

# Guidance Note for MGI Asia Pacific (APAC) Pandemic Preparedness Program (PPP)

### Background

The MGI APAC Pandemic Preparedness Program (PPP) has been designed to empower institutions and laboratories across APAC, with the eventual goal of scaling up to worldwide (WW) coverage with comprehensive solutions for pathogen surveillance and response.

It was developed in conjunction from ground feedback from Voice of Customers (VOCs) and partnerships, such as Asia Pathogen Genomics Initiative (APGI), Centers for Disease Control and Prevention (CDC) and research institutes in different countries as a means in providing a differentiated and sustainable alternative for pathogen surveillance and research, especially in application centric workflow driven solutions, such as acute infectious diseases requiring equitable, effective, relevant and validated workflows.

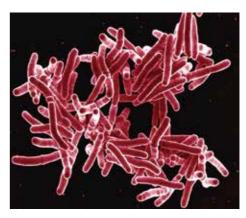
This guidance note outlines the scope of support available across key areas, including target audience, pricing, purchasing, logistics, training, and product support.

#### Target Audience / Recipients

Anyone that is involved or interested with pathogen genomics surveillance as the primary focus, such as universities, government institutes, hospitals and research institutions will have an informed choice in selecting a suitable solution or workflow based on their needs and interests, enabling timely and accurate genomic insights.

The partnership with APGI and their respective country partners is envisioned to be an important first step in expanding access to pathogen genomics, followed by program expansion and enrollment to any institute that wishes to setup or expand their pathogen surveillance capabilities.

APGI country partners (First Wave, defined by 2024 - 2025) will be given exclusive priority for enrollment, followed by any WW pathogen surveillance institution not included in APGI (Second Wave, to be determined based on First Wave response).



Digitally colorized scan of *Mycobacterium tuberculosis* bacteria.

#### Pricing

MGI is committed to providing affordable solutions tailored to the needs of pandemic preparedness. Competitive pricing for both reagents and sequencer instrument purchases have been specially designed to ensure cost-effectiveness, transparent pricing structure is transparent, with no hidden fees, with required reagents, consumables, and equipment to support a complete sample-to-answer workflow based on the applications and needs.

- Preconfigured PPP Application Bundles, designed for various genomic surveillance applications (Figure 1, Table 1) are available to eligible PPP recipients and APGI country partners.
- These PPP Application Bundles offer a combined discount of different products from standard offerings for APGI partner institutions, including library preparation, sequencing and analysis results at a price range of USD 55 - 95 per sample (Table 2). Extraction costings may be included and indicated based on product validation protocols.
- MGI provides a curated selection of sequencers via the PPP program pricing to APGI partners based on specific regional considerations. Referrals will be initiated by APGI and undergo verification by MGI for mutual approval to ensure alignment with program criteria (refer to Figure 2, Section 3).
- Prices listed excludes shipment, taxes, customs, tariffs and/or duties.
- End users will be quoted with the same pricing shown in Table 2 by MGI local distributors. The PPP is a collaborative effort with MGI distributors for harmonizing pricing transparency and simplify ordering and budgeting across all regions.
- There are no minimum order quantity requirements: above mentioned pricing may fluctuate based on the sequencer product configurations and batching sizes.

 In the event that reagents are requested to be purchased ad-hoc without the Application Bundle, alternative purchasing options can be evaluated and considered based on the urgency, merit(s) and scope of the proposed pathogen surveillance projects by each APGI country partner and/or WW pathogen surveillance institution.

