** : 2020

Title : Information Security Implementation

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Professor Dr. Sanya Mitaim

#### Abstract:

The project of Information Security Implementation in accordance with ISO/IEC27001:2013. The Public Broadcasting Organization of Thailand (TPBS) is aware of information security important and has adopted ISO/IEC27001:2013 standard to apply to organization information security system. The scope of project includes information security related team set up by top management approval, defining information security policy, risk assessment for information asset, implementing information security management and controls, information security awareness

and related training, and internal audit set up to support information security according to ISO/IEC27001:2013. This is to prepare organization for ISO/IEC27001:2013 accreditation.

Outcome of information security implementation in accordance with ISO/IEC27001:2013 introduce significant information security process improvement. Organization is aware of information security by related security awareness training. Related information security trainings are conducted to TPBS people.

## Information Technology

### **Udonthani Center Hospital**

**Year** : 2020

Title : Al Edge Service and Al Could Service Development for ALChest4All to Support Screening of Chest

X-ray Image of Hospitals Nationwide

City : Udon Thani

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Charturong Tantibundhit

#### Abstract:

Due to the current AlChest4All installation, hospitals that request to use AlChest4All require high performance servers for chest X-ray image processing. Which causes cost problems for rural hospitals and remote areas. The AlChest4All system currently works offline and that makes it difficult to maintain and fix in the event of changes or modifications to the software version. Therefore, there was a concept in designing and developing the Edge Service and Al Cloud Service by separating the central processing unit to be installed at the Udonthani Cancer Hospital in order to support chest X-ray image processing

from hospitals that install Edge Service applications and return results to hospitals that have requests for use. The said principle can amend the above limitations so that the hospital can buy a server at a lower price but with the same processing capability as the server with high efficiency. In addition, modifications to the software version, if necessary, can be done by editing on a single server instead of fixing it on every machine. Edge Service and Al Cloud Service can also help to collect opinion from expert doctors in hospitals that are used to develop the AlChest4All artificial intelligence system more efficiently.

#### Office of Justice Affairs

**Year** : 2020

Title : Thai Crime Victimization Survey Methodology

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Dr. Thanyaporn Soontornthum, Pol.Maj.Gen. Dr. Chavanut Janekarn

#### Abstract:

This qualitative and quantitative research aimed to develop the Thai crime victimization survey methodology in terms of the frequency of enumeration, survey plan, mode of data collection, sampling method in order to achieve international standards. The survey methodology and questionnaires were developed based on the past experience of the Thai crime victimization survey and international guideline. The first draft of the survey had been considered and discussed by the focus group of experts in criminology

and victimization surveys before trying out in the selected areas. The result indicated that the methodology and questionnaires were reliable and effective to obtain crimes and victim's data. This information is efficient for crime prevention policy decision making. The detail of the survey methodology including some limitations and recommendations are in the Manual of Thai Crime Victimization Survey.

**Keywords**: Crime Victimization Survey, Victim, Survey,
Thailand

## King Prajadhipok's Institute

**Year** : 2020

Title : Development of Peace Index

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Dr. Kiatanantha Lounkaew

#### Abstract:

The aim of this research was to develop analytical methodology and relevant indicators reflecting current state of positive peace in Thailand. It began with comprehensive literature review on current state of conceptual and empirical development of peace-related indices. Lessons learned from such review were then applied to develop positive peace indices for Thailand. This indices capture four essential dimensions: 1) physical violence; 2) stability and security; 3) inclusiveness; and 4) equitable distribution of resources. Data used to carry out this exercise were taken from both administrative sources as well as a nation-wide field survey.

It was found that, out of scale of 5, overall peace score in 2017 was 3.42 and for 2019 the score was 3.36. The two dimensions with increased scores were physical violence and inclusiveness; the scores of the other two dimensions were lower in 2019. Provincial-wise, the

Mahasarakam, Trang, Lampang and Nakhonsithammarate enjoyed the highest scores. The lowerest performers in 2019 were Narathiwat, Chaingrai, Chachengsao, and Mae Hong Son.

There were four policy recommendations stemming out from this exercise. The first on being the promotion of positive peace concept should be carried out at local level rather than a nation-wide initiative. The second recommendation relates to integrated effort between different stakeholders to promote peace-related activities. The third one being information sharing; one of the by-product from this study was information redundancy which resulted in information being underutilized. The last recommendation was on promotion of positive peace concept using various means to reach different target groups.

