

“Barcode of Life”
Open Platform for Access &
Benefit Sharing of GR/TK

Pacific Academic Institute for Research (PAIR)
Pacific Patent Services (PPS)

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DNA Barcode ?



- “DNA bar-coding” is a way to identify species using a very short genetic sequence as the way a supermarket scanner distinguishes products using the black stripes of the Universal Product Code (UPC)
- Allows non-experts to identify species in a short of time without a trained taxonomist.
- The Convention on Biological Diversity (CBD) strongly encourages the use of DNA barcodes in the management of biodiversity.

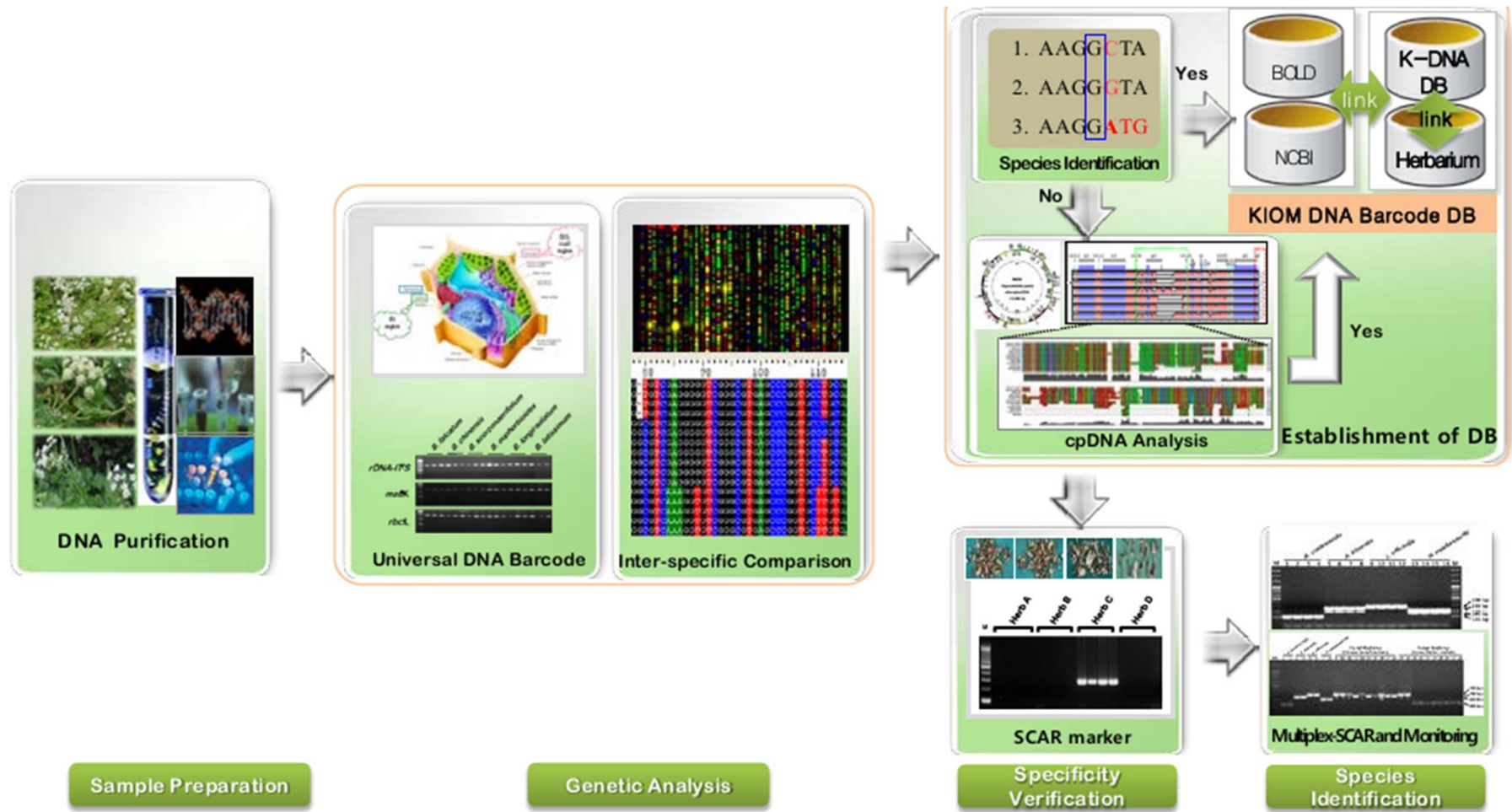
DNA Barcoder of the Future ?



