

**Establishing One Health Lab Network,  
Promoting and Implementing Bio-risk  
Management Practice in **Academic Institution**  
in Indonesia: The Challenges**

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# OUTLINE

- Background
- The Establishment of One Health Lab. Network
  - ✓ Scope of work of One Health Lab. Network
  - ✓ Desktop assessment for membership
  - ✓ OHLN members
- Roles of university laboratory in implementing bio-risk management and the challenges
- What to do in the up coming year?
- Conclusions

# Background

- **Indonesia is a multi-complex country**

17,504 islands, 700 dialects, 33 provinces, 262,5 million population

- **Migration of people and animals is increase every year locally and globally** Spreading of diseases such as TB, Dengue and Avian Influenza (H5N1), Anthrax, Rabies etc.

- **Indonesia has many BSL-2 and trend to build BSL3s, including in universities (both human and animal laboratories)** Needs more safe and secure lab practice and human resources

- **Zoonotic, Emerging infectious diseases outbreak, and AMR issues are increasing**  
Lack of capacity to identify and detect the pathogens, limited human resources, collaboration and networking







# THE ESTABLISHMENT OF ONE HEALTH LABORATORY NETWORK (OHLN)

“Linking University Laboratories to support the National Strength to Identify and Detect Zoonotic Disease and (Re) Emerging Infectious Diseases (EID) Pathogens”

## SCOPE OF WORK

1 Linking university laboratories

1

2 Provide training for laboratory personnel

2

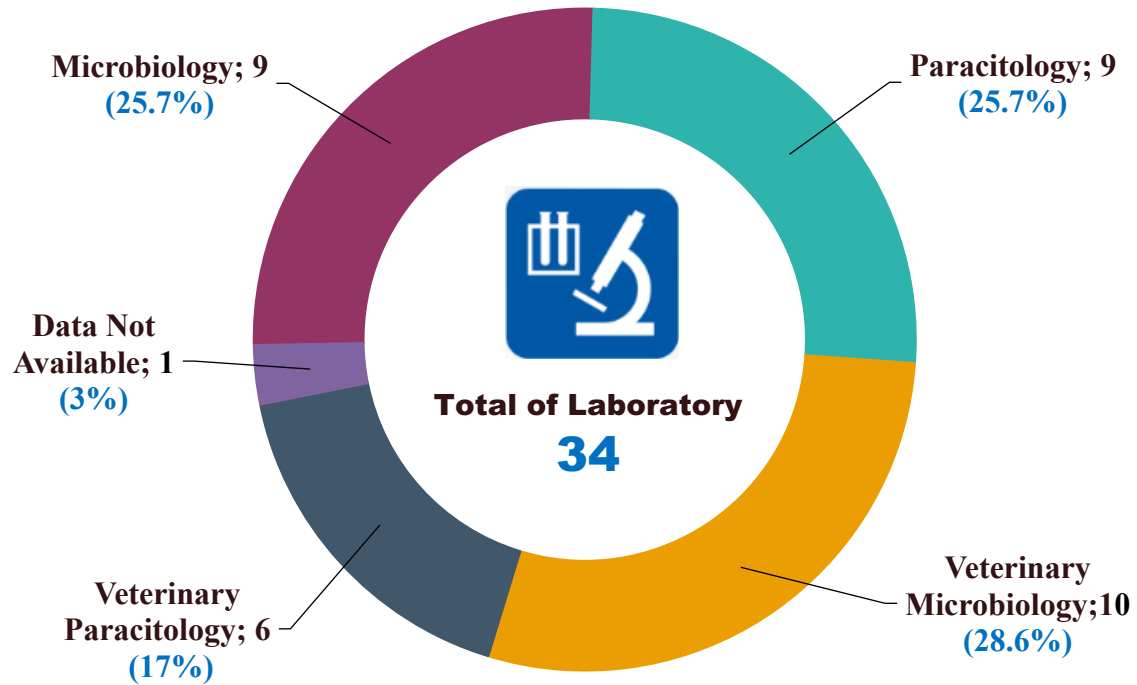
4 Promoting laboratory biorisk management practice

4

3 Promoting Laboratory Quality Assurance

3

## OHLN DESKTOP ASSESSMENT LABORATORY LIST



## COMMENTARY

Of 35 proposed laboratories, due the lack of responsiveness of faculty/laboratory member, **1 laboratory (3%)** are not collected their data (parasitology veterinary laboratory).