### **Department of Business Development**

Year : 2020

Title : Developing logistics service provider business to achieve ISO 9001 Under logistics provider

potential development project 2563 B.E.

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Nopbhorn Leeprechanon

#### Abstract:

Thammasat university Research and consultancy institute (TU-RAC) of Thammasat university has been assigned by the department of business development, ministry of commerce to implement "Developing logistics service provider business to achieve ISO 9001", a project under develop the potential of Thai logistics service providers to support the expansion of the trade and service sectors 2020".

The objectives of this project are to support Thai logistics service provider business to achieve ISO 9001 quality management systems standard; to increase credibility and acceptance from domestics and international customers of Thai logistics service provider business; and to increase international competitiveness of Thai logistics service provider business.

The project consists of the following activities:

- The project publicity and enrolment of logistics service provider businesses, which intend to develop their organization management systems using ISO 9001:2015.
- 2. Screening the logistics service provider businesses for participating in "Developing logistics service provider business to achieve ISO 9001:2015". Selection criteria of the logistics service provider businesses were established by consultant. 33 logistics service provider businesses passed the selection criteria.

- Upgrading logistics service provider business to achieve ISO 9001:2015 by arranging various activities as follow;
- 3.1 Seminar and workshop in ISO 9001 Quality Management System-Requirements (1 day), internal auditing (1 day), applying ISO 9001 by consulting and advising (3 days).
- 3.2 Conduct consulting and advising activities at each logistics service provider businesses.
- 3.3 Conducting study trip at the best practice logistics service provider in order to providing good practices of management system standard for other logistic providers.
- 4. Provision of certification audit in each logistics service provider against ISO 9001 standard so that at least 30 logistics service providers successfully achieve ISO 9001 certificates.
- 5. Dissemination and publicity the event of the quality management system award to logistics provider businesses, which passed the selection criteria through various media such as Facebook, Line and project's website.
- 6. Compiling problems, obstacles and suggestion while conducting the project in order to provide this information to participating logistics service provider businesses, which targeting to achieve ISO 9001:2015 quality management system standard.

## Office of the Public Sector Development Commission

**Year** : 2020

Title : A Study on the Guidelines for Changing the Form of Establishing a Government Agency to be

Flexible in order to Support the Implementation of the National Strategy

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Professor Dr. Somkit Lertpaithoon

#### Abstract:

One of the significant problems that make the bureaucratic in Thailand lack flexibility and agile comes from the government agencies at the ministry and departments level are formed as a legal entity. Following Section 7, paragraph two of the National Government Organization Act, BE 2534 (1991) and the establishment, merger, or transfer of such government agencies proceeded by enacting an action under section 8 of the same Act. As a result, the establishment, merger, transfer, or dissolution of ministries, bureaus, and departments were difficult because the government had to make into a Bill to improve the ministries, departments, and departments into consideration by the parliament that took a long time, making it impossible to improve the government structure to keep up with the current situation that changed rapidly.

Previously, the bureaucratic system more flexible and agile. One of the most important actions was the amendment of the National Government Organization Act, BE 2534 (1991) in BE 2545 (2002) by adding the provisions of Section 18, paragraph four, to enact the Royal Decree to establish the government agencies. The organization did not have any status of government but had a supervisor of such government agency as Director-General (or a similar position), that the position can be called by other names

as the Director-General. Although it could provide the opportunities for the ministries to establish a government agency that did not have a departmental status by enacting the Royal Decree, there were still many problems and obstacles in the administration of the department which were impossible to proceed the function of agencies according to the principles.

The advisory committee has studied problems, obstacles, and advice for the internal administration of government agencies established under Section 18, paragraph four of the National Government Organization Act, BE 2534 (1991) to improve the establishment and internal administration of such government agencies, including to be a flexible timely adjustment. Government structure and administration in the future were studied and analyzed the various methods for establishing government agencies of foreign countries that are workable organizing. We were more interested in the form of establishment, dissolution, restructure of a public administration, additionally the engagement of technologies and innovation to improved the public administration for complying with the Digital Era. This study also presents solutions' suggestions to solve the problems in organizing the government structure, public administration, and the approach of technology and

innovation to the public administration within the Thai government agencies to be more flexible, flexible, and appropriate.

