Raising the Floor on Nets Update

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BILL & MELINDA GATES *foundation*

SAVE MORE LIVES

BETTER ACCESS TO SAFE, HIGH QUALITY, EFFICACIOUS VECTOR CONTROL TOOLS

OUTCOMES

- Quality management system drives continual improvement in ITN quality
- Improved communication and trust among stakeholders
- Countries supported to make informed decisions on quality
- Procurers use data to make value-based decisions
- Quality and innovation are incentivized
- Product specifications represent attributes that correlate with performance
- Methods are standardized and results more consistent

OUTPUTS

- Revised physical and chemical specification requirements
- Fit for purpose methods validated
- Revised product change guidance
- Reports on wash resistance, AI/bioefficacy relationship
- New editions of product testing guidelines
- ISO 9001+ specific for ITN manufacturing
- Data landscaping report
- Database / data sharing platform
- Blueprint for external quality assurance scheme for ITN testing facilities
- ITN testing facility capacity assessments and action plans
- ITN market analysis report
- Manufacturer quality management system risk stratification
- Context-relevant procurement model
- ITN quality guidance for regulators and NMCPs
- Post distribution data toolkit
- Case studies providing examples success and challenges of QA system

ACTIVITIES

Quality and Performance Metrics
- Link product specifications with performance
- Revise product testing guidelines

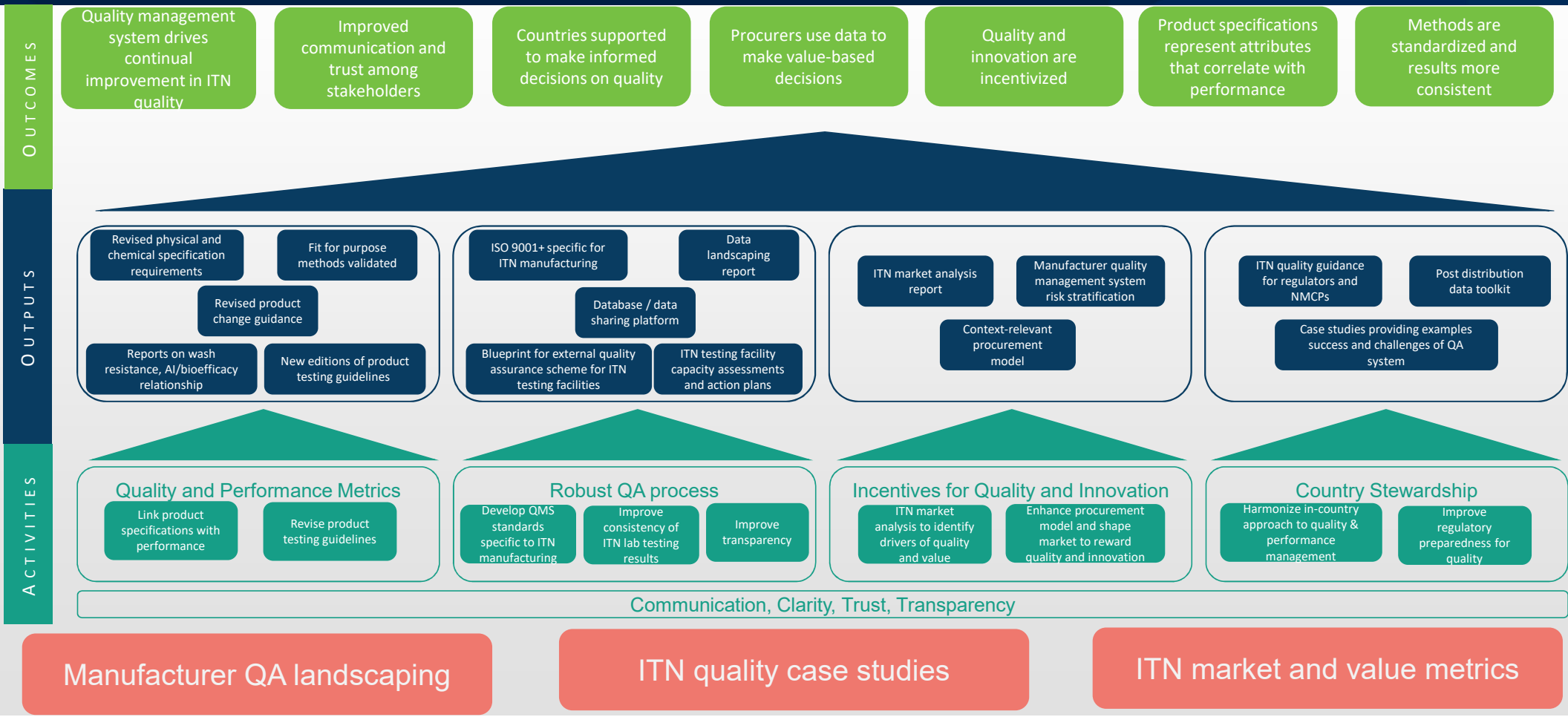
Robust QA process
- Develop QMS standards specific to ITN manufacturing
- Improve consistency of ITN lab testing results
- Improve transparency