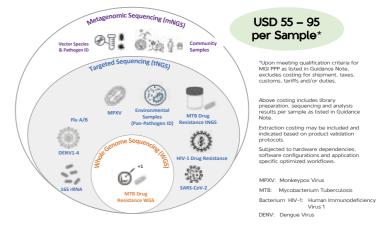
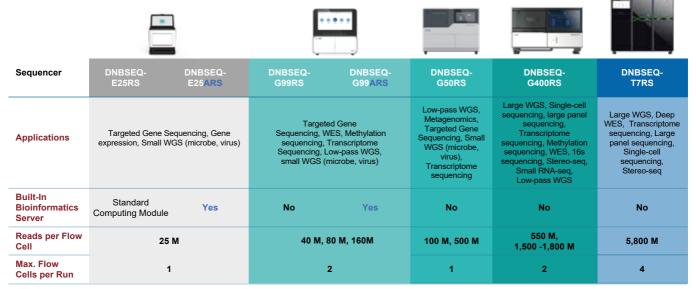


Figure 1: MGI PPP Application Overview and APAC Pricing Range



MGI is dedicated to advancing public health initiatives through the PPP program for improving the collective health and resilience of communities in combating antimicrobial resistance. The program provides financial incentives\* up to 10,000 USD, 14,000 USD, 33,000 USD and 50,000 USD, respectively for DNBSEQ-E25RS, DNBSEQ-E25ARS, DNBSEQ-G99RS and DNBSEQ-G99ARS, varying based on country-specific market.

Figure 2: MGI PPP Sequencer Overview and PPP Pricing

<sup>\*</sup>Upon meeting qualification criteria for MGI PPP in Guidance Note, pricing excluding shipment, taxes, customs, tariffs and/or duties. Subjected to hardware dependencies, software configurations and application specific optimized workflows.

#### Purchasing Process / Financing

Through the MGI PPP, the purchasing process is envisioned to be simple and streamlined, allowing partners to focus on their critical work. MGI will offer PPP Application Bundles categorized by their applications that are ready to deploy and reducing the complexity of procurement. Through streamlined cataloguing orders, the MGI PPP hopes to strive to reduce complexity and procurement experience by providing detailed quotations, clear instructions, and support at every step of the purchasing journey.

In the event that funding / instrument purchase options are not imminently available, alternative financing options can be evaluated and considered based on the urgency, merit(s) and scope of the proposed pathogen surveillance projects by each APGI country partner and/or WW pathogen surveillance institution.

- First Wave and Second Wave institutions (as defined in Section 1) to register your interest via MGI Asia Pacific Pandemic preparedness Program website.
- Once qualified, MGI will handover to local distributors and/or partners for quotation and lead times using the following MGI PPP Application Bundles in Table 2 and referral code "#APGIPPP".
- Standard lead times will apply to infrastructure setup (4 –10 weeks) and/or reagent delivery (3 – 6 weeks) upon confirmation of order depending on location and setup.

#### 5 Training

MGI offers extensive training programs to empower teams with the knowledge and skills needed to fully leverage our solutions. From onboarding and equipment installation to troubleshooting, our training programs are tailored to the specific needs of each partner.

We provide both virtual (theory and troubleshooting) and in-person training options, supported by our experienced technical teams and local distributors and partners, to ensure that your staff is fully equipped to be confident in the MGI sample to answer workflow.

- All new capital expenditure (capex) instrument purchases include user training by our MGI service team as outlined in Section 6: This training covers system operation, best practices and maintenance.
- Standalone purchase of MGI PPP Application Bundles does not include training sessions from MGI team by default: Training can be conducted either in person at APGI Academy, or through online sessions for theory training. On-site training may be discussed based on travel requirements and purchased sample volume as specified by end user.

#### 4 Logistics

Logistics are a critical component of our support. MGI will leverage on the experience gained in operating during COVID-19 pandemic and ongoing distribution networks for optimizing shipping processes, such as the taxes, tariffs and customs duties, and freight charges across Asia Pacific.

MGI works closely with our distributors and logistics partners to ensure timely delivery of all necessary materials and equipment, even in challenging situations. Our global distribution network ensures that our partners receive the tools they need, when they need them.

Disclaimer: The PPP program for public health is a special program and reserved with the exclusive right to modify, expand, or discontinue at will.

#### 6 Product support

Our commitment to your success extends beyond the point of purchase. The MGI team provides comprehensive pre- and post-sales support to ensure that you have everything you need to achieve your pandemic preparedness goals.

