



# Activities of Pillar 5

## Natural Product Drug Discovery Network

Under APAC Drug Alliance Expert Working Group (DA-EWG)

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6<sup>th</sup> APAC Conference, Tokyo, April 5<sup>th</sup>, 2017

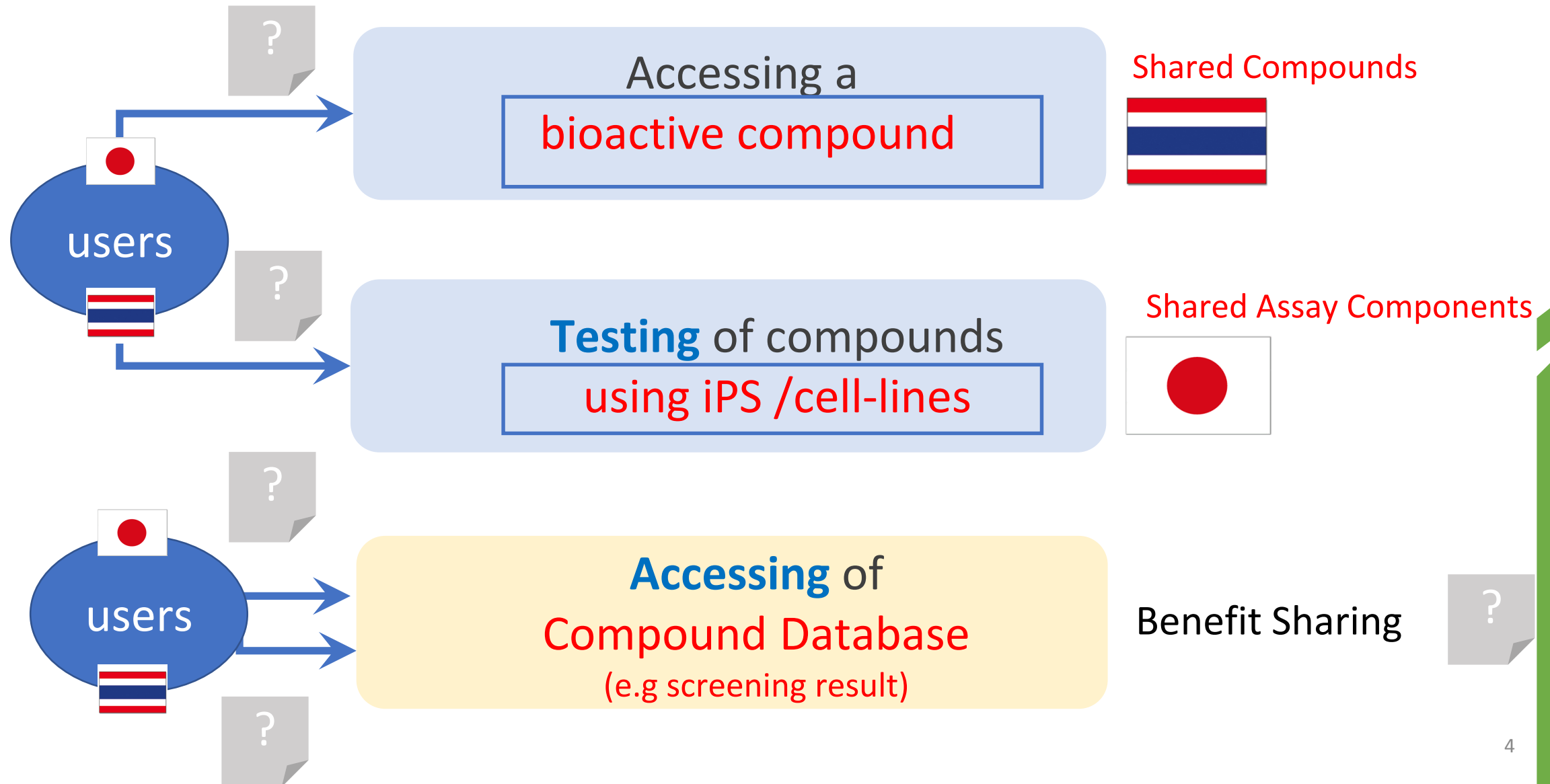
# Activity Summary

	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
China		Bilateral Meeting	<div>Bio US event</div> <div>All Member meeting</div>			<div>All Member meeting / Bio Japan events</div>						<div>All Member tele-conference/6<sup>th</sup> APAC(2017)</div>
Hong Kong												
India												
Korea					F to F meeting		F to F meeting					
Malaysia												
Singapore							Delegation					
Taiwan		Bilateral Meeting		Delegation/ Bio Taiwan								
Thailand							Delegation				Delegation	

# Towards Guidelines for cross-border transfer of natural bio-resources

The big challenge that lies ahead...