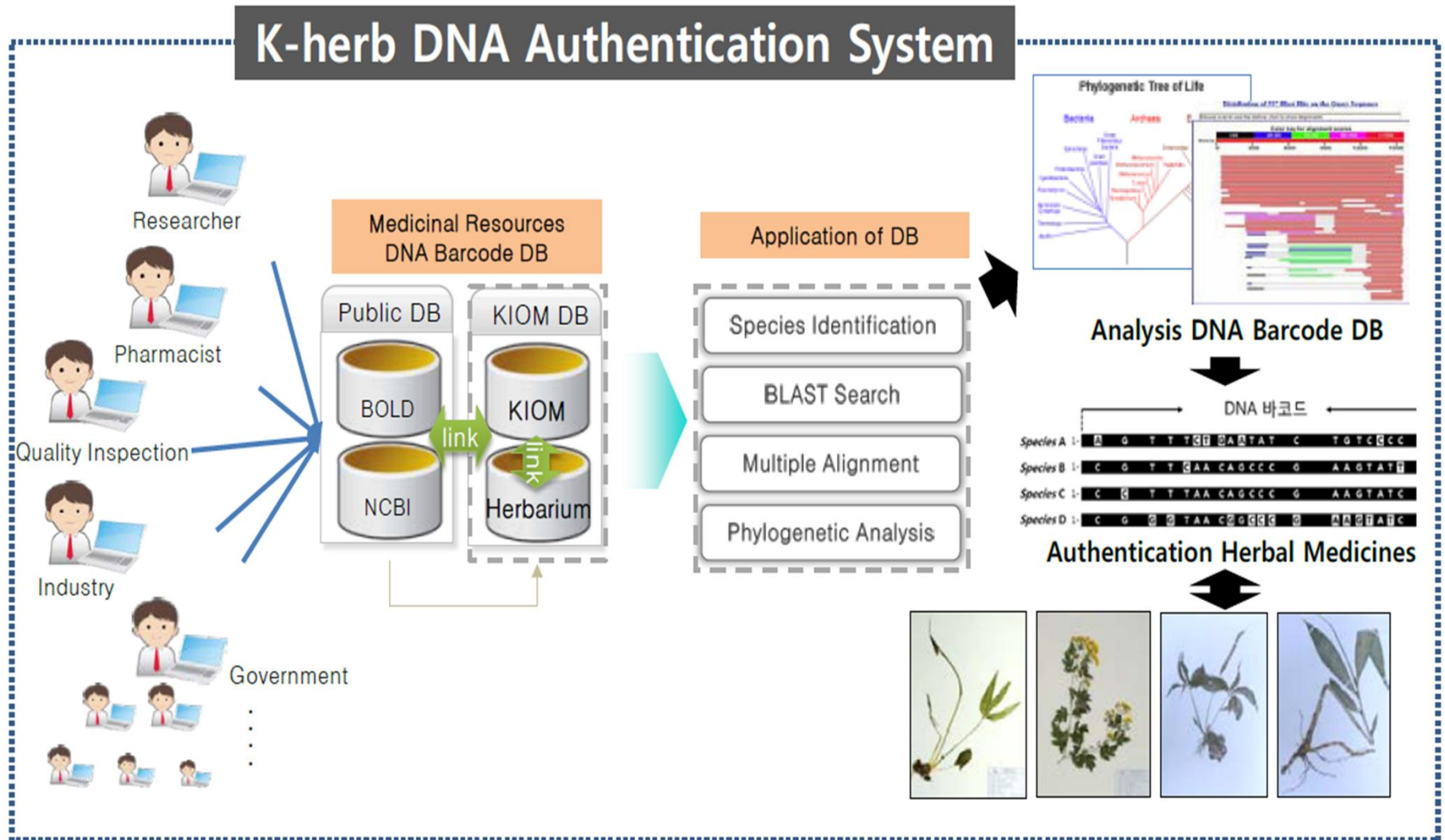
May be.....