This includes in-depth consultation sessions to guide you in selecting the appropriate solutions, as well as ongoing technical support to resolve any challenges that arise during the use of our products. Our dedicated customer service team is always available to assist with any questions or concerns.

- Bronze Program coverage for 1 year for all new instruments (Figure 2)
  that have been purchased through capex funding. Extended warranty
  / service coverage beyond 1st year is available upon request (Table 3)
  ranging from USD 4,000 to 126,000 per year.
- MGI Asia Pacific Field Service Engineer (FSE) and Field Application Scientist (FAS) teams provides installation, validation, repairs and training in English, in conjunction with MGI distributors or partners who may deliver concurrently in local language, subjected to availability and / or feasibility.
- FSE and FAS teams can be contacted at MGI-Service@mgi-tech.com
- Upon request and permission, social messaging groups can be created based on the local requirements for efficient transmission of information (e.g. WhatsApp, Line, Zalo, Viber, etc.) as reasonably requested during office hours (Monday to Friday, 9am to 6pm) based on prevailing local labour policies and union laws. (Table 4)
- Troubleshooting and escalation to follow the following tiers. (Table 5)

Through the MGI Pandemic Preparedness Program, MGI is proud to support pathogen surveillance related support across the sample preparation and sequencing workflow, ensuring that our partners are well-equipped to focus on the science in tackling the ever-changing challenges of pandemic surveillance and response.

Together, as a team, we believe that we can make a difference in safeguarding public health.

Table 1: MGI PPP Application Bundle

Category	Application	Usage	
Shotgun Metagenomic Sequencing (mNGS)	Metagenomics Genomic Surveillance	In-depth profiling and novel pathogen detection across the entire genetic repertoire of organisms for unknown / uncharacterized community samples.	
	Vector Species and Pathogen Identification	Identification of vector species and/or pathogens using primary samples, such as degraded and/or immature vector samples from extracted DNA and/or RNA.	
Whole Genome Sequencing (WGS)	Epidemiology Investigation for Mycobacterium Tuberculosis (MTB) Drug Resistance	Whole genome sequencing of DNA extracted from Mycobacterium tuberculosis cultured isolates and Drug-resistance prediction based on the WHO MTB mutation catalogue, as well as MTBC & NTM identification, spoligotype identification and evolutionary analysis.	
Targeted tNGS (tNGS)	Rapid Identification of Mycobacterium Tuberculosis (MTB) Drug Resistance	Detection of Mycobacterium tuberculosis complex or cultured samples targeted drug resistance genes, identification of mixed Non-tuberculous Mycobacteria (NTM) species, and drug resistance prediction based on the WHO MTB mutation catalogue for first- and second-line anti-tuberculosis drugs using extracted genomic DNA.	
	Human Immunodeficiency Virus (HIV-1) Drug Resistance	Identification of HIV-1 virus genotype and targeted detection for drug resistance mutations detection in pol gene based on Stanford HIV Drug Resistance Database (HIVdb) and phylogenetic analysis using extracted total RNA from HIV-1 positive samples.	
	SARS-CoV-2 Genomic Surveillance	Detection, clade identification and phylogeny analysis of SARS-CoV-2 virus for single and mixed lineages using total RNA from wastewater, pharyngeal swabs, bronchoalveolar lavage fluid and other samples.	
	Influenza A/B Genomic Surveillance	Detection, assembly, subtype identification and phylogenic analysis of Influenza (A / B) virus using extracted total RNA from nasopharyngeal swabs.	
	Monkeypox (MPXV) Genomic Surveillance	Detection, assembly, clade identification and phylogenic analysis of MPXV virus using extracted DNA from blister fluid or opharyngeal swabs, nasal swabs.	
	Dengue Virus (DENV1-4) Genomic Surveillance	Detection, typing, clade identification, and analysis of closely related genomes of DENV (1/2/3/4) using RNA extracted from plasma, serum and other samples.	
	16S rDNA Characterization	Metagenomic survey of species level identification, composition and community structures of bacteria based on 16S rDNA using genomic DNA extracted from complex microbiome samples.	
	Pan-Pathogen and Antimicrobial Resistance (AMR) Detection	Identification of 330 clinically relevant pathogens (bacteria, viruses, fungi, parasites) and 150 AMR genes using total nucleic acid extracted from various biospecimens.	

