
TDR Activities in HAT Diagnostics

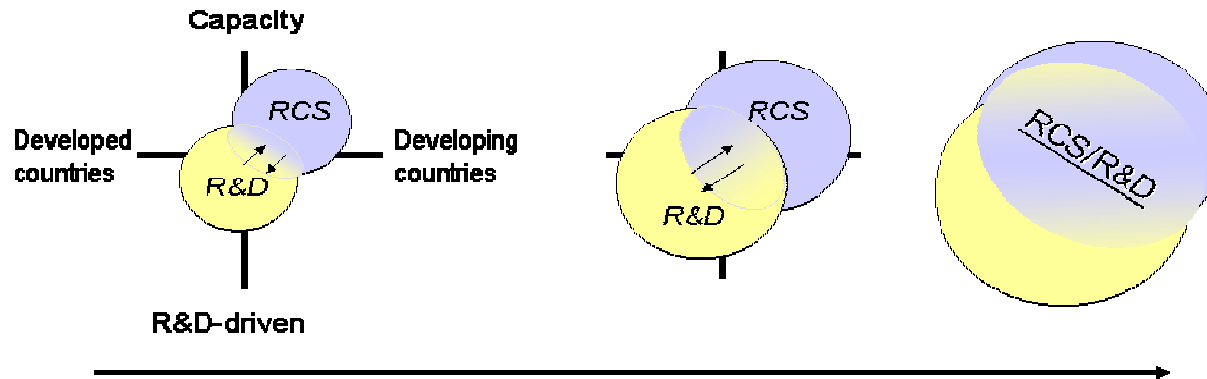
Rob Ridley



UNICEF/UNDP/World Bank/WHO
Special Programme for Research and
Training in Tropical Diseases (TDR)

Mission

- To undertake research, development and evaluation of new and improved tools and interventions to fight major tropical diseases
- To strengthen research capabilities in countries where these diseases are endemic



- Knowledge management to assist research agenda setting



Human African Trypanosomiasis

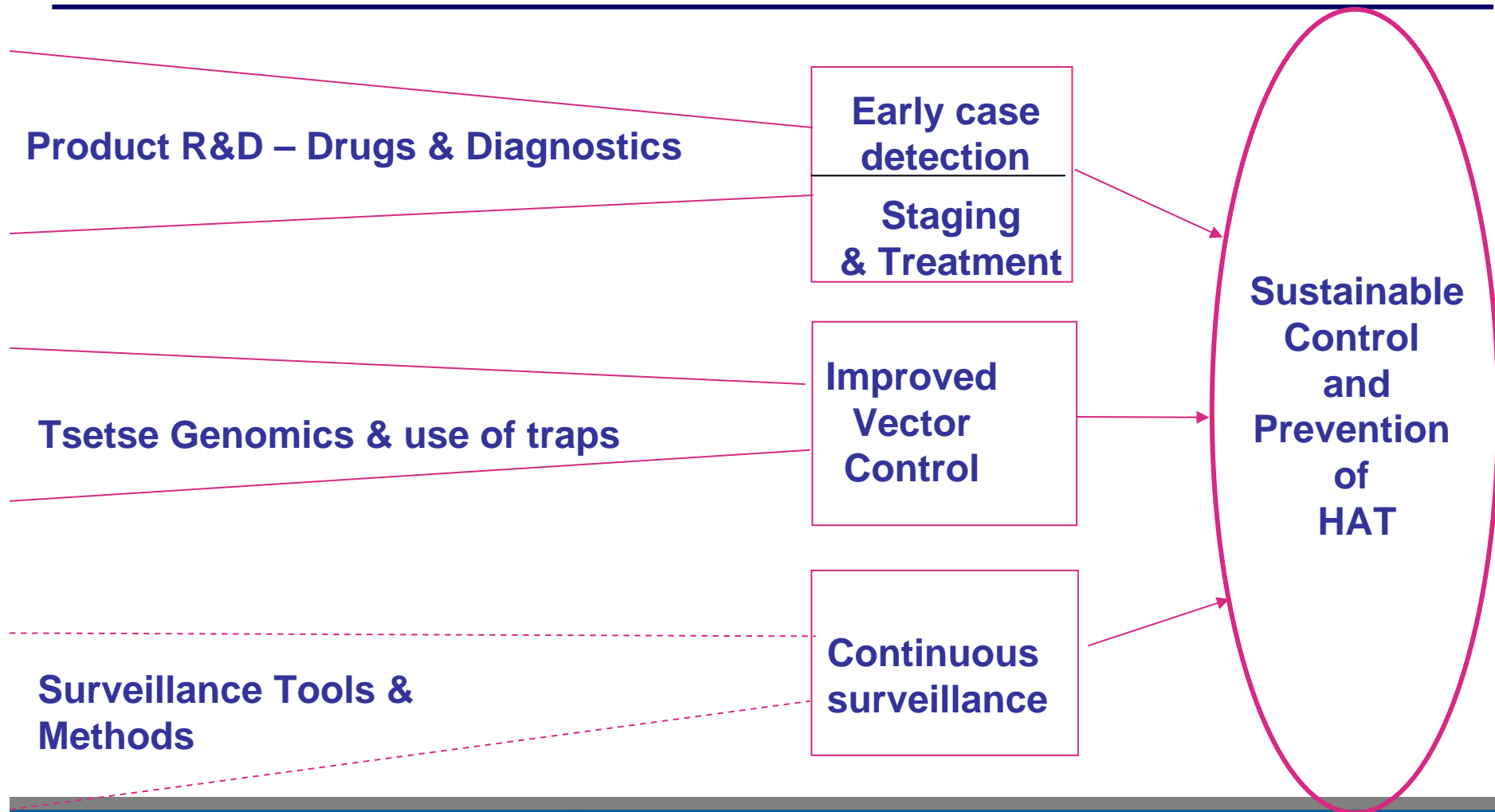


Disease burden: 300 000 new cases/year; 70% fatality rate



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HUMAN AFRICAN TRYPANOSOMIASIS