The study's results and recommendations of the advisory committee will create the organization of the country's bureaucracy more flexible and mobility. The political administration can modify the structures, duties, and powers of government agencies at all levels to be more

effective and can cope with the rapidly changing situation of the country and the world.

Moreover, the agencies can be improved in line with the national strategy aimed at modernizing the government, flexible to the national development context, including to develop and adjust the system of a government operation to be up to date and able to provide public services to meet the needs of the people.

### **Industrial Promotion Center Region 8**

**Year** : 2020

Title : Formulate strategies and action plans to develop the seafood industry to be the seafood production

center of the future

City : Suphan Buri

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Kaewta Rohitratana

#### Abstract:

The three year terms strategic planning project and action plan to develop the seafood industry to become the center of seafood production (2021-2023) under the implementation of Industrial Promotion Center Region 8 aim to drive the industry target at the local level of lower central provincial cluster 2 to comply with the policy and national development framework. Moreover, to accordance not only with the new operational mission of the Department of Industrial Promotion and Ministry of Industry but also the mission of being an academic unit in offering opinions and recommendations on the strategic policy formulation. This project is created to support SMEs and community enterprises and to be a center of advise, information, design and technology development and to be a model of local level industry which connected to provincial industry office.

The planning process included gathering information from various government operational policies related to the development of regional industry, policies, regulations, measures, standards and trends affecting the success of the Thai seafood industry in world market.

In order to achieve seafood industry development strategies and action plans in line with national development guidelines at the macro level, cooperate with industry trends in the world market and to meet the needs and potential of the area. Hence, there were 2 brainstorming sessions held on August 11, 2020 and September 14, 2020 with 18 participants which is including stakeholders from both public and private sectors.

### Haadthip Public Company Limited

**Year** : 2020

Title : Carbon Footprint for organization verification : Hardthip PLC. (Hat Yai)

City : Songkhla

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Harnpon Phungrassami

#### Abstract:

Nowadays, Climate change and Global Warming are regarded as problems which impact on the earth and environment drastically and more and more increasingly. Global Warming is primarily a problem of too much Greenhouse gas emissions from human activities in the atmosphere. Carbon Footprint for Organization is the concept for calculating the amount of Greenhouse gases produced from human activities for the purpose of measuring direct and indirect Greenhouse gases emission. Carbon Footprint for Organization is also a measurement method of Global Warming impacts caused by cooperate operations and gas emissions of your organization is measured in unit of CO<sub>2</sub> equivalent. Through this measurement, the organization could find out the release amount of Greenhouse gases.

THAILAND GREENHOUSE GAS MANAGEMENT ORGANIZATION (PUBLIC ORGANIZATION) is responsible for projects concerning Climate change and Global Warming

in Thailand. The organization has developed Thailand CFO Verification system to assure the consistency between CFO assessment of each organization and the 5 key principles; Relevance, Completeness, Consistency, Accuracy Transparency, including good Data quality management and be in accordance with Carbon Footprint for Organization assessment in Thailand.

#### Conclusion

On 29<sup>th</sup> October 2019, Carbon Footprint for Organization assessment of Haadthip Public Company Limited (Hat Yai Factory) has been verified at level of Limited assurance. Moreover, operational Control is selected as an approach for assessment. In conclusion, the result of Carbon Footprint for Organization is **PASS** and accords with the 5 key principles. It also performs good data quality management and be in same line with the concept of Thailand Carbon Footprint for Organization assessment.

### Mitr Phol Bio Power Co., Ltd.

**Year** : 2020

Title : Study on Qualities of Sugarcane Juice during Storage Test

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Suteera Vatthanakul

#### Abstract:

Sugarcane juice were put in bottle and stored at 4°C for 8 weeks. Changes in sensory quality (20 semitrained panels) and microbial properties of the sugarcane juice during storage.

For sugarcane juice type A, The acceptance score of sugarcane juice at storage temperature 4°C was decreased with increasing storage time. The overall liking of sugarcane juice was rated as dislike slightly (4.8). The qualities of sugarcane juice was higher in color, some slight in separating from pulp, and juice sediment formation during storage. 47.1% of Panelists was accepted the sugarcane juice stored at 4°C after kept samples for 8 weeks.