FM UI, FM Padjadjaran Univ, FM Gadjah Mada Univ, FM Airlangga Univ, FM Brawijaya Univ, FM Udayana Univ, FM Hasanuddin Univ,

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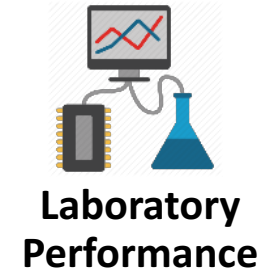
FVM Bogor Univ, FVM Gadjah Mada Univ, FVM Airlangga Univ (2), FVM Brawijaya Univ, FVM Udayana Univ (4), FVM Syiah Kuala Univ

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## DESKTOP ASSESSMENT CRITERIA



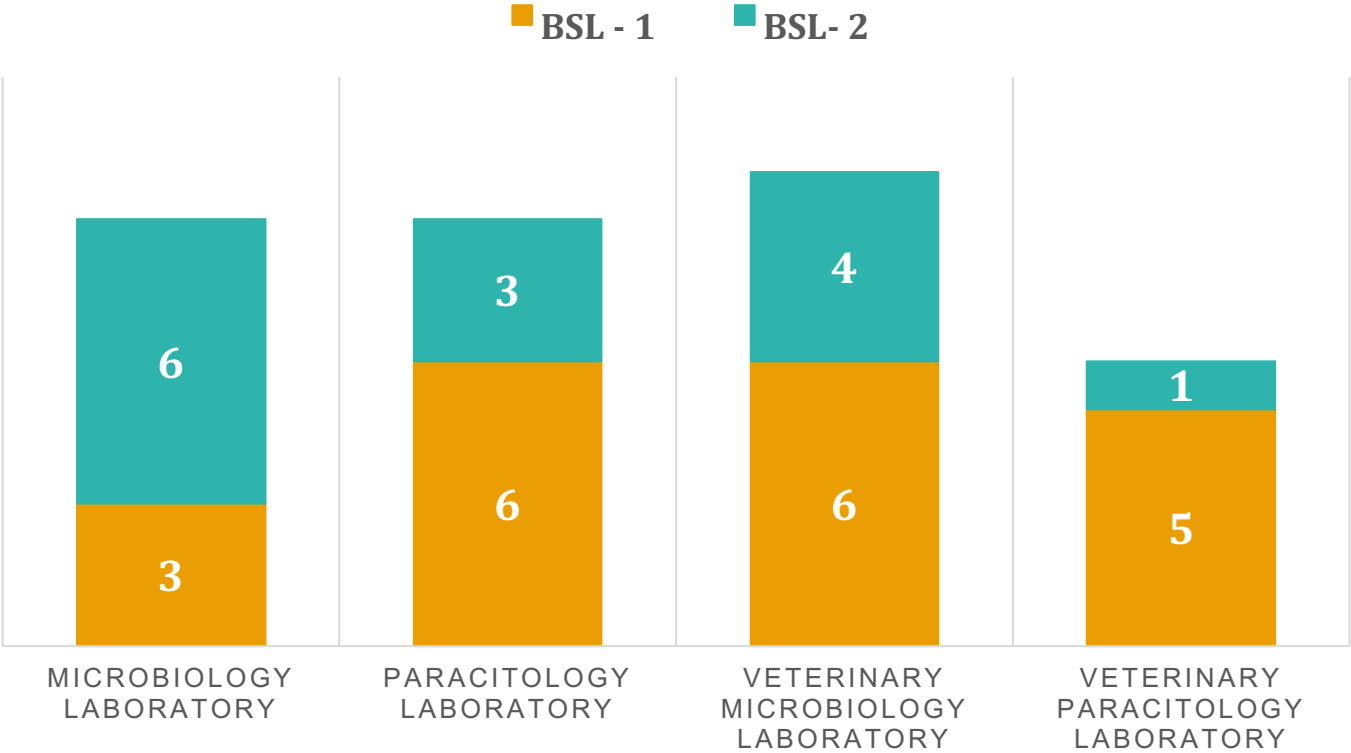
*“All university laboratories that further assessed with the next variables (collaboration and networking, professional HR, lab performance, & lab equipment) **must be BSL 2 lab**”*