Incentives for Quality and Innovation
- ITN market analysis to identify drivers of quality and value
- Enhance procurement model and shape market to reward quality and innovation

Country Stewardship
- Harmonize in-country approach to quality & performance management
- Improve regulatory preparedness for quality

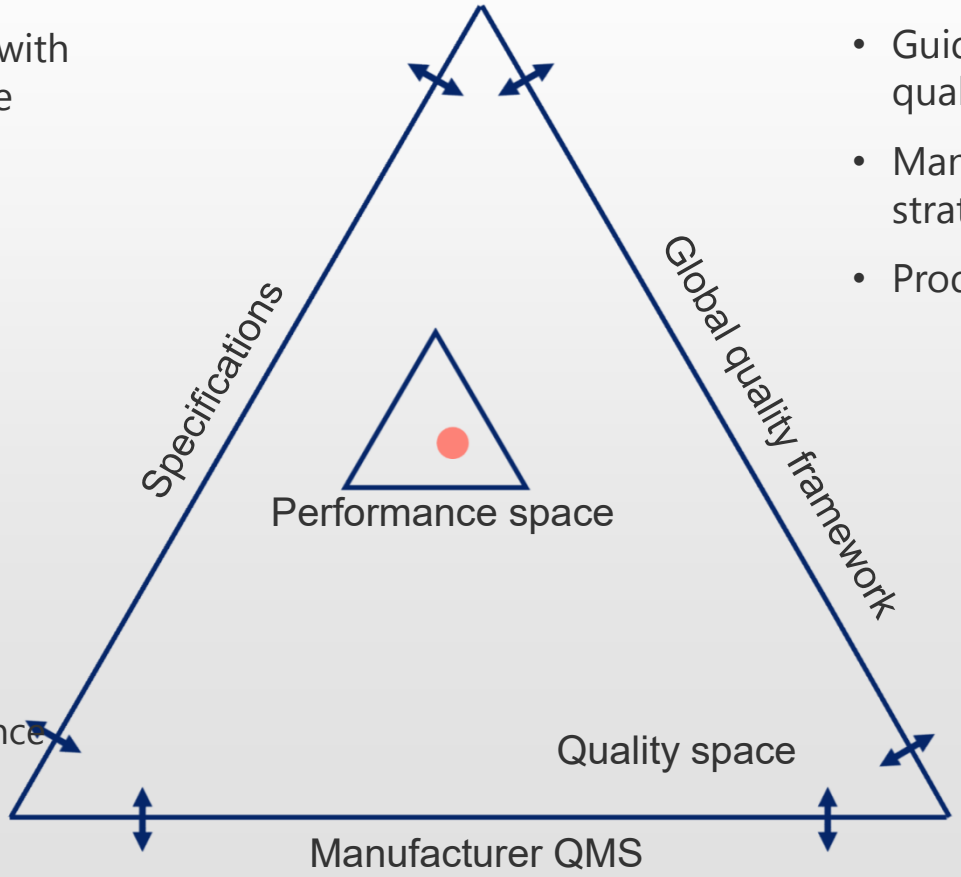
Communication, Clarity, Trust, Transparency

Activities that underpin the ToC



The quality triangle

- Alignment of specifications with expectations of performance



- Guidelines on changes to a pre-qualified product
- Manufacturer audits and risk stratification
- Product testing guidelines