- A taxonomic GPS
- Link to reference database
- Usable by non-specialists.

DNA Bar-coding and DB Construction



Overview of DNA Authentication System



DNA Barcode Consortium & DB

- Consortium for the Barcode of Life (CBOL)
- European Consortium for the Barcode of Life (ECBOL)
- International Barcode of Life (iBOL)



◆ Barcode of Life Database (BOLD) System



ACCESS FOR ALL

BOLD is freely available to anyone with interests in DNA barcoding, anywhere, anytime



FACILITATING RESEARCH

BOLD aids the assembly of records that meet the BARCODE standards set out by the global community



GLOBAL COLLABORATION

BOLD's web-based delivery and flexible data security model make it well positioned to support projects that involve broad research alliances



SECURITY

BOLD keeps submitted data password protected until it is ready for publication.

WWW.BOLDSYSTEMS.ORG

BOLDSYSTEMS

DATABASES

IDENTIFICATION

TAXONOMY

WORKBENCH

RESOURCES

LOGIN



DATA PORTAL

A data retrieval interface that allows for searching over 1.7M public records in BOLD using multiple search criteria including, but not limited to, geography, taxonomy, and depository.



EDUCATION PORTAL

A custom platform for educators and students to explore barcode data and contribute novel barcodes to the BOLD database.



BIN DATABASE

A searchable database of Barcode Index Numbers (BINs), sequence clusters that closely approximate species.



WORKBENCH

A data collection and analysis environment that supports the assembly and validation of DNA barcodes and other sequences.

5,951k

Barcodes

543k

BINs

188k

Animal Species

66k

Plant Species

21k

Fungi & Other Species

Animals: 432,993 Public BINs

- Acanthocephala [58]
- Annelida [6526]
- Arthropoda [374357]
- Brachiopoda [35]
- Bryozoa [286]
- Chaetognatha [66]
- Chordata [30560]
- Cnidaria [991]
- Cycliophora [0]
- Echinodermata [1756]
- Gnathostomulida [8]
- Hemichordata [4]
- Mollusca [15284]
- Nematoda [642]
- Nemertea [253]
- Onychophora [128]
- Platyhelminthes [625]
- Porifera [464]
- Priapulida [2]
- Rotifera [687]
- Sipuncula [106]
- Tardigrada [154]
- Xenoturbellida [1]

Other Life: 3177 Public BINs

- Heterokontophyta [373]
- Rhodophyta [2804]

iBOL Central Nodes:

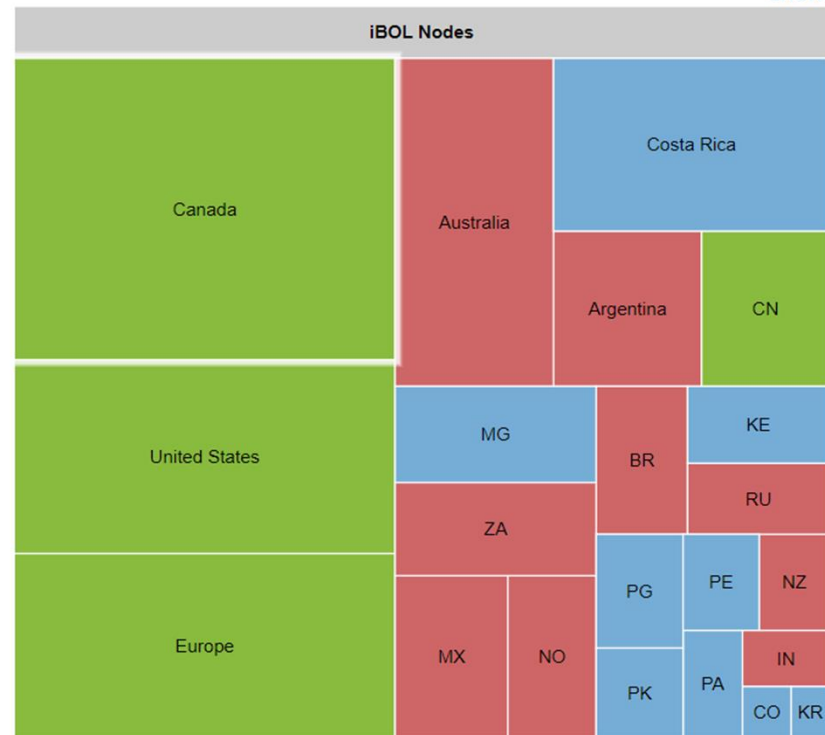
- Canada [77029]
- China [13682]
- Europe [47713]
 - France [6592]
 - Finland [10981]
 - Germany [19991]
 - Netherlands [1525]
 - Portugal [1430]
 - Spain [4460]
 - United Kingdom [2734]
- United States [49319]