# DESKTOP ASSESSMENT CRITERIA

## BIO-SAFETY LEVEL STATUS

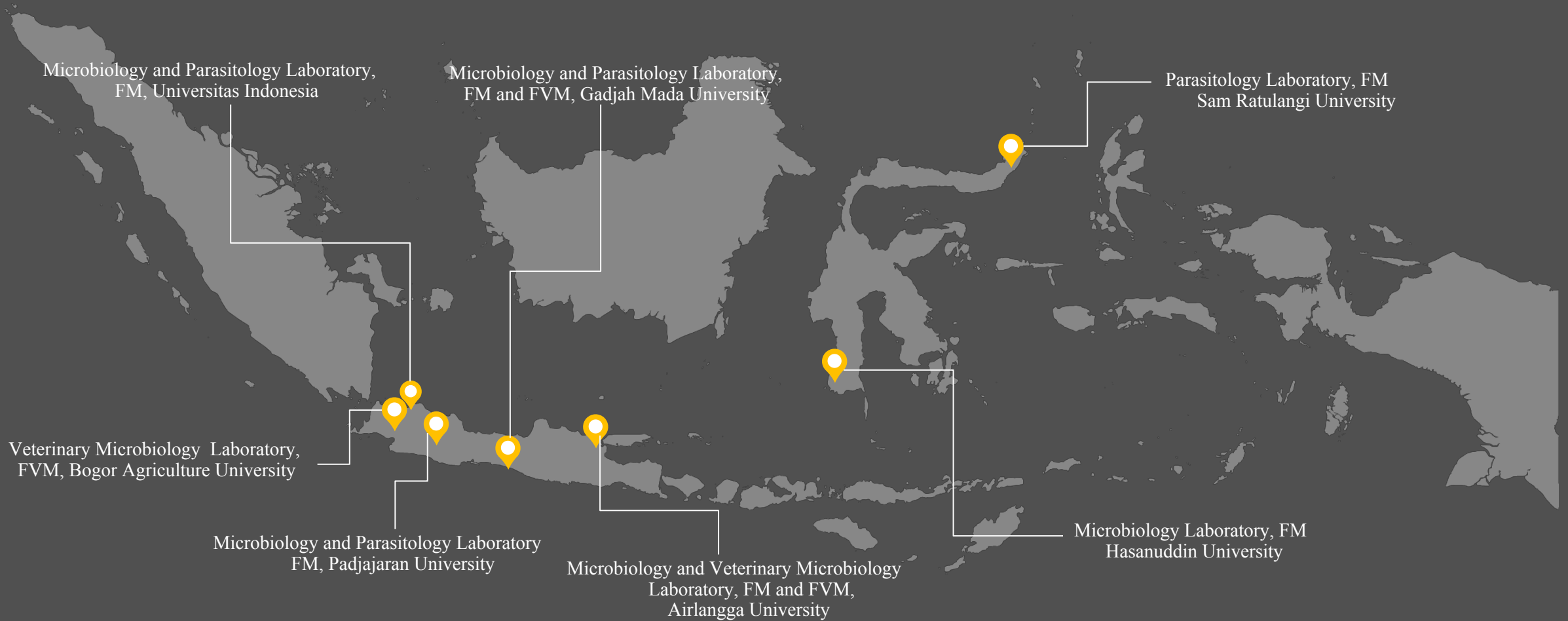


Laboratory Biosafety Level



“All university laboratories that further assessed with the next variables (collaboration and networking, professional HR, lab performance, & lab equipment) **must be BSL 2 lab**”

