Concept Note Template: Mosquito Tracking for Vector Control Product Evaluation

Call Objective: Within 2 years, develop and validate a robust semi-field mosquito-tracking system capable of tracking ≥10 free-flying mosquitoes overnight in an open experimental hut with ≤10-day data turnaround

Submission guidelines

Length must not exceed 3-5 pages. Please replace bracketed text [e.g., Guidance] with your specific details. Ensure clear distinction between existing hardware/software capabilities, necessary adaptions and new research and development. *Note: sections may be left blank if information not known at this stage.*

1. Administrative information and lead organisation

Project title:	[Insert Proposed Project]
Lead applicant and affiliation:	[Institution / Company Name, Country]
Principle investigator (PI):	[Name, Title, Email, Phone Number]
Consortium partners (if applicable):	[List Co-applicants, Academic/Industry Partners, Trial Site Affiliations]
Suggested budget and duration:	[USD $ Amount (Target ≤$50,000/unit) | Duration in Months (Max Q4 2028)]

2. Executive summary and innovation concept

[Provide a concise summary describing the proposed mosquito-tracking solution. Summarize your core technology, key objectives, how the system addresses multi-mosquito tracking (≥10 mosquitoes) around ITNs and/or spatial emanators, and how it will be deployed in experimental huts. If this is a consortium, please describe the main contributions from each of the members.]

3. Key technical specifications summary matrix

Please complete the 'Applicant system specification' standardised parameters below (if known at this time):

Technical parameter	IVCC scoping requirement	Applicant system specification
Semi-field application	System can record mosquito movement and product interaction inside an open experimental hut/semi-field environment	
Target products	ITNs and/or spatial emanators	
Target species	Malaria vector species	

Tracking capacity	≥10 free-flying mosquitoes simultaneously overnight in semi-field conditions	
Recording duration	Overnight host-seeking period	
Spatial coverage	Whole intervention area – inside of an experimental hut, including a full ITN and/or spatial emanator	
Data management	Secure data storage, transfer and processing with low-burden data processing with results available within 10 days of recording	
Implementation	System can be installed and operated in semi-field conditions	

4. Behavioural Endpoints & Vector Control Product Evaluation

[Describe the behavioural endpoints, and how they are quantified, that the system can capture]

- *E.g., Mosquito flight paths around human-baited bed nets and/or spatial emanators.*
- *E.g., Precise contact locations and contact durations across specific net areas (e.g., roof vs side panels).*

6. Any other relevant information

[Provide any other relevant information that you consider helpful to assess if the objective would be achievable within the timeline and budget constraints]

7. Project Work Plan & Milestone Schedule (to Q4 2028)

[Provide an indicative R&D work plan outlining key work packages and milestones leading to semi-field validation by Q4 2028]

Phase/milestone	Key deliverables and RD target	Target timeline

8. Risk Assessment & Mitigation Strategy

[Identify key technical risks and mitigation measures (e.g., handling track fragmentation, handling power fluctuations in remote field sites)]

9. Intellectual Property, Software Access & Freedom to Operate

[State clear arrangements regarding software accessibility (e.g., open-source permissive licensing, commercial licensing), data ownership, long-term user support, software updates, and Freedom to Operate (FTO) for IVCC trial sites and vector control stakeholders.]

10. Indicative Budget & Resource Allocation

Provide a high-level budget summary for the project.

Budget category	**Description and inclusions**	**Estimated cost (USD $)**
FTE		
Equipment		
Lab/field costs		
Consumables		
Travel		
Other running costs		
Total estimated budget		