

# Centre for Pathogen Genomics

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Asia-Pacific Academic and Training Centre  
The University of Melbourne, Doherty Institute, Australia

Dr Lisa Ioannidis  
Manager, Centre for Pathogen Genomics





## A Short History



A joint venture between The University of Melbourne and The Royal Melbourne Hospital



Over 900 scientists, educators, clinicians and public health experts



Melbourne Biomedical Precinct, Parkville



\$210 Million building – State, Commonwealth and University Funding



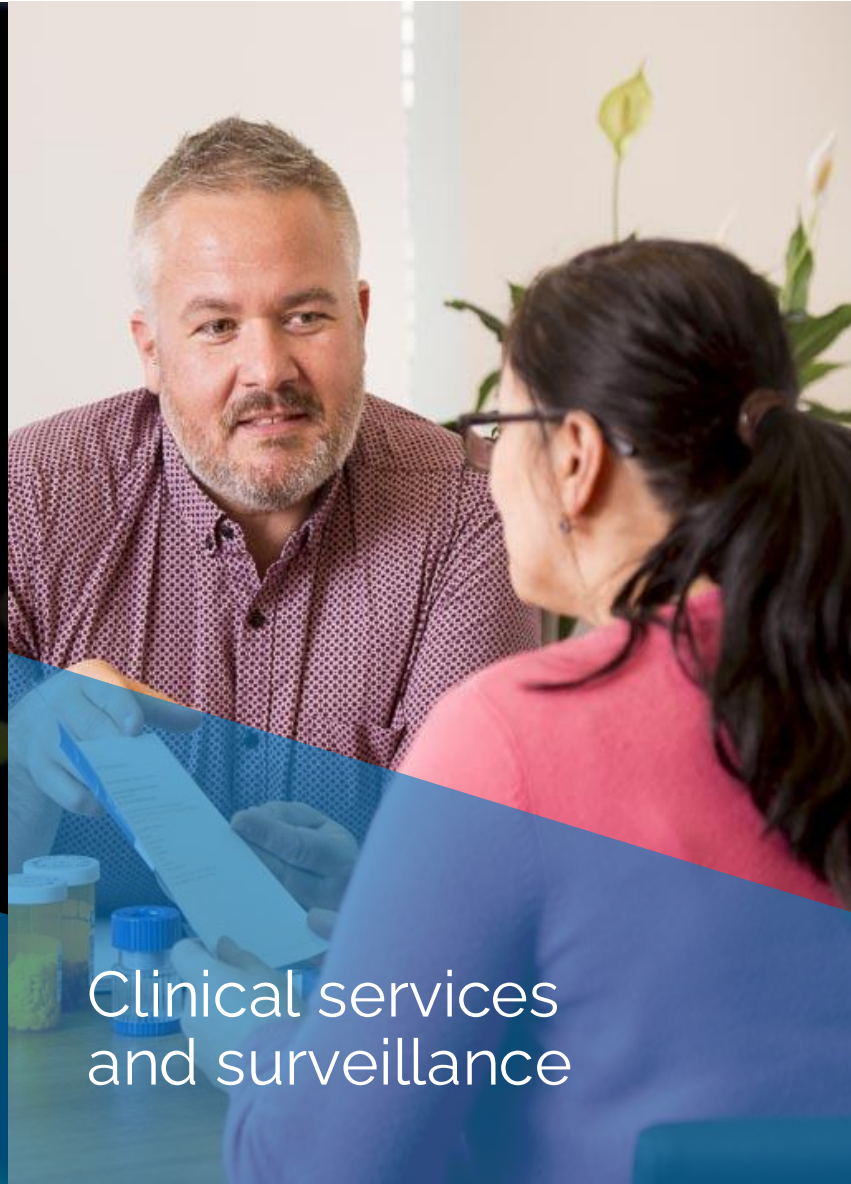
Entirely focused on infection and immunity