Table 2: MGI PPP Application Bundle Pricing

Platform	Application	Application Bundle SKU	Number of Samples per Bundle	Bundle Includes Extraction	Application Bundle Pricing (USD)
DNBSEQ- E25ARS	MTB (tNGS) Drug Resistance	Group200- E25MTBTNGSPPP	96	-	7,680
	SARS-CoV-2	Group200- E25COVIDPPP	96	Yes	5,760*
	HIV-1 Drug Resistance	Group200-E25HIVPPP	96	-	8,640*
	Pan-Pathogen	Group200- E25ACCUGENPPP	96	Yes	9,120
DNBSEQ - G99ARS	MTB (tNGS) Drug Resistance	Group200- G99MTBTNGSPPP	96	-	5,590
	MTB (WGS) Drug Resistance	Group200- G99MTBWGSPPP	96	-	8,160
	DENV1-4	Group200- G99DENVPPP	96	-	8,160
	SARS-CoV-2	Group200- G99COVIDPPP	96	-	4,320*
	HIV-1 Drug Resistance	Group200-G99HIVPPP	96	-	6,720*
	16S rDNA (V3V4)	Group200- G9916SPPP	500	Yes	12,160
	Pan-Pathogen	Group200- G99ACCUGENPPP	96	Yes	8,160
	MPXV	Group200- G99MPXVPPP	96	Yes	9,120
	Flu A/B	Group200-G99FLUPPP	96	Yes	8,640*
	VMI	Group200-G99VMIPPP	96	-	8,640*
DNBSEQ- G400RS	MPXV	Group200- G400MPXVPPP	96	Yes	8,640
	Flu A/B	Group200- G400FLUPPP	96	Yes	8,160*
	Metagenomics	Group200- G400MNGSPPP	1,000	Yes	95,000*
DNBSEQ- T7RS	Metagenomics	Group200- T7MNGSPPP	1,000	Yes	84,590*

<sup>\*</sup>Additional analysis software may be required to be purchased, alternative options can be evaluated and considered based on the urgency, merit(s) and scope of the proposed pathogen surveillance projects.

Standalone reagent / ad-hoc purchases sans Application Bundle can be evaluated and considered by POC based on a case-by-case basis.

Subjected to hardware dependencies, software configurations and application specific optimized workflows.

Table 3: MGI Instrumentation Support Coverage

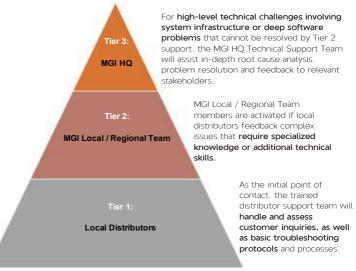
Scope	Bronze Program	Gold Program	Note
Remote Online Support	Yes	Yes	Includes telephone and email support.
On-site Hardware Support	Yes (Response Time: 3 business days)	Yes (Response Time: 2 business days)	Response time is restricted to certain geographic areas within mainland China, countries and areas with locally trained engineers.
Preventive Maintenance (PM) Visit	Yes (1/year)	Yes (2/year)	PM Visit may be performed in conjunction with on-site repair services.
Reagents Replacement Upon Equipment Failure	No	Yes	Reagent replacement only includes sequencing kits replacement upon sequencer failure, not include library preparation kits.
Updates and Modifications of Covered Software	Yes	Yes	Such updates or modification is subject to purchase agreement and the applicable user agreement.
Parts Replacement	Yes	Yes	Include necessary parts of the equipment, not include any consumables. Exchanged Parts shall become the property of MGI.

Table 4: MGI APAC Customer Service Channels



Disclaimer: The PPP is a special program to facilitate public health genomic surveillance and enable a few designated partners. MGI reserves the exclusive right to modify, expand, or discontinue at will.

Table 5: Troubleshooting and Escalation Tiering Matrix



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