# Map of Current **OHLN** Members

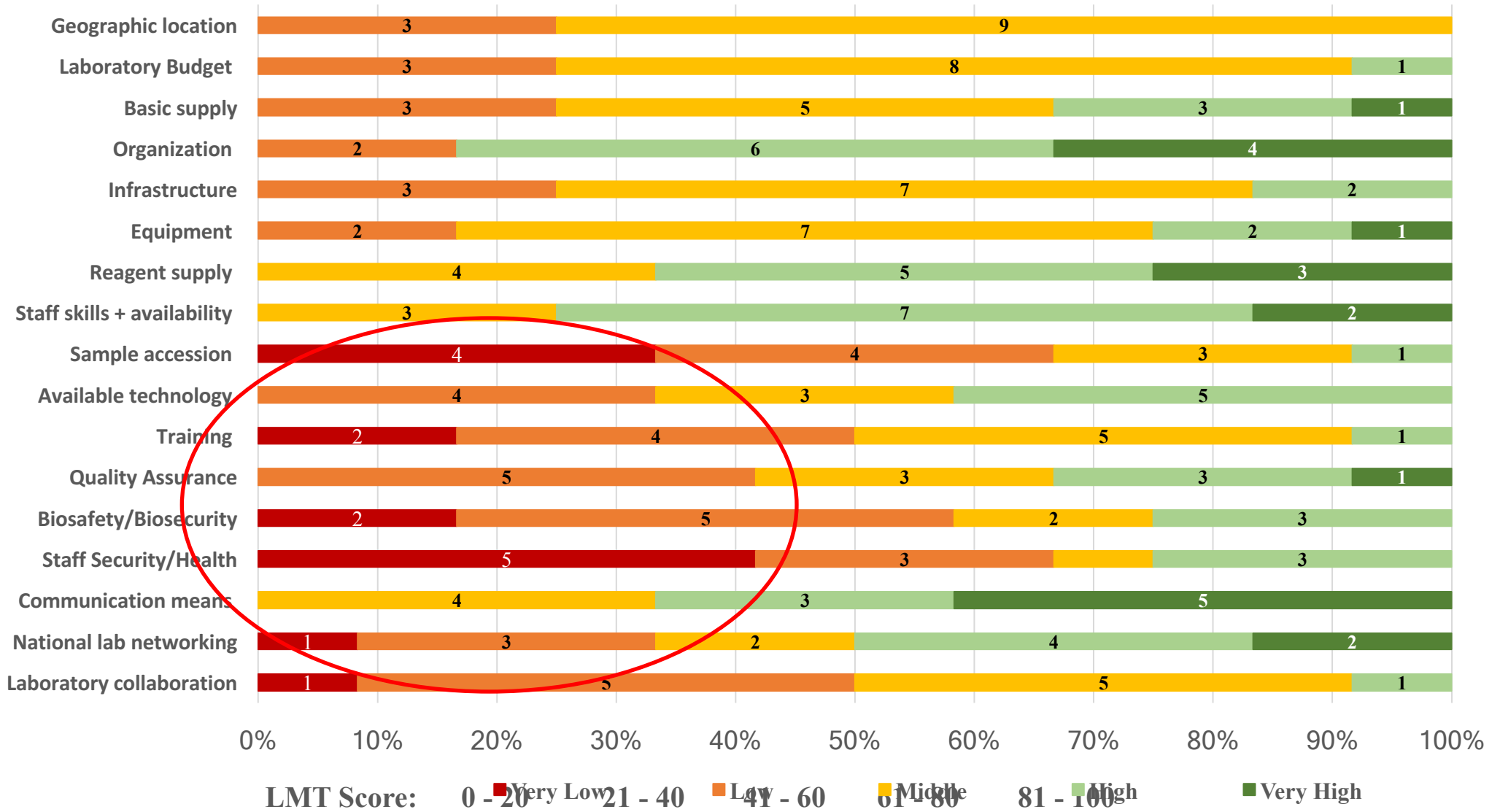


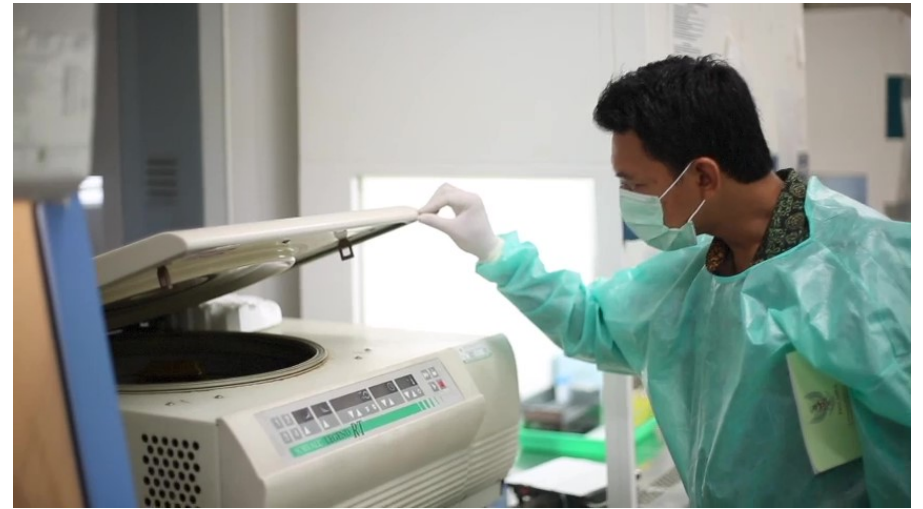
***8 Microbiology, 3 Parasitology, 1 Microbiology & parasitology (Human and Animal lab)***