Institute opened Sept 2014



# Doherty Institute overview



# Major themes and disciplines



Immunology



Antimicrobial Resistance



Viral Infectious  
Diseases



Bacterial and  
Parasitic Infections



Discovery Research



Public Health



Clinical and Health Systems Research



Global Health



Education and Professional Development



Indigenous Health



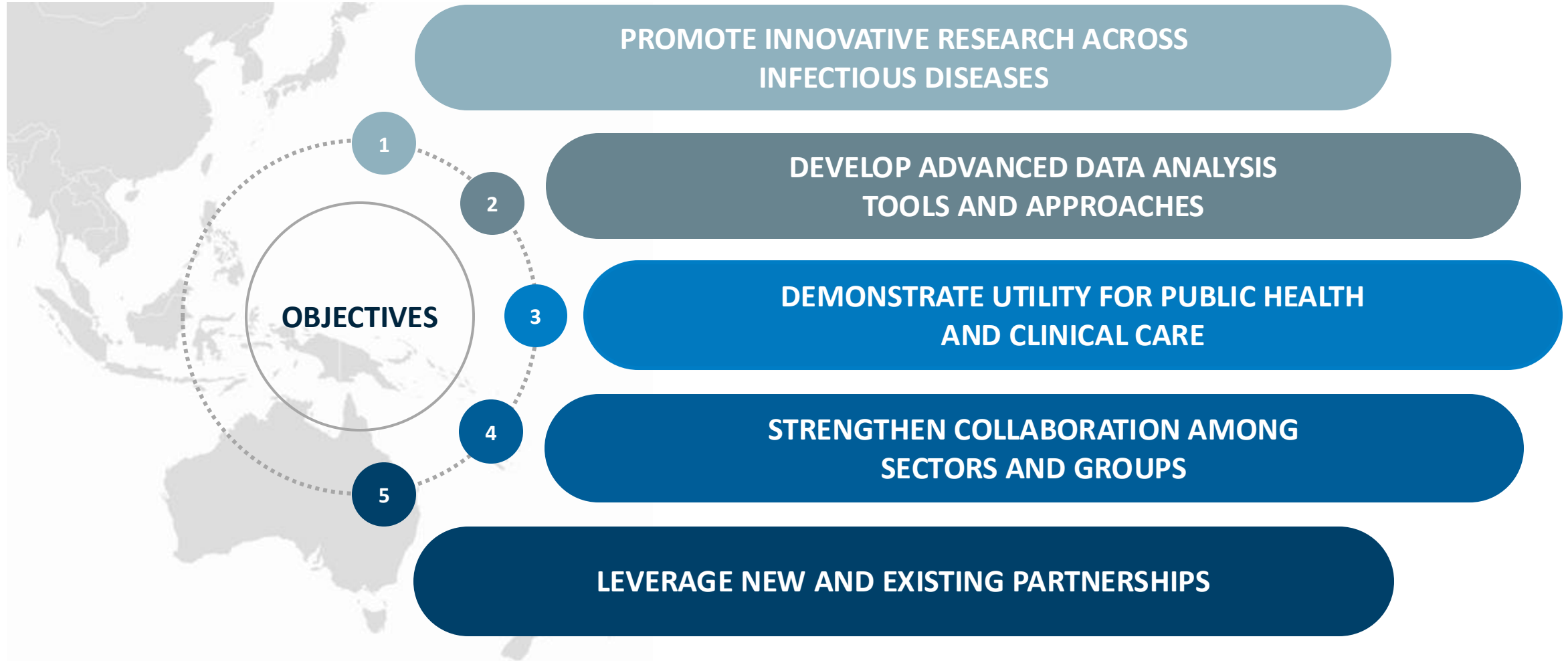
Computational Science and Genomics



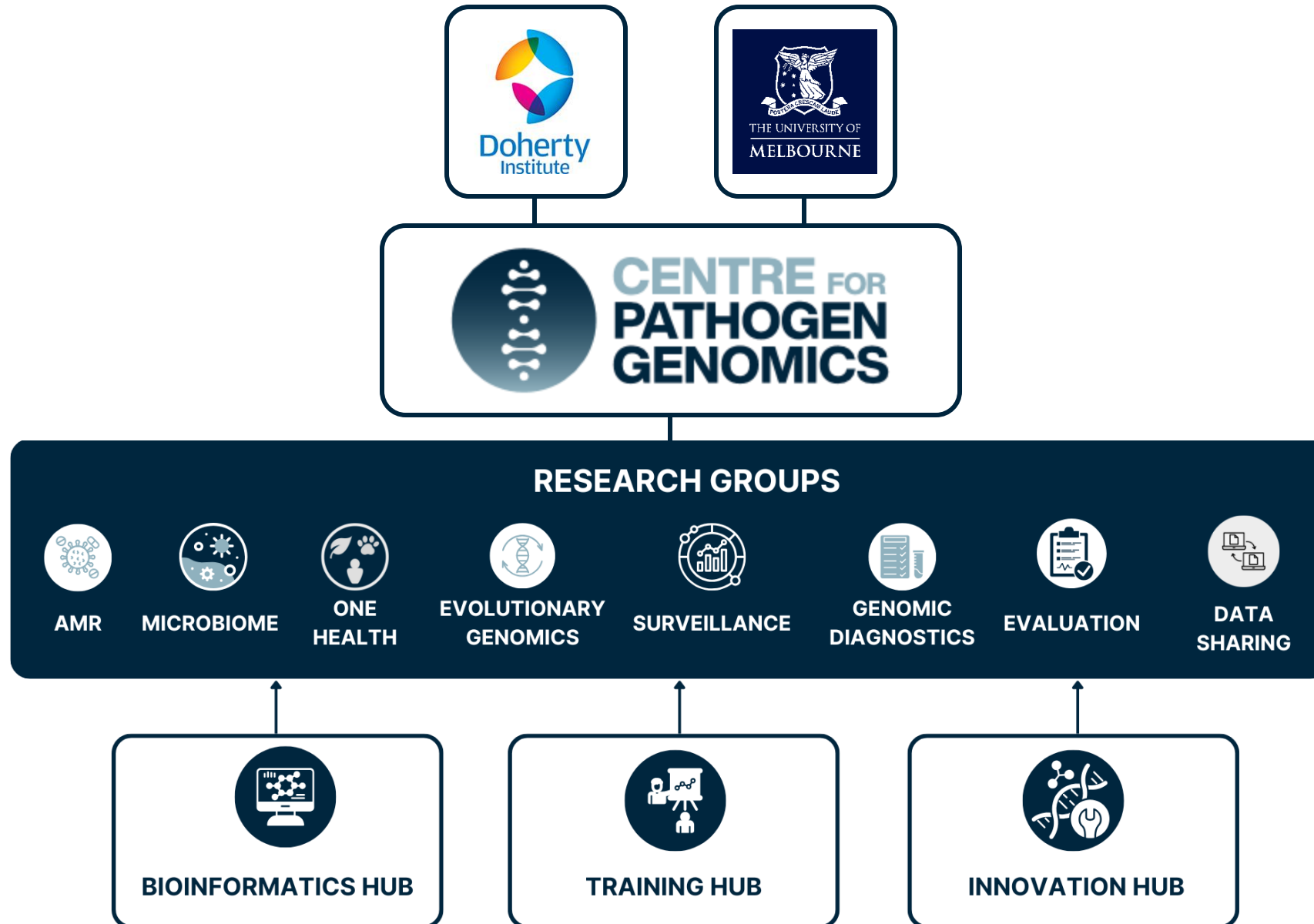
# Centre for Pathogen Genomics



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# Centre Structure





# Centre Team



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## Leadership



**Prof Ben Howden**  
Co-Director



**Prof Tim Stinear**  
Co-Director



**Dr Chuan Lim**  
Co-Director



**Dr Lisa Ioannidis**  
Centre Manager