iBOL Regional Nodes:

- Argentina [15501]
- Australia [35057]
- Brazil [9054]
- India [3314]
- Mexico [12366]
- New Zealand [4614]
- Norway [9815]
- Russia [6953]
- South Africa [12472]

iBOL National Nodes:

- Colombia [1766]
- Costa Rica [32015]
- Kenya [7337]
- South Korea [1443]
- Madagascar [13016]
- Pakistan [5279]
- Panama [4373]
- Papua New Guinea [6651]
- Peru [4944]



PW ??

What Do We Do?

MISSION

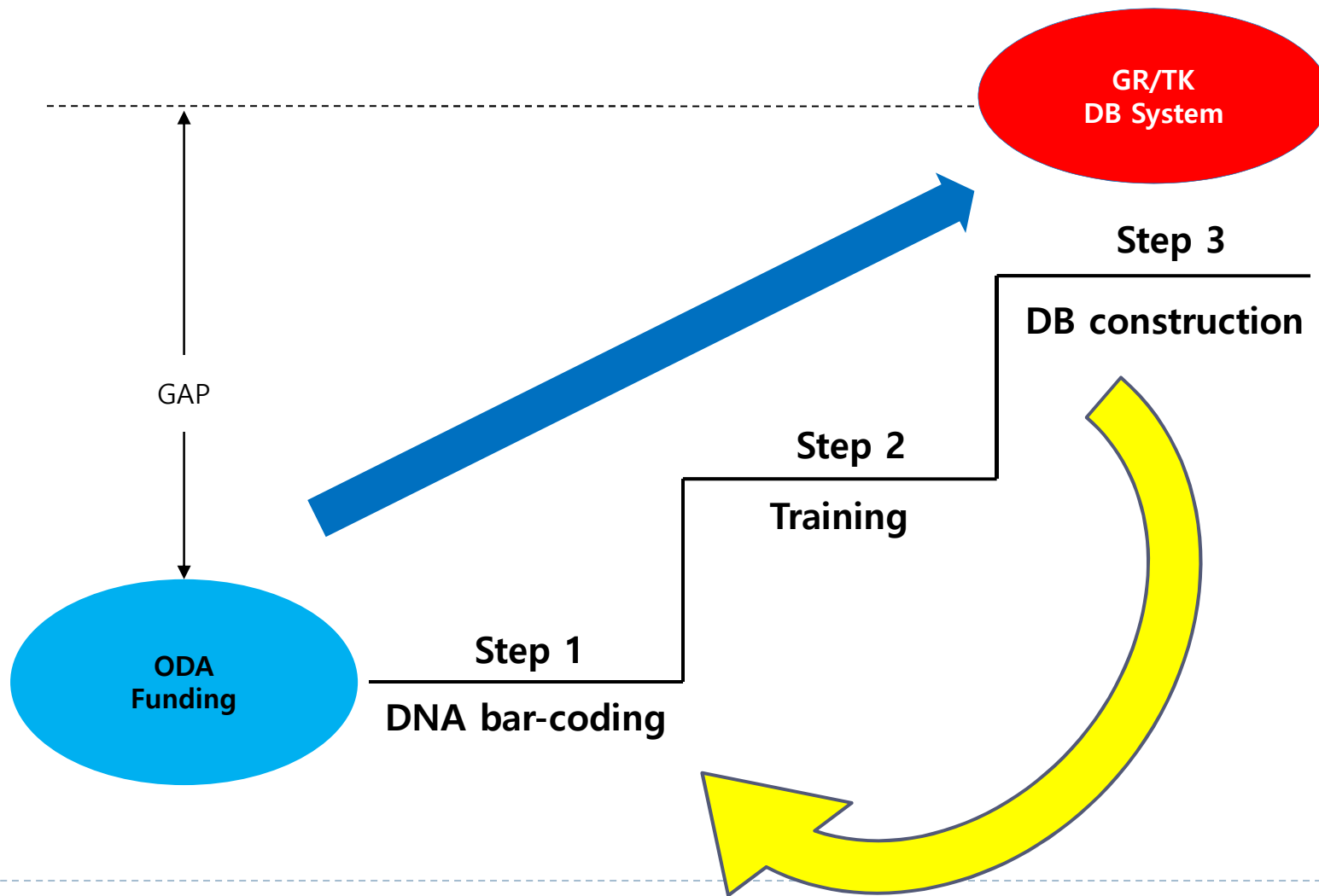
To Establish an Open-Platform for GR/TK Business for Palau