## 12 University Laboratories Capacity Based on FAO Laboratory Mapping Tool Variables

LMT Variables

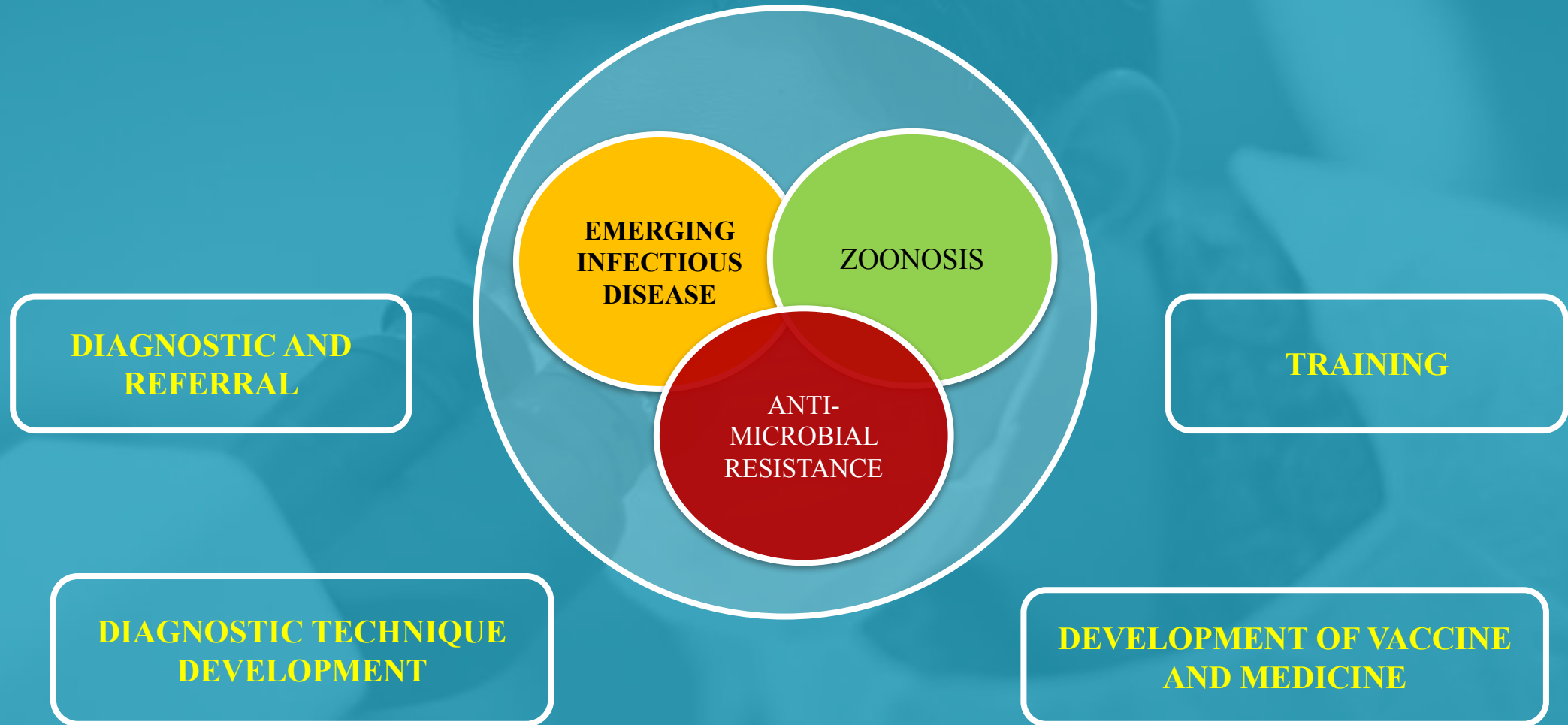




# Roles of University Laboratories in Implementing Biorisk Management in Indonesia and The Challenges



# GLOBAL THREATS AND ROLES OF LABORATORY



# What has been done by the OHLN in the Implementation of Biorisk Management?

## Advocacy to the top management

- Laboratory assessment
- Legal agreement with universities and faculties
- Laboratory membership

## Quality Improvement

- Promoting bio-risk awareness to the network (WHO Biosafety manual, CWA 15397 and CWA 16393 documents)
- Increasing laboratory personnel capacities on Good Clinical Lab practice (GCLP)
- Laboratory guideline identification
- Identification of collaboration framework between university and government of Indonesia Laboratories

# The Challenges of Promoting and Implementing Biorisk Management Program in Academic Setting

## System and regulation

- There is no mandatory national policy yet on the implementation of biorisk management in university laboratory
- Absence of system in most university members to support the implementation of biorisk management
- Commitment of university top management

## Infrastructure and facility

- Most of members are BSL 2 laboratory
- The biosafety facility need to be improved (BSC, bio-containmnet etc)
- Variation of biorisk management guideline among the laboratory members

## Human resource and network

- Biorisk issue is quite new among the laboratory workers