**Dr Michelle Wille**  
Snr Research Fellow



**A/Prof Sarah Dunstan**  
Department of  
Infectious Diseases



**Tuyet Hoang**  
Strategy and  
Governance Manager



**Chantel Lin**  
Strategy and International  
Partnerships Manager



**Prof Glenn Browning**  
Veterinary Sciences

## Innovation Hub



**Dr Louise Judd**  
Innovation Hub Lead



**Taylor Harshegi**  
Laboratory Scientist

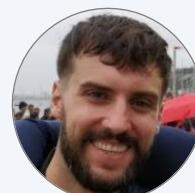
## Bioinformatics Hub



**Dr Geraldine Kong**  
Research Fellow



**A/Prof Torsten Seemann**  
Lead Bioinformatician



**Dr Calum Walsh**  
Research Fellow



**Dr Ryan Wick**  
Research Fellow

## Research



**Dr Celeste Donato**  
Research Fellow



**Dr Marielle Babineau**  
Research Fellow



**Dr Courtney Lane**  
Lead Epidemiologist

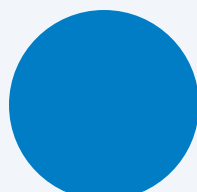
## Training Hub



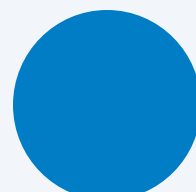
**Hasini Walpola**  
Training Specialist



**Dr Sarah Baines**  
Research Fellow



**Bioinformatics  
Trainer**



**Genomic  
Epidemiology  
Trainer**

## Key Doherty Institute Partnerships



# Innovation Hub

## Key capacities:

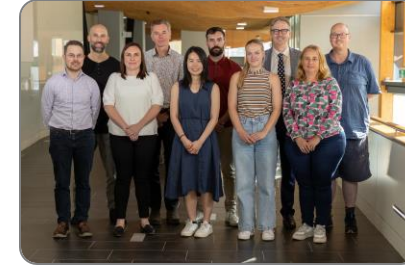
- Advice on study design
- Microbial WGS
- Metagenomics
- Microbiome profiling
- Plasmid / clone validation
- Bioinformatics
- Training
- Access to instruments

## Collaborative partnerships:

- Supported ~200 projects and collaborations:
  - > 20 research groups
  - 150 publications
  - > \$25 million in grant funding

## Exemplar project:

- Genome sequence enrichment for environmental pathogen surveillance



illumina





# Bioinformatics Hub



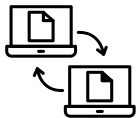
Implement novel computational approaches for genomic data analysis