# Will NP screening be relevant to Nagoya Protocol ? Japan-Thailand case study





## Text of the Nagoya Protocol

### Article 2. Use of Terms

The terms defined in Article 2 of the Convention shall apply to this Protocol. In addition, for the purposes of this Protocol:

- (a) “Conference of the Parties” means the Conference of the Parties to the Convention;
- (b) “Convention” means the Convention on Biological Diversity;
- (c) “Utilization of genetic resources” means to **conduct research and development** on the genetic and/or **biochemical composition** of genetic resources, including through the application of biotechnology as defined in Article 2 of the Convention;
- (d) “Biotechnology” as defined in Article 2 of the Convention means any technological application that uses biological systems, **living organisms, or derivatives thereof**, to make or modify products or processes for specific use;
- (e) “Derivative” means a **naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity.**

# Parties to the Nagoya Protocol: Status



**JAPAN**

**SIGNED** 2011-05-11



**THAILAND**

**SIGNED** 2012-01-31



# The ABC's of ABS



- **Access** – users seeking access to genetic resources must:
  - Get permission from the provider country (known as Prior Informed Consent or PIC)
- **Benefit-sharing** – provider and user must:
  - Negotiate an agreement to share benefits resulting from the use of a genetic resource (known as Mutually Agreed Terms or MAT)
- **Compliance** – Nagoya Protocol creates obligations to:
  - Ensure compliance with MAT and national ABS legislation
  - Monitor the utilization of genetic resources
    - Checkpoints
    - Internationally recognized certificate of compliance

# Provisions of the Nagoya Protocol on ABS

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## National Focal Points (NFPs):

- Responsible for providing information on ABS, such as the requirements for gaining access to genetic resources



## Competent National Authorities (CNAs):

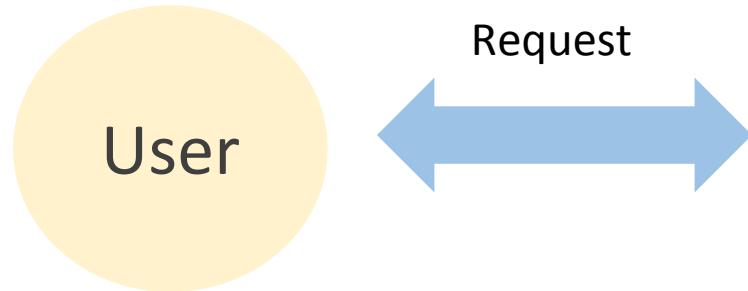
- Established by governments
- Responsible for granting access to their genetic resources
- Represent providers on a local or national level