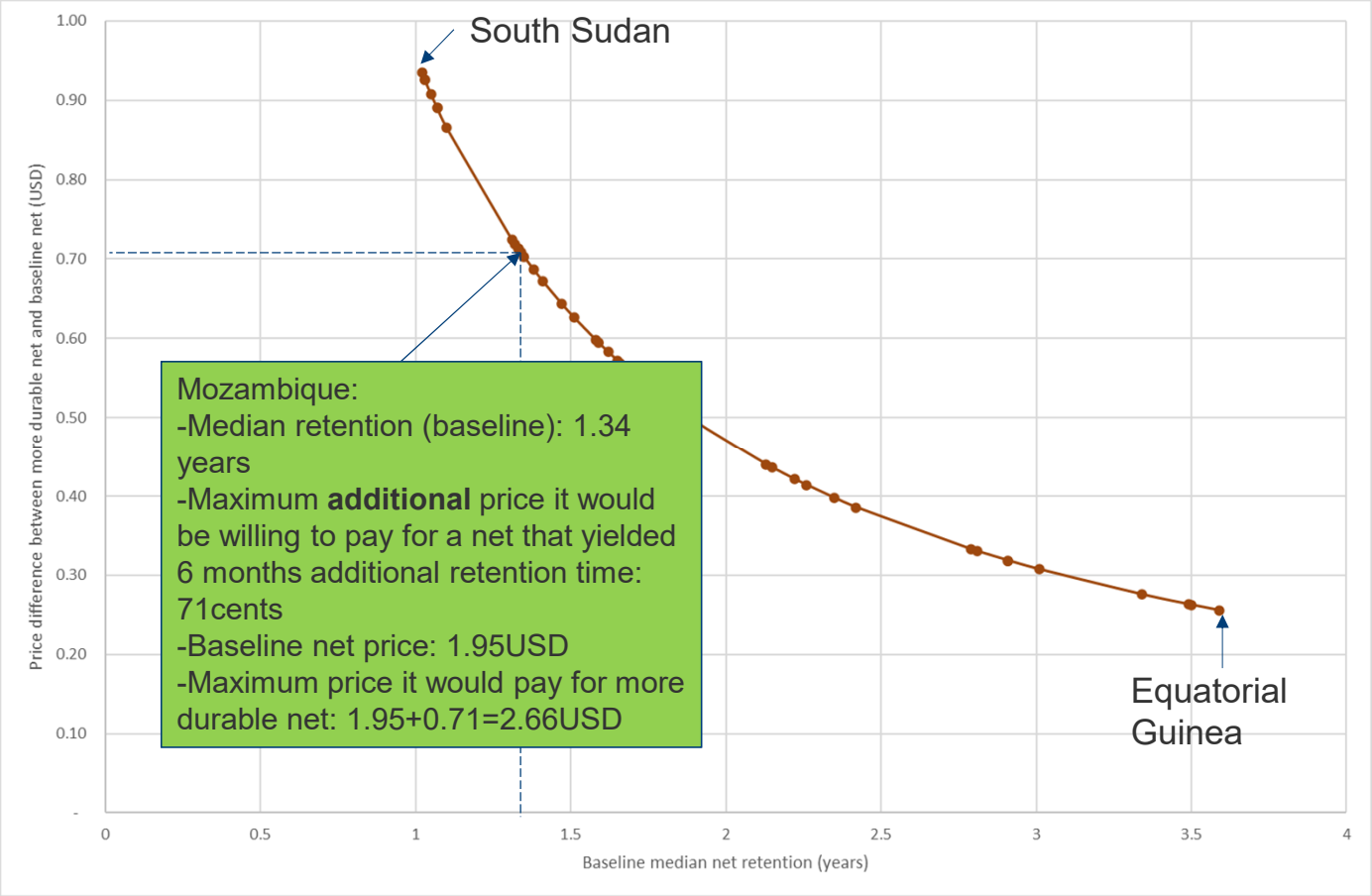
- QA audits
- QC best practice guidelines
- Testing to quality v performance