For sugarcane juice type B with white cap, The acceptance score of sugarcane juice at storage temperature 4°C was decreased with increasing storage time. The overall liking of sugarcane juice was rated as like slightly (5.7). The qualities of sugarcane juice was higher in viscosity and

sweetness during storage. 76.5% of panelists accepted the sugarcane juice stored at 4°C after kept samples for 8 weeks.

For sugarcane juice type C, The acceptance score of sugarcane juice at storage temperature 4°C was decreased with increasing storage time. The overall liking of sugarcane juice was rated as dislike slightly (4.9). The qualities of sugarcane juice was lower in odor and flavor of sugarcane juice during storage. 58.8% of panelists accepted the sugarcane juice stored at 4°C after kept samples for 8 weeks.

Total plate count and yeast and mould count were carried out for the microbiological analyses by using Ministry of Public Health Notification No 356 B.E. 2556 (2013) Title: Food in a Hermetically Sealed Container. The result found that the total plate count of the sugarcane juice was not more than 1x104 cfu/ml. and Total Yeast and Mold Counts was not more than 100 cfu/ml.

#### FEEDBACK 180 COMPANY LIMITED

**Year** : 2020

Title : Topic modelling in Thai language from social media messages in corporation with Feedback 180

Co., Ltd.

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Rachada Kongkachandra

#### Abstract:

The social media online has popular on the internet. The data comes from the social media online is increasing in every second. Most of the available data is text which is in unstructured format. To analyze these data, we need to automated extract the desired information for fueling the organization's business decisions to improve their products or services to serve customer needs. The important process for information extraction is to identify topics from text documents.

Topic Modelling (TM) refers to automate the extraction of topic from unstructured sources. Keyword extraction is a part of TM to discover implicit and potentially important keywords in underlying unstructured natural-language texts. Due to the inherent characteristic of

Thai written language which does not explicitly use any word delimiting characters, identifying individual words. In this project, an alternative method for word-formation for noun phrase recognition is proposed. The word-formation is improving keyword extraction using the compound noun pattern. We use the word-formation to applying the TextRank algorithm to group the noun phrase, there are selected as candidates to calculate in the algorithm. The dataset for experiments are 2,727 documents in the banking domain from social online such as Facebook, Twitter, and online news. The experimental results yield 47.10% of accuracy with significant improvement by word-formation. According, the keyword have effective for TM.

#### C.P. RETAIL DEVELOPMENT COMPANY LIMITED

**Year** : 2020

Title : The Role of Hypermarket in Creating Sustainable Environment

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Sathaporn Opasanon

#### Abstract:

This study is designed to (1) explore and review the Sustainable Business Policy of Charoen Pokphand Group and summarize Tesco Lotus's approaches for creating environmental balance in terms of Zero Waste and Zero Carbon; (2) propose the Sustainable Supply Chain Management approach with a focus on the efficient management of Green Logistics and Supply Chain Management in order to becoming a Zero Waste and Zero Carbon organization; and (3) assess the preliminary benefits on the environment and social communities, resulting from Charoen Pokphand Group's environmental policy in accordance with Tesco Lotus's Zero Waste and Zero Carbon policy.

The results show that Tesco Lotus has implemented a wide range of Green Supply Chain Management measures, covering all dimensions throughout the cycle. They include packaging design, manufacturing, transportation, consumption, reverse logistics, and recycling. This confirms that the company is committed to help alleviate the environmental problems in the hypermarket supply chain, especially Zero Waste and Zero Carbon policies.

The future environmental management measures of Tesco Lotus may include (1) Green Logistics, consisting of core logistics activities associated with hypermarket business: Green Distribution and Green Reverse Logistics; and (2) Green Retailing including Green Procurement, Green Retail Store and Green Image.

### Thai Optical Group Public Company Limited

**Year** : 2020

Title : Carbon Footprint for Organization Verification Project 2019: Thai Optical Group Public Company

Limited

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Phairat Usubharatana

#### Abstract:

Nowadays, Climate change and Global Warming are regarded as problems which impact on the earth and environment drastically and more and more increasingly. Global Warming is primarily a problem of too much Greenhouse gas emissions from human activities in the atmosphere. Carbon Footprint for Organization is the concept for calculating the amount of Greenhouse gases produced from human activities for the purpose of measuring direct and indirect Greenhouse gases emission. Carbon Footprint for Organization is also a measurement method of Global Warming impacts caused by cooperate operations and gas emissions of your organization is measured in unit of CO<sub>2</sub> equivalent. Through this measurement, the organization could find out the release amount of Greenhouse gases.