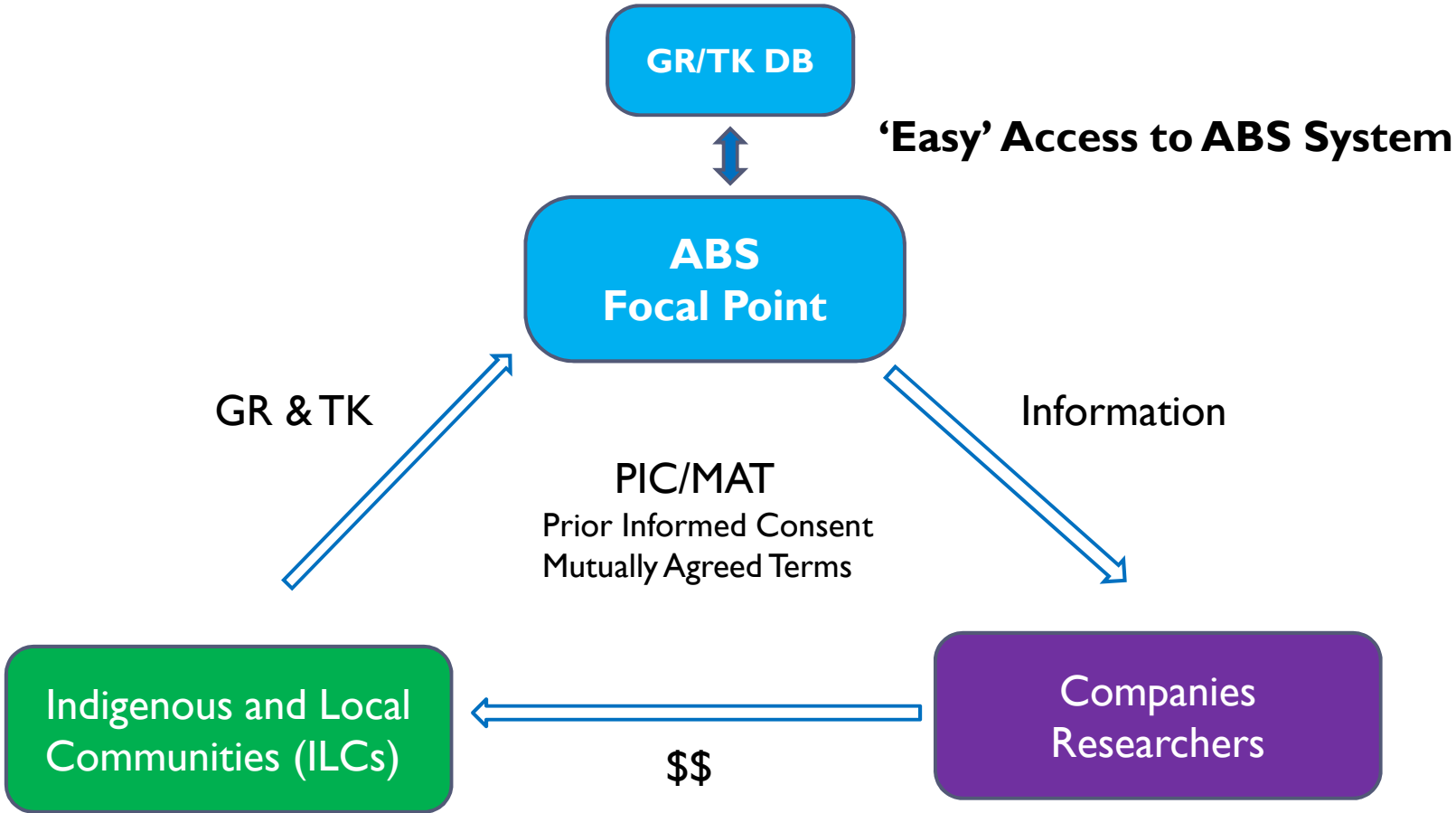
VISION

To Establish an integrated