Marginal willingness-to-pay for a more durable net analysis

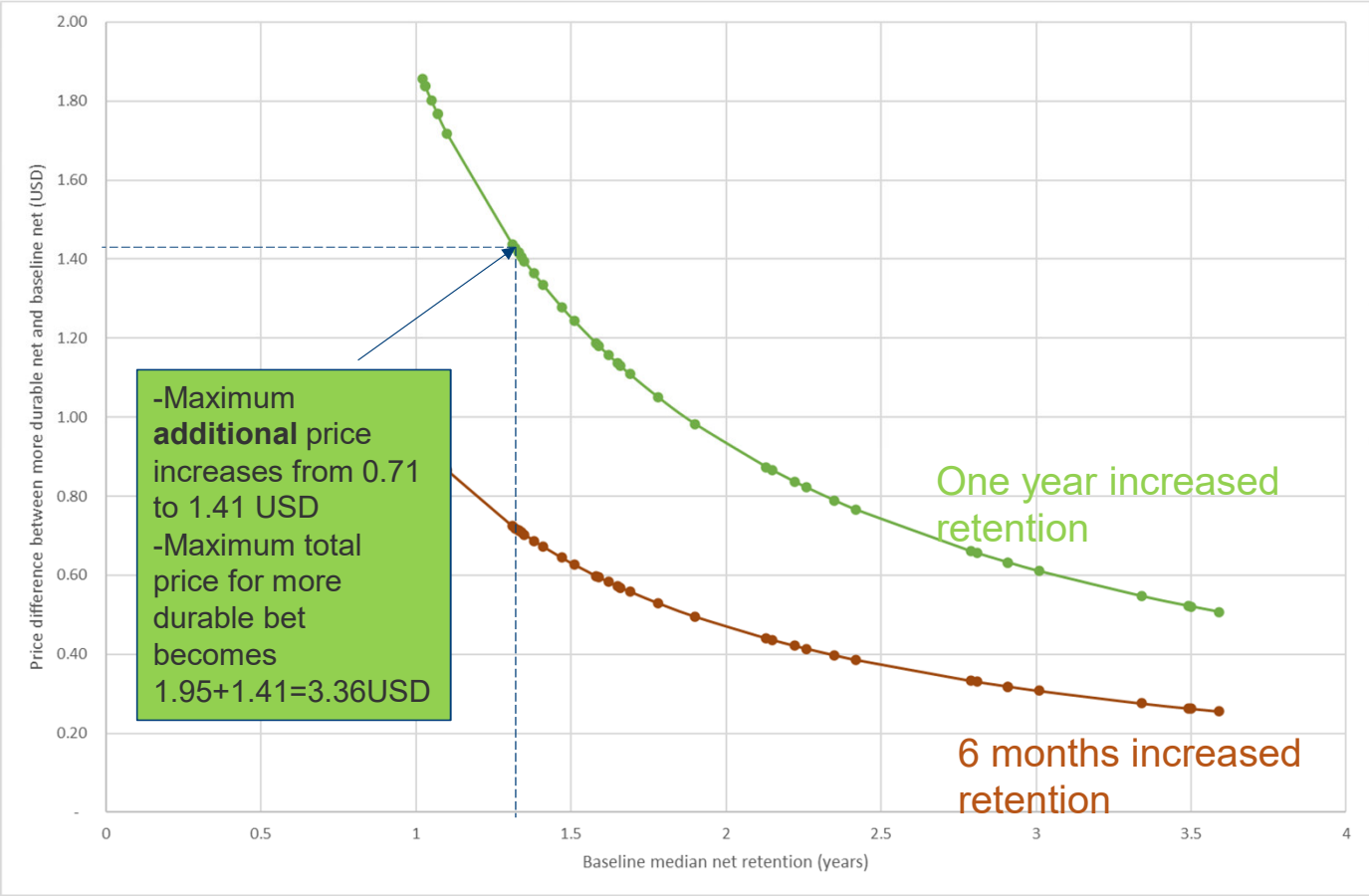
Working towards a value metric to support ITN procurement of more durable nets

- How much more would a country/procurer be willing to pay, in theory, for a more durable net?
- This decision will be influenced by
  - How much does the baseline net last for? How much does it cost and what other costs need to be factored in (e.g. distribution)
  - How much longer does the more durable net last for?
- Finding the price threshold (maximum price a country would pay): Although a more durable net is likely to be more expensive, the *equivalent cost per year of retention* may be lower; at what price (of a more durable net) does this happen?
- Baseline data
  - Real life price data from Global Fund PQR and PMI database
  - Net retention data for 40 African countries (Bertozzi-Villa et al)