THAILAND GREENHOUSE GAS MANAGEMENT ORGANIZATION (PUBLIC ORGANIZATION) is responsible for projects concerning Climate change and Global Warming

in Thailand. The organization has developed Thailand CFO Verification system to assure the consistency between CFO assessment of each organization and the 5 key principles; Relevance, Completeness, Consistency, Accuracy Transparency, including good Data quality management and be in accordance with Carbon Footprint for Organization assessment in Thailand.

#### Conclusion

On 6<sup>th</sup> August 2019, Carbon Footprint for Organization assessment of Thai Optical Group Public Company Limited has been verified at level of <u>Limited assurance</u>. Moreover, operational Control is selected as an approach for assessment. In conclusion, the result of Carbon Footprint for Organization is <u>PASS</u> and accords with the 5 key principles. It also performs good data quality management and be in same line with the concept of Thailand Carbon Footprint for Organization assessment.

# Thailand Greenhouse Gas Management Organization (Public Organization)

**Year** : 2020

Title : Thailand CO<sub>2</sub> Scenario

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Bundit Limmeechokchai

#### Abstract:

Thailand is a member of United Nations Framework on Climate Change (UNFCCC). One important obligation of the members is to prepare the greenhouse gas (GHG) inventory, submitted to the UNFCCC, in accordance with their readiness and potential. However, in order to improve the countries' efficiency on mitigation action, UNFCCC under the Paris Agreement have established the transparency framework, aimed at implementing understanding, clarifying and monitoring of the implementation and support on climate change under the Paris Agreement. Each Party is required to submit the Biennial Transparency Report (BTR), and the first report shall be submitted by December 31st, 2024. The report shall be contained the national GHG inventory, necessary information to monitor the progress and achievement of the National Determined Contributions (NDC), and information on adaptation and support.

In accordance with the requirement of the Conference of the Parties of the Paris Agreement, the national GHG inventory is prepared based on the method published in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories by the Intergovernmental Panel on Climate Change (IPCC). Therefore, in order that the Thai

agencies can operate in line with national development goals, as well as reveal responsible for global environmental problems efficiently, it is crucial that all sectors need to develop their knowledge, understanding and skill to support preparation of national GHG inventory in accordance with the organizations missions.

Thailand Greenhouse Gas Management Organization (Public Organization) as a supporting agency for managing GHGs is necessary to develop the GHG inventory training course for Thailand in line with the IPCC practice, supporting implementation of Thailand's NDC in three sectors: Energy, Industrial Processes and Product Uses (IPPU), and Waste management. The components of training course include 1) curriculum and lesson plans, 2) training materials and handouts, 3) examination, 4) manuals, 5) calculation tools, and 6) list of experts. All documents and tools are reviewed by a panel of experts outside the working groups and trained to the relevance agencies at least 1 time. Then, this training course will be provided as practical training for long term capacity building to the relevance agencies for supporting preparation of national GHG inventory.

## **Engineering**

## FiberHome International (Thailand) Co., Ltd.

**Year** : 2020

Title : The consultation project on antenna specifications testing HXPM12X22WWWW1721065033T2C

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Watchara Amasiri

#### Abstract:

This research was to present the testing result of the parameter of the antenna FiberHome-HXPM12X22WWWW1721065033T2C consists of VSWR Isolationand passive Intermodulation which is a major parameter before using the antenna. The standard of VSWR must be less than 1.5 dB and the value of isolation must be higher than 30 dB and passive intermodulation

must be less than 150 dB by testing the antenna inside the Anechoic Chamber and using the equipment consist of Vector Network Analyzer and PIM Analyzer.

As the testing of antenna results revealed that parameters of the antenna meet the standard criteria in all respects.