Country A

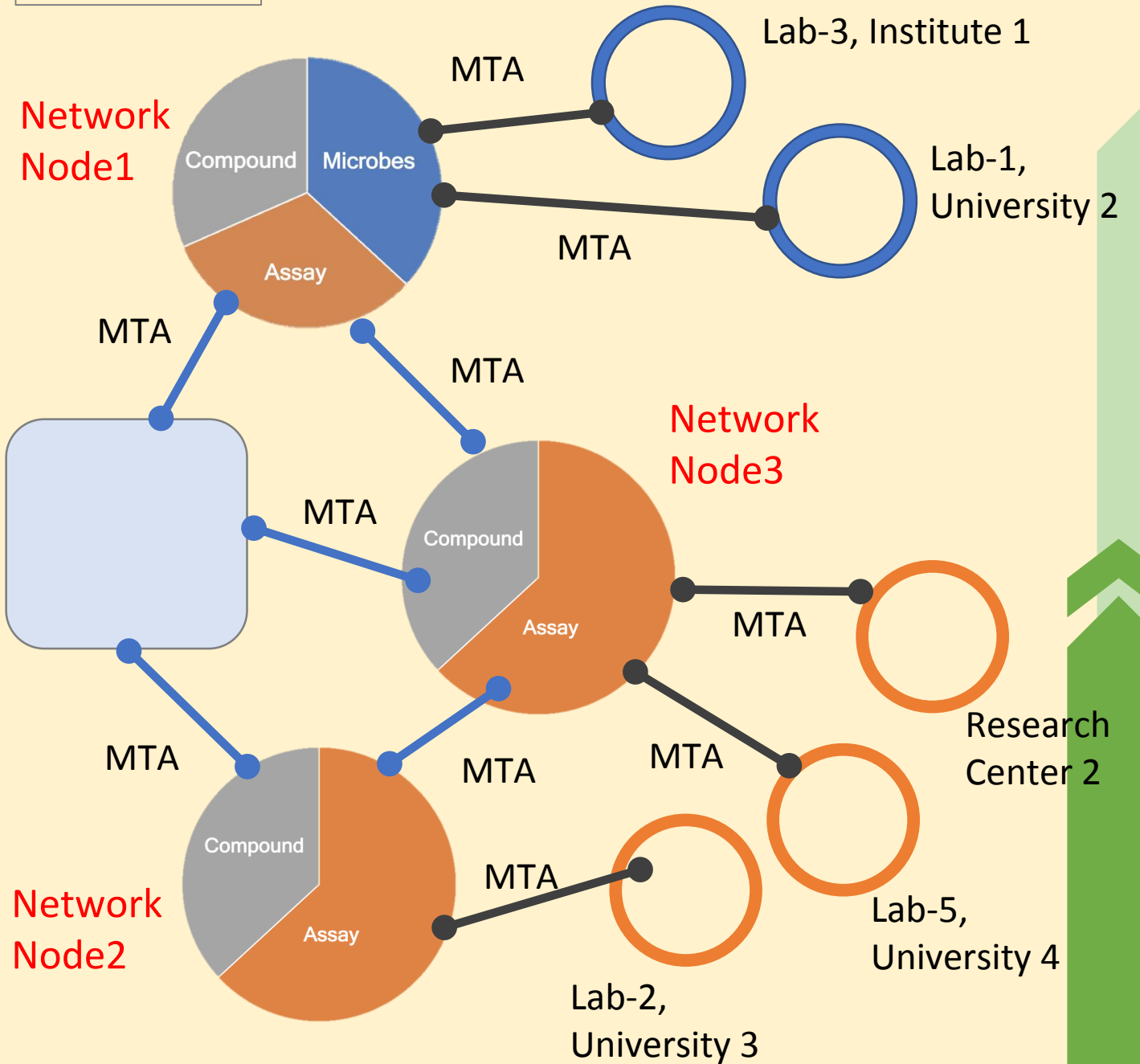
## An Ideal Flow of Bio-Resources, Information, and Benefits under the Network



Competent National Authority (CNA)