GR/TK DB System

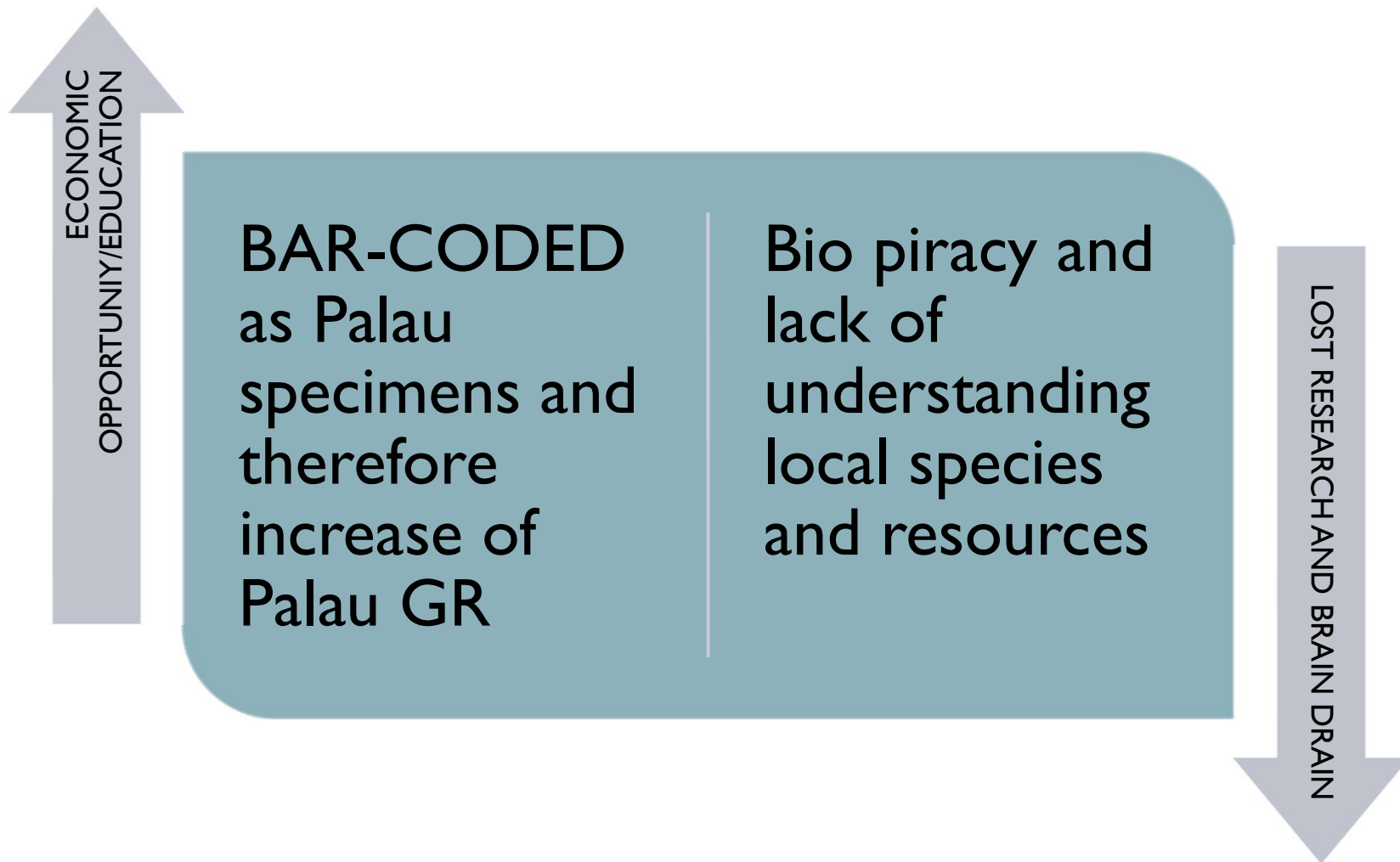
How Can We Do?