## **Engineering**

### **Department of Highways**

**Year** : 2020

Title : The analysis of highways network conditions to improve the efficiency of highways maintenance

budgeting 2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Uruya Weesakul

#### Abstract:

The Department of Highways is the main unit responsible for the nationwide highway network. Now there is a distance approximately 74,786.100 kilometers (per 2 lanes) in responsibility. The maintenance roads are divided into 73,165.825 kilometers, which consist of approximately 66,711.865 kilometers of paved surfaces, 6,406.886 kilometers of concrete and 47.074 kilometers of gravel, and also construction and maintenance roads. 1,614.275 kilometers (road surface account data as of December 14. 2020). In the past the Department of Highways had the implementation of the road maintenance management system by using the TPMS Budgeting Module, is a program that analyzes the methods and budgets used in road maintenance from the damage condition since 2006 in order to consider making road maintenance plans. Then, in 2009, it was developed as a TPMS Optimization Model to develop the World Bank guidelines. The data analyzed includes the international roughness index data (International Roughness Index: IRI), rutting data (Rutting), Mean Profile Depth (MPD) data, as well as various types of damage data obtained from the survey and analysis of highway conditions. Paved and concrete surfaces and information on pavement photographs. All data is stored in a database with

geographic information (GIS) displayed in the highway network information system (Roadnet) that can be used with ease, speed and accuracy. By providing information services to other agencies or linking with other information systems within the Department of Highways And has been continuously utilized until now.

In this regard unable to perform operations to yield maintenance management plan results. Highway and the budget required to complete 74,786.100 kilometers (distance per 2 lanes) within 1 year due to time limitations, number of tools, equipment obtained and procurement budget. Therefore, the 3-year long-term operation plan has been prepared and is now in the process of operating for the second year with a joint consultant group, namely Chulalongkorn University Transportation Institute, Thammasat University Research and Consultancy Institute and STS Engineering Consultants Co., Ltd. are a group of appropriate advisors and is considered to be an operator. The operations are planned under the key criteria for selecting the routes to be surveyed each year.

**Keywords**: Survey and Assess, Highway road network, Highway maintenance budget

### **Department of Business Development**

**Year** : 2020

Title : Business strengthening activity providing logistic service for special economic zone (SEC and EEC)

in digital age

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Jirapon Sunkpho

#### Abstract:

In this project, it is concerned with the activity management for business capacity building of EEC and SEC logistic service in digital age. Moreover, it aided the entrepreneurs to gain knowledge and understanding including of seeing importance with benefits for the business management services in technology usage. Then, it enabled to practice for information analysis, and report designs as being the business plan information with good effectiveness. On the same way, it stimulated the entrepreneurs to have the concept idea by bringing the IT technologies to adapt in their own organizations with the activity operation constantly to gain the most benefits. Finally, it has the recommendations to promote the technologies and the IT information usage with the business management as this following:

(1) Due to the altering of the logistic business context, it affected to the adaptation of logistics and transportation services in current day including of the business alteration with the transportation and logistics system effects and the trends of business changes with the same effects. Therefore, the agency must have the role to boost up the business strengths by studying from the new patterns and methods to promote and develop the logistic service businesses. In this case, it will contribute to the digital age's situation in the good direction for short terms and long terms in the near future.

- (2) The government agency must have the guidelines to make the combination of the business development for the logistic services in the same ways obviously. Then, the entrepreneurs will gain the knowledge and the benefits for the business management in all aspects including of perceiving the strong business movements, coping with problems and adapting with current economics situations with professional ways.
- (3) The operational training is as one of the activities to promote the knowledge to the business as the good ways. Thus, the providing of the headings or the curriculums of training must be directly to the goals and conform to the target groups as well as the durations of training with the methods to the activity management. Luckily, in this project it represented of the excellent performance, except for the project to be more beneficial in concrete ways with the additional supporting of the depth counseling at the establishment. With this case, it should have minimally for 4 Man-day from the experts to the real IT information usage for the entrepreneurs in their own organizations so that it will be capable to make information analysis and bring the strategy planning to the cost reduction and the business incentive increase for the foreign logistic business competitiveness in the future.

### Thai Credit Guarantee Corporation

**Year** : 2020

Title : Development of Academic Article as a public policy communication tool for Thai Credit Guarantee

Corporation (TCG)

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Nopporn Ruangwanit

#### Abstract:

Development of Academic Article as a public policy communication tool for Thai Credit Guarantee Corporation (TCG) is the project Thai Credit Guarantee Corporation (TCG) to describe the efficiency, impact on economics scheme and to identify pros and cons of each guarantee system on both Thailand and international context and to construct the guideline to develop and enhance Thailand's credit guarantee system to align with consumer needs.