Develop accessible bioinformatic solutions for low resource settings



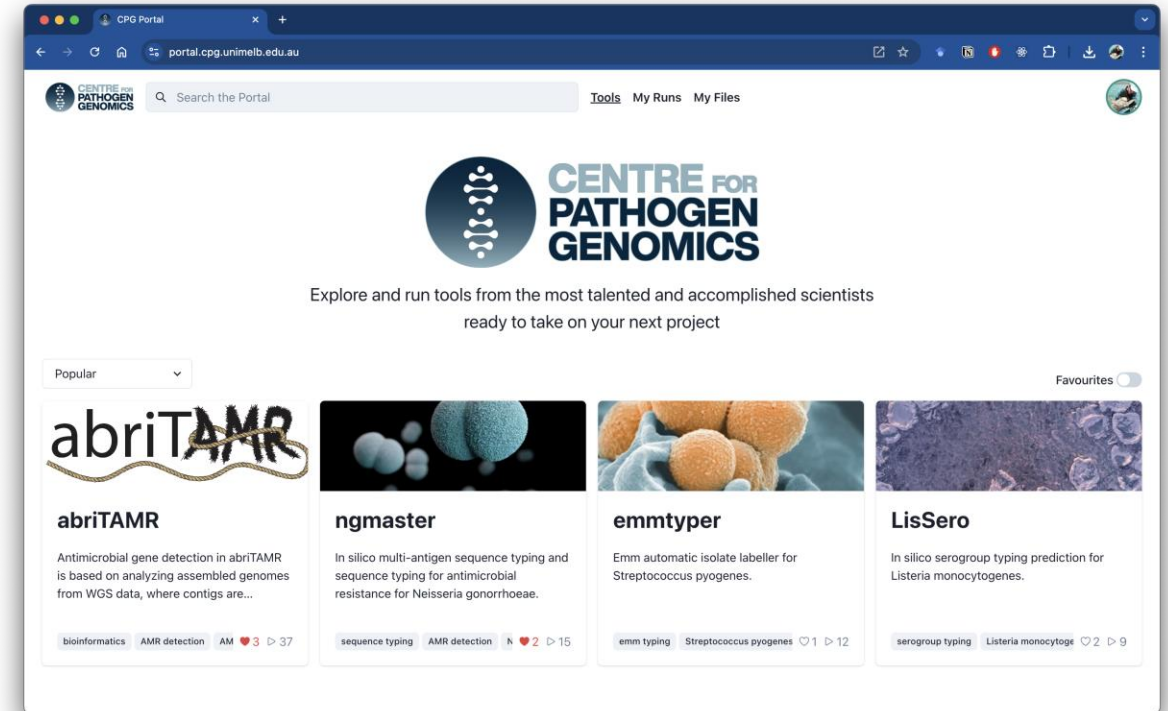
Access to computational infrastructure



Enhance data sharing to support local and global public health decision making



Create a community of practice for microbial bioinformatics

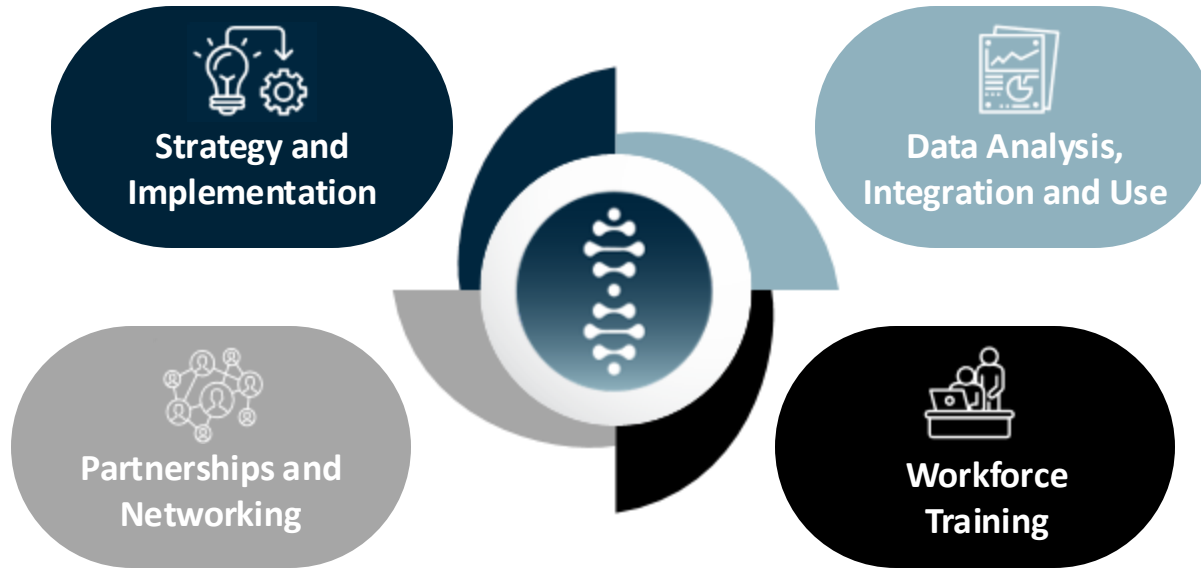


# Training Hub



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## IMPLEMENTATION FRAMEWORK



## KEY INITIATIVES



**BRIDGE**

A program supported by the Australian Government and implemented by the Doherty Institute



MICRO-CREDENTIAL

**Microbial Genomics: DNA Sequencing Basics**

MICRO-CREDENTIAL

**Microbial Genomics: Bioinformatic Analysis Basics**

## FUNDING SUPPORT



Australian Government

Department of Foreign Affairs and Trade



**World Health Organization**



# THANK YOU

[centre-pathogen@unimelb.edu.au](mailto:centre-pathogen@unimelb.edu.au)



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