What is the Role of GR/TK DB

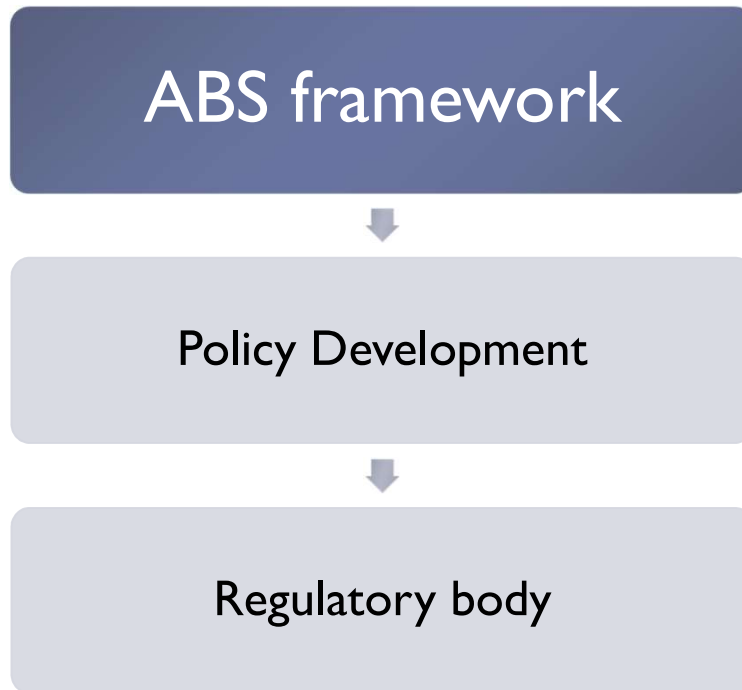


INVERSE RELATIONSHIP CREATED BY DNA BARCODING

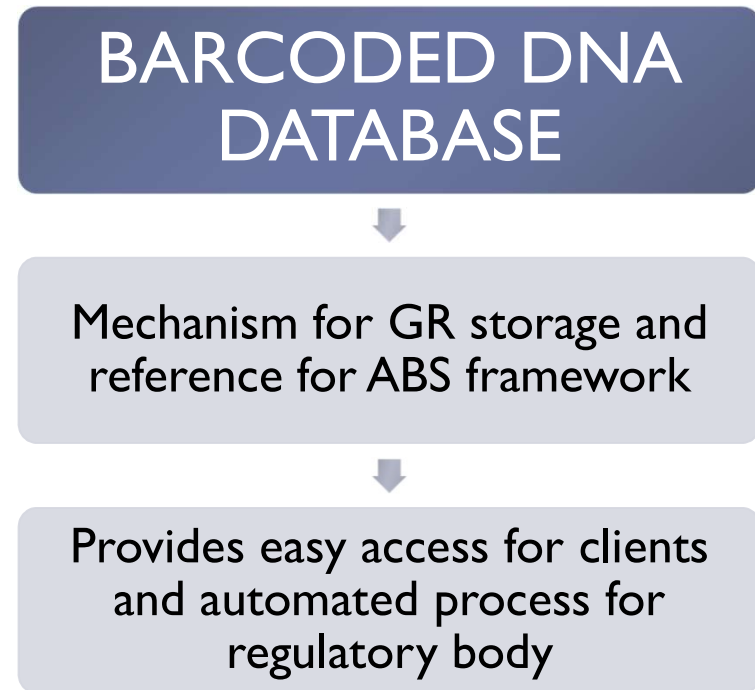


INDEPENDENT PROCESS BUT DRIVEN BY MUTUAL BENEFIT

GOVERNMENT PROCESS



ACADEMIC PROCESS



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