For the study process, this project start with literature review on paper, article, and publication related to process and dynamic of guarantee system as a secondary data to develop the framework for academic article on research question "Which guarantee system suit with Thailand context".

To answer this question, we use 4 criteria to choose the countries to review including

- 1. Share of SMEs Loan Guarantee
- 2. Economic Additionality
- 3. Credit Additionality
- 4. Cover both developed and developing countries

The results for countries selection as below

- 1. Korea
- 2. Hungary
- 3. Japan
- 4. Poland
- 5. Turkey

The results of the study has reveal the dynamic and economic impact of each credit guarantee system in various context. To be conclude the most suitable for Thai context in economic recession is individual guarantee scheme and for economic stability is portfolio guarantee scheme. However, it is noticeable that in present individual guarantee scheme process can be faster and equal to portfolio guarantee scheme enabler by technologies such as alternative credit scoring, automate platform.

Furthermore, the researcher also suggests a communication guideline to build awareness and public policy communication strategies under the objective to shift TCG brand position from near-the-end of customer journey to at-the-first of customer journey.

### **Department of Business Development**

**Year** : 2020

Title : Service Business Potential Development Program 2020

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Peera Charoenporn

#### Abstract:

The service sector takes president in the Thai economy regarding economic value included GDP proportion, number of businesses, and employment rates. The government has the policy to develop capabilities of Thai firms by enhancing and strengthening the foundation economy to be a vital factor driving job creation, income generation, and subsequently, sustainable economic growth. The Department of Business Development impels the sector's marketing and promotes its development. Thus, the Service Business Division had organized activities to develop business prospects towards professional service providers under the project "Enhancing the potential of high-value service enterprises." This including: 1) Smart Professional Entrepreneurs (DBD-SPE) to increase the potential of business operations systematically, enhance professional business management, and leverage business competitiveness and sustainable growth. The SPE covered five areas: marketing, finance, corporate governance, human resource management, and innovation. 2) Advance Creative Marketeer (DBD-ACM) to develop Thai entrepreneurs to be the future leaders in modern marketing, enable service providers to implement new marketing strategies, and effectively enlarge their markets, as well as to create more trade opportunities and broaden local and international business networks.

In collaboration with Thammasat University Research and Consultancy Institute, it was found that there were thirty-six and twenty-three entrepreneurs who have developed to meet the criteria under the SPE and the ACM, respectively. Besides, three entrepreneurs in each of the pursuits have been assessed and selected for "The Best Practice" in outstanding, very good, and good performances. This was to motivate and encourage other entrepreneurs to engage in the process of development towards the Smart Enterprise.

### **Industrial Promotion Center Region 8**

**Year** : 2020

Title : Activities to increase the capability in agricultural and food industries leading to "Smart Factory"

City : Suphan Buri

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Associate Professor Dr. Thira Jearsiripongkul

#### Abstract:

Industrial Promotion Center Region 8 (Department of Industrial Promotion) creates activities to increase the capability in agricultural and food industries leading to "Smart Factory". The digital technology and engineering has been used to improve the manufacturing process while the smart platforms or applications are introduced to 5 factories (SMEs) as sample. The results show the capability to reduce the labor costs and the errors in working processes, e.g., note of data, mistype information, data

communication, and purchase/order system. Some platforms or applications, e.g., Advanced Manufacturing system, ERP, and Dashboard are used for implementation. For example, the link between warehouse and shopping-online platform, the quality control using image processing, and track and trace data using Dashboard system are introduced. Those 5 samples with digital technology or platforms will be carefully selected to show as success case later for Industrial Promotion Center Region 8.

### National Metal and Materials Technology Center

**Year** : 2020

Title : SDG12 indicators monitoring web application extension

City : Bangkok

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Chol Bunnag

#### Abstract:

The project "Development of extension structure of the monitoring and evaluation system of the promotion of sustainable consumption and production in Thailand" is a part of the project "Development of the monitoring and evaluation system of the sustainable production and consumption promotion of Thailand: Phase 3", initiated by the Office of Environmental and Natural Resource Policy and Planning (ONEP), Ministry of Natural Resource and Environment (MoNRE). The consulting agency of the phase 3 is the Thailand National Metal and Materials Technology Center (MTEC), under the National Science Technology Development Agency (NSTDA). MTEC continued the development of the system for monitoring and evaluation for indicators of Sustainable Development Goal 12 (SDG 12) from the previous 2 phases to cover the 13 indicators of the Goal. Thammasat University Research and Consultancy Institute (TU-RAC), as the consulting agency of the project in Phase 2 who studied the calculation methods and improve the database system of 5 SDG-12 indicators, therefore, collaborated with MTEC in reviewing the calculation methods in accordance with the metadata proposed by the United Nations (UN), improving and adding more details into the database so that the data can be input into the system in accordance with the metadata, and updated the data in the database system.