MTA : Material Transfer Agreement

Country B



Country A

# Aggregate Services Access Point (ASAP)

Country B

Network  
Node1

PA/MTA

MTA

Lab-3, Institute 1

MTA

Lab-1,  
University 2

1. Project  
Agreement  
(PA)

User

2. MTA

National  
Compound  
Database

Management &  
Coordination

PA/MTA

Network  
Node3

MTA

Research  
Center 2

MTA

Lab-5,  
University 4

PA/MTA

CNA

Compound

Assay

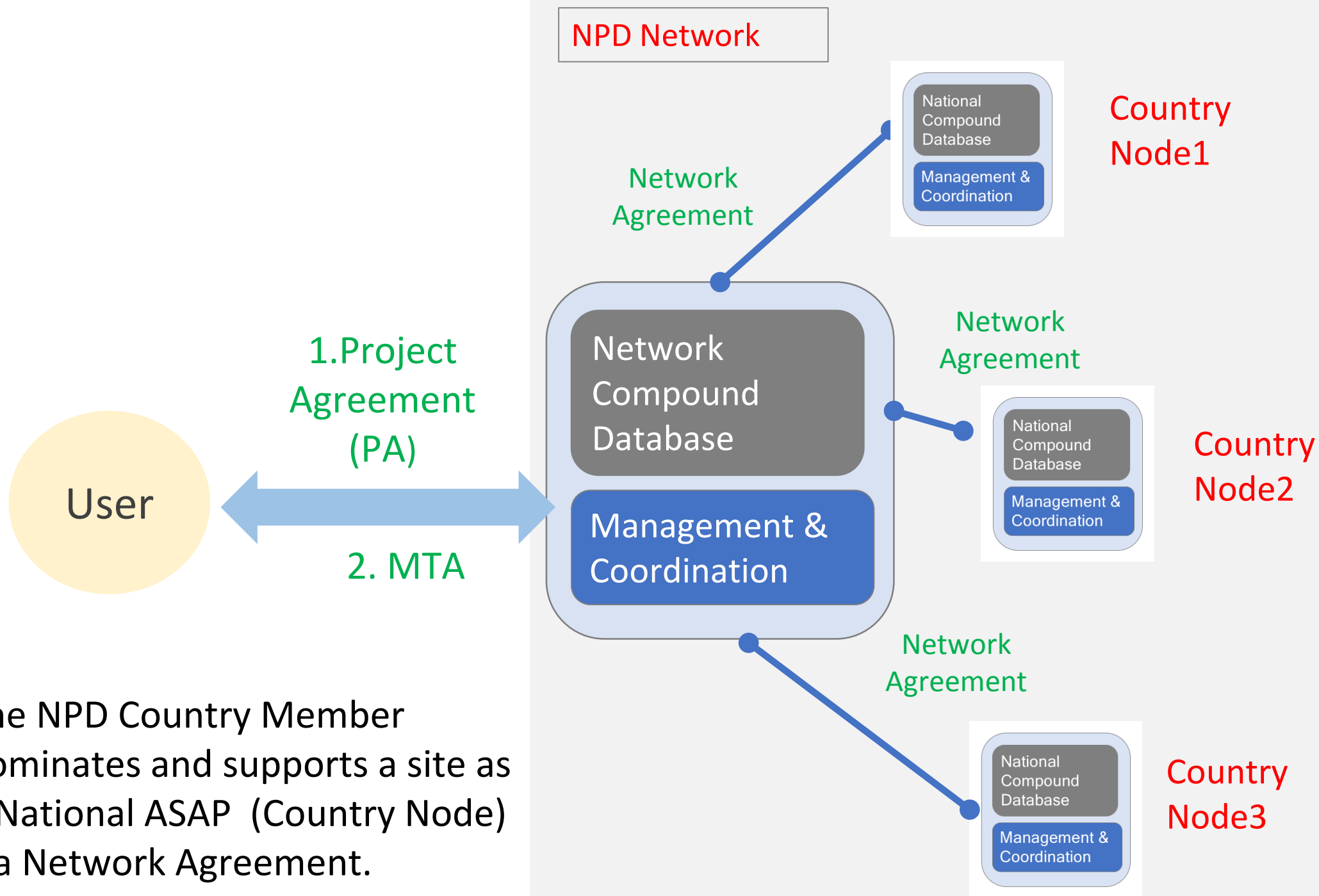
MTA

Lab-2,  
University 3

Network  
Node2

ABS-CH

- one-stop service
- simplify and facilitate the access



The NPD Country Member nominates and supports a site as a National ASAP (Country Node) via Network Agreement.