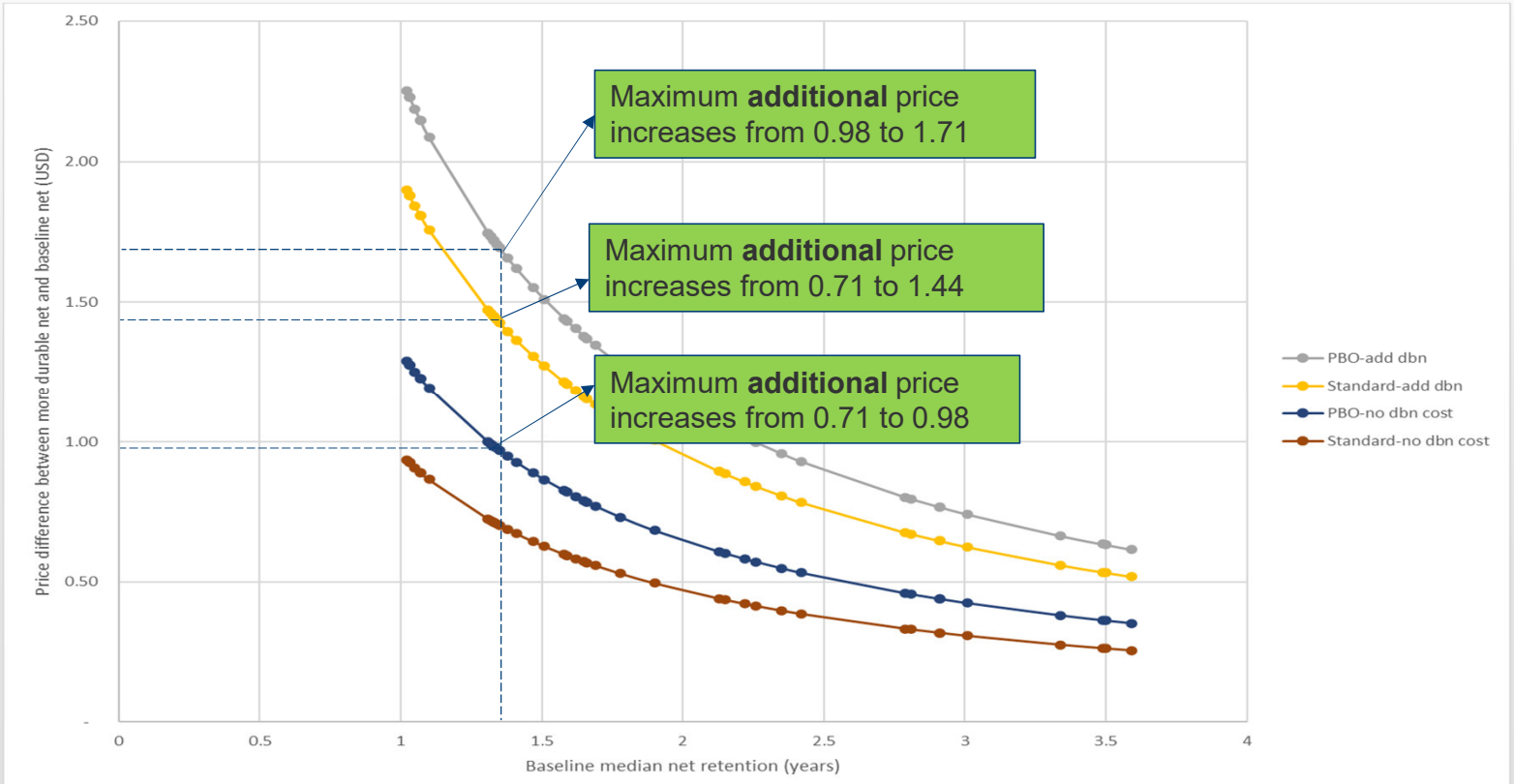
What is the maximum additional price that a country would pay for a more durable net (threshold for additional net price): 6 months additional retention



What is the maximum additional price a country would pay: comparison of 6 months with one year increased retention



What is the maximum additional price a country would pay: 6 months increased retention, comparing PBO vs standard net and adding distribution costs



Key messages

- Potentially start thinking about market segmentation: which countries will yield the greatest return on investment for a more durable net?

- Results are highly sensitive to baseline costs
  - Baseline values may change (increased costs etc.)
  - Other costs (e.g. distribution) need to be included

Next steps, based on stakeholder feedback

Stage I

- Refine assumptions, define the most **relevant outputs**, sensitivity analysis
- Gain better understanding of realistic increase in (i) price and (ii) physical durability/retention time for a more durable net
- Can we link variation in functional life/retention with **Resistance to Damage (RD)** scores?

Stage II

- Develop the analysis from country to province and district level (further data required)
- Look at the impact on total programme costs and coverage levels under different scenarios (varying durability and costs, factoring in replenishment needs and distribution costs)

Stage III

- Develop an ITN procurement tool, that can be adapted to different settings, in order to facilitate decision making by country stakeholders

Information sources

Variable	Source
Median net retention	*"Maps and metrics of insecticide-treated net access, use, and nets-per-capita in Africa from 2000-2020"* (Bertozzi-Villa et al, 2021)
Net prices	Combined GF-PQR and PMI database
Net distribution cost	*"Systematic review and meta-analysis of the cost and cost-effectiveness of distributing insecticide-treated nets for the prevention of malaria"* (Wisniewski et al, 2020)
Net price increase (%)	*"PBO net deep dive report"* (CHAI, 2021)
Equivalent annual cost	(Drummond et al, 2001)
Value of longer functional survival/net life	*"Comparative functional survival and equivalent annual cost of 3 long-lasting insecticidal net (LLIN) products in Tanzania: A randomised trial with 3-year follow up"* (Lorenz et al, 2020)