This project was operated as follows. First, the researchers analyzed and designed the additional structure of the database system for the additional 5 SDG12 indicators in phase 3, using the System Development Life Cycle (SDLC). Data input templates were designed to collect all relevant data for the calculation of each indicator. The structure of the database was designed to be consistent and connected to the database structure of the Phase 1 and 2 of the projects. In addition, data of all 13 SDG-12 indicators were collected, updated and input into the database so as to obtain the most updated calculation results of the indicators.

The System Development Life Cycle consists of the following steps.

- Analysis: Analyzing the existing working system to seek and identify problems.
- 2. Design: Designing the system.
- Implementation : Construct and develop the system
- 4. Testing: Testing the use of the system.
- Deployment : the system is launched and operated.
- 6. Maintenance: the system is maintained.

After collecting and input data of all 13 indicators, it is found that only data of some of the indicators, i.e. 12.1.1, 12.2.1, 12.2.2, 12.3.1.a, 12.3.1.b, 12.4.1, 12.5.1, 12.6.1, 12.a.1, and 12.c.1 were reported back. The other 4 indicators had to rely on the existing data and data from relevant documents as they were not reported yet by the responsible organizations. The main reason for the difficulties in the data collection for the indicators was because new indicators and/or updated or new metadata were announced by the UN. The indicators with updated indicators and/or metadata were 12.4.2, 12.7.1 and 12.b.1. As a result, the responsible organizations had to learn about the new indicators and their metadata, and collect relevant indicators, as if these

indicators were new. The indicator 12.b.1 was still being developed; therefore, data of this indicator was not available at the moment. Moreover, the establishment of the Ministry of Higher Education, Science, Research and Innovation (MHESRI) made data collection for indicator 12.8.1 even more challenging.

For the indicators that the responsible organizations lack the capacity for data collection, ONEP should collaborate with technical organizations and the responsible organizations in order to build the responsible organizations' capacity to collect and process the data, so as to ensure the availability of the indicators to track progress and trends of each target.

### **Industrial Promotion Center Region 10**

**Year** : 2020

Title : The Development of Palm Oil Business Management Information System

City : Surat Thani

Language : Thai

Publisher : Thammasat University Research and Consultancy Institute

Researcher: Assistant Professor Dr. Suwan Juntiwasarakij

#### Abstract:

According to the project of IT development for Palm Oil industry management, the findings showed that the entrepreneurs realized benefits of adopting Business Intelligence (BI) technology for cost reduction and operation performance. That is, report design was the entrepreneurial key. Also, the findings found that the entrepreneurs were short of insights towards utilizing digital technologies in support of business management and effectively storing business operation information. In this regard, BI was the solution for quality reports and productivity forecast. Upon the project completion, the participated entrepreneurs reported highly satisfied at 94.44% on the staff's technical knowledge and ability, mentorship skills, and responsiveness to questions and details. In sum, the economics return of the projects resulting from the cost reduction, the productivity, and the increase in sales of the six entrepreneurial portfolios was projected at THB 1,656,800.

As a result, participated entrepreneurs was able to process large amount of annual report at minimal cost by utilizing BI tools. In addition, the tools enabled the entrepreneurs to plan effectively due to data analytics tools' friendliness. Unfortunately, the palm oil industry seemed to technologically lack of support from government and local authorities as 90 percent of the participated entrepreneurs were not aware of business intelligence technology. When compared with foreign players, these shortcomings would have impact towards the industry's health and competitiveness. Empowered with technical knowledge and skills, the entrepreneurs were inspired to continue adopting and apply the technology onto their business operations after the graduations.





## สำนักงานศูนย์วิจัยและให้คำปรึกษาแห่งมหาวิทยาลัยธรรมศาสตร์

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