- Lack of certified personnel on biorisk management



# What to Do in the Up Coming Year?

# Start with National Policy (Top Down)

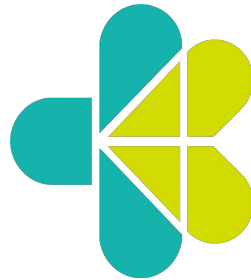
- **Advocate the government** on biorisk management policy (ministerial decree)
- Initiate the Establishment of laboratory biorisk management certification body
- Establish and integrate biorisk management in one system
- Consolidate the current laboratory members to implement the biorisk management
- Risk assessment (risk group, animal and human model, logistics)
- Training of biosafety officers, laboratory managers to obtain biorisk management certification from IFBA
- Support the development of management system within the university for implementation of Biorisk Management

# Conclusion

- ❑ The university laboratories play important roles **to strengthen the national security** capacity to identify and detect zoonotic diseases and (re)-emerging infectious diseases, including the pathogens that are potentially used as **biological weapon**.
- ❑ Improvements of University laboratories are greatly needed in bio-risk management, laboratory performance, and partnership/networking.
- ❑ **Network** among university and government laboratories should be established to overcome the global threat with effective solution to tackle EID, Zoonosis, and AMR issues

# Acknowledgements

## OHLN Donors and implementing partners





# Acknowledgements

## OHLN University Members







**THANK YOU**