# Our Current Capacity and Aspiration for Collaborative Pilot Project

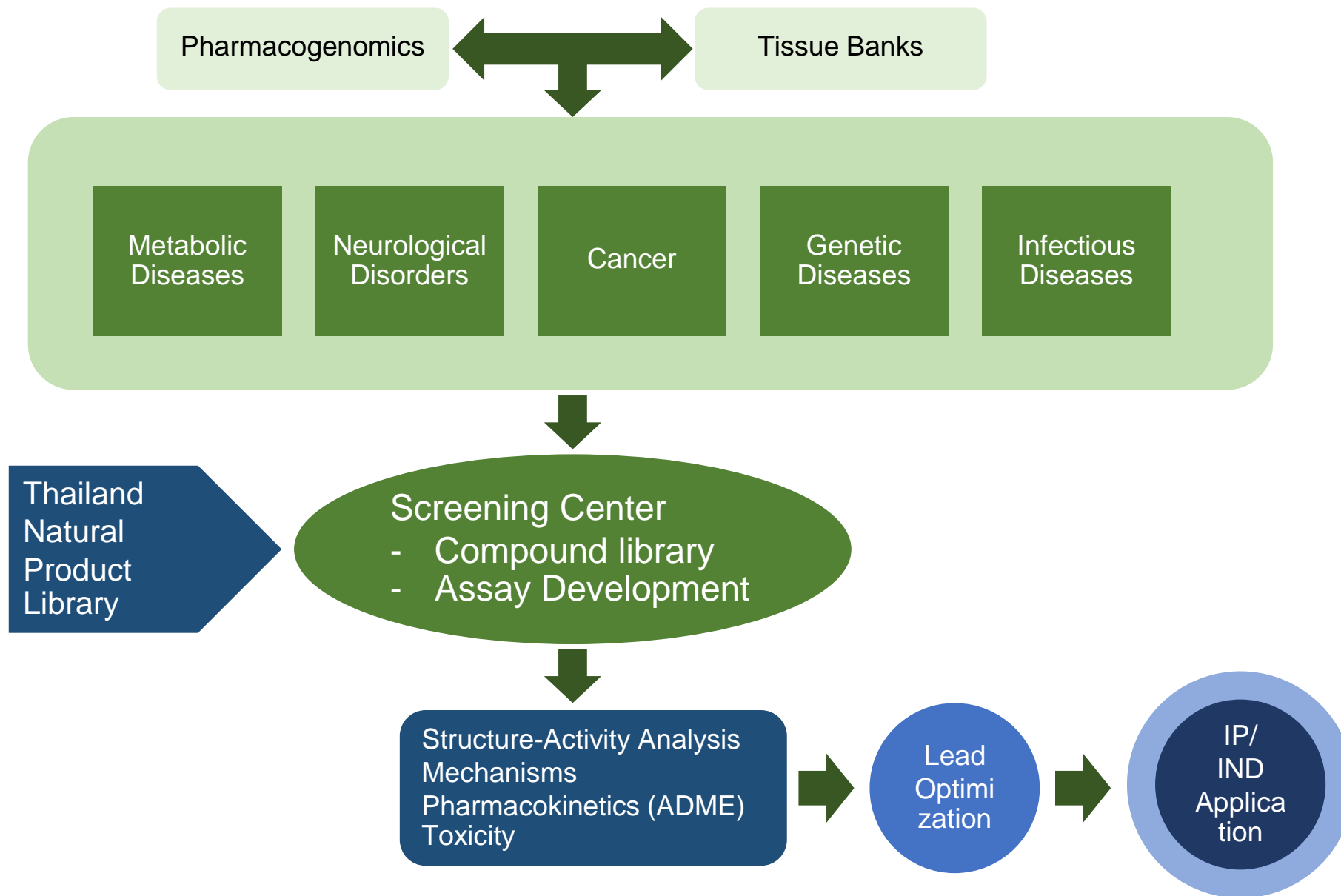
The first step towards realizing mutual potential...

A large white robotic arm is the central focus, positioned in a laboratory or industrial setting. In the background, a person wearing a white lab coat, a face mask, and safety glasses is working at a workstation. The scene is dimly lit, with the primary light source coming from the background, creating a professional and scientific atmosphere.

# Excellent Center for Drug Discovery

Inspired to make **LIFE** better.

# Model Workflow of ECDD





## Industrial Applications

TBRC serves as a non-profit center to preserve, provide and facilitate the coordination of exchange of biological information and resources and develop mechanisms enabled by information technologies to broaden access to biomaterials to the public and scientific community. TBRC also provide quality technical services and supports that meet international standard practices.

### Health and Medicine



TBRC offers top-quality cell cultures and microbial strains that produce authentic bioactive compounds for pharmaceutical, food supplement and cosmetic research applications.

- Bioactive compound
- Food supplement
- Probiotics and prebiotics
- Cosmetic

### Agriculture



TBRC offers a selection of microorganisms for agriculture research or industry e.g. Bio-control strains to control insect pests and plant pathogens or bio-fertilizer strains to digest agriculture waste.

- Bio-fertilizer
- Bio-control
- Plant growth promoter

### Food and Feed



TBRC is holding a wide variety of microbes that support manufacturing food and feed such as extremophiles, or lactic acid bacteria for fermented food, or pentosanase and heat-tolerant phytase producing *Aspergillus* sp. for feed processing, or bacteria strains for the production of DHAs, long/short chain fatty acid, or biopolymer.

- Food
- Feed
- Probiotics and prebiotics

# Proposed Activities in 2017-2018

Maximizing APAC's unique opportunity...

# Plan of Actions

- Completion of guidelines core elements (-November 2017)
  - Access
  - Benefit Sharing
  - Compliance
  - MTAs and DTAs (as appendices)
- Starting of pilot project(s) (-January 2018)
  - collaborative research / data exchange
  - include technology transfer and know-how sharing
  - exchange of personnel
  - seminars
- Bring more Asian members on board with NPDD