Human African Trypanosomiasis

- **Diagnostic Need:**

- Early detection crucial for prevention of severe disease
- Staging disease since treatment is toxic and dependent on whether there is CNS involvement
- Less invasive methods for staging (current method: spinal tap)

- **Existing diagnostics:**

CASE DETECTION:

- Blood smear for *T. b rhodesiense* (sensitive) or *T. b. gambiense* (less sensitive)
- Card indirect agglutination test (CATT) for *T.b. gambiense*

STAGING:

- Microscopy on cerebral spinal fluid



TDR Diagnostics R&D Mission

**To promote and facilitate the development,
evaluation and application of
diagnostics for TDR diseases**



WHO/TDR Diagnostic R&D:

The Ideal Diagnostic Tool

A = Affordable by those at risk of infection

S = Sensitive

S = Specific

U = User-friendly (simple to perform, minimal training)

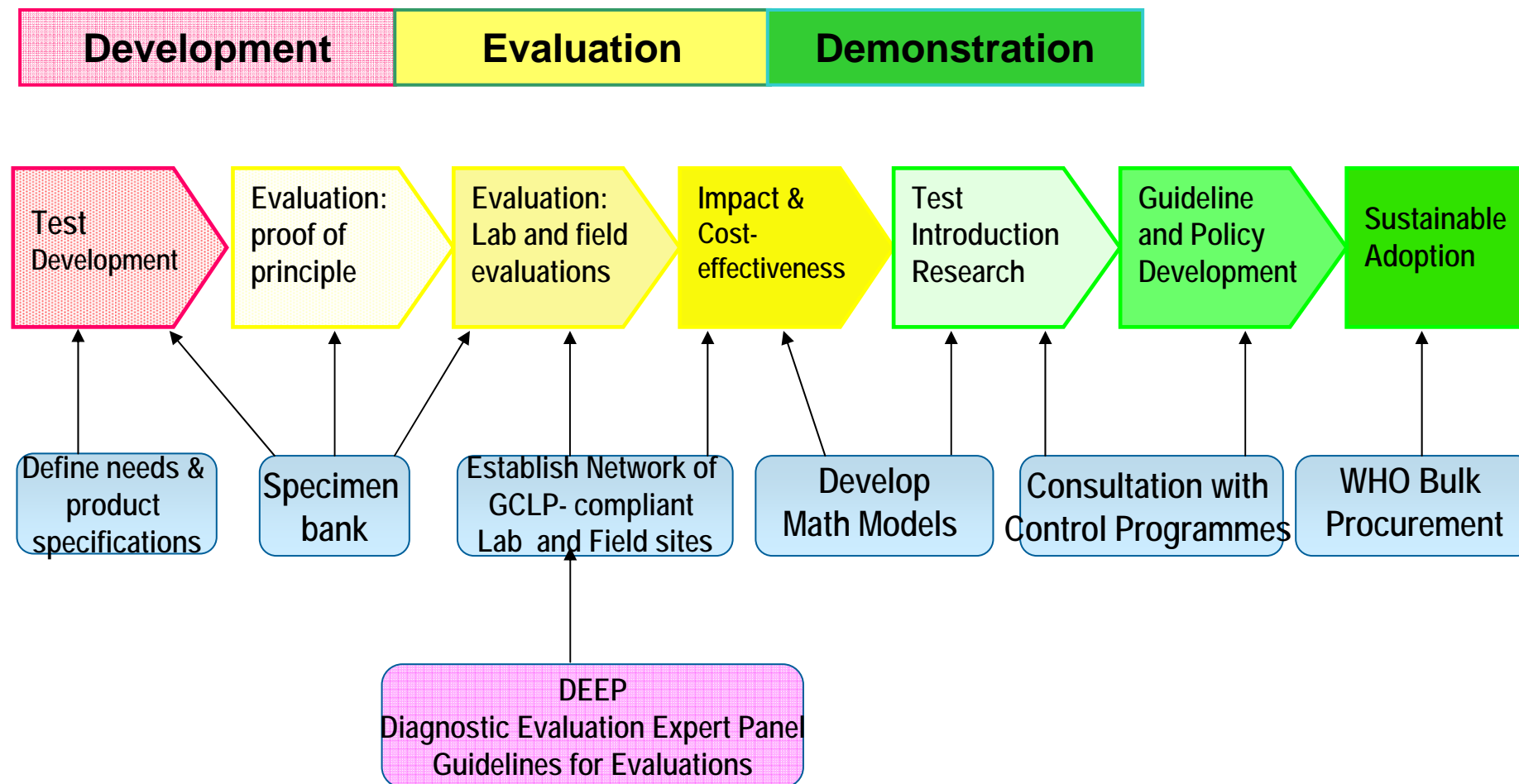
R = Rapid/robust (ambient storage, enables action at point of care)

E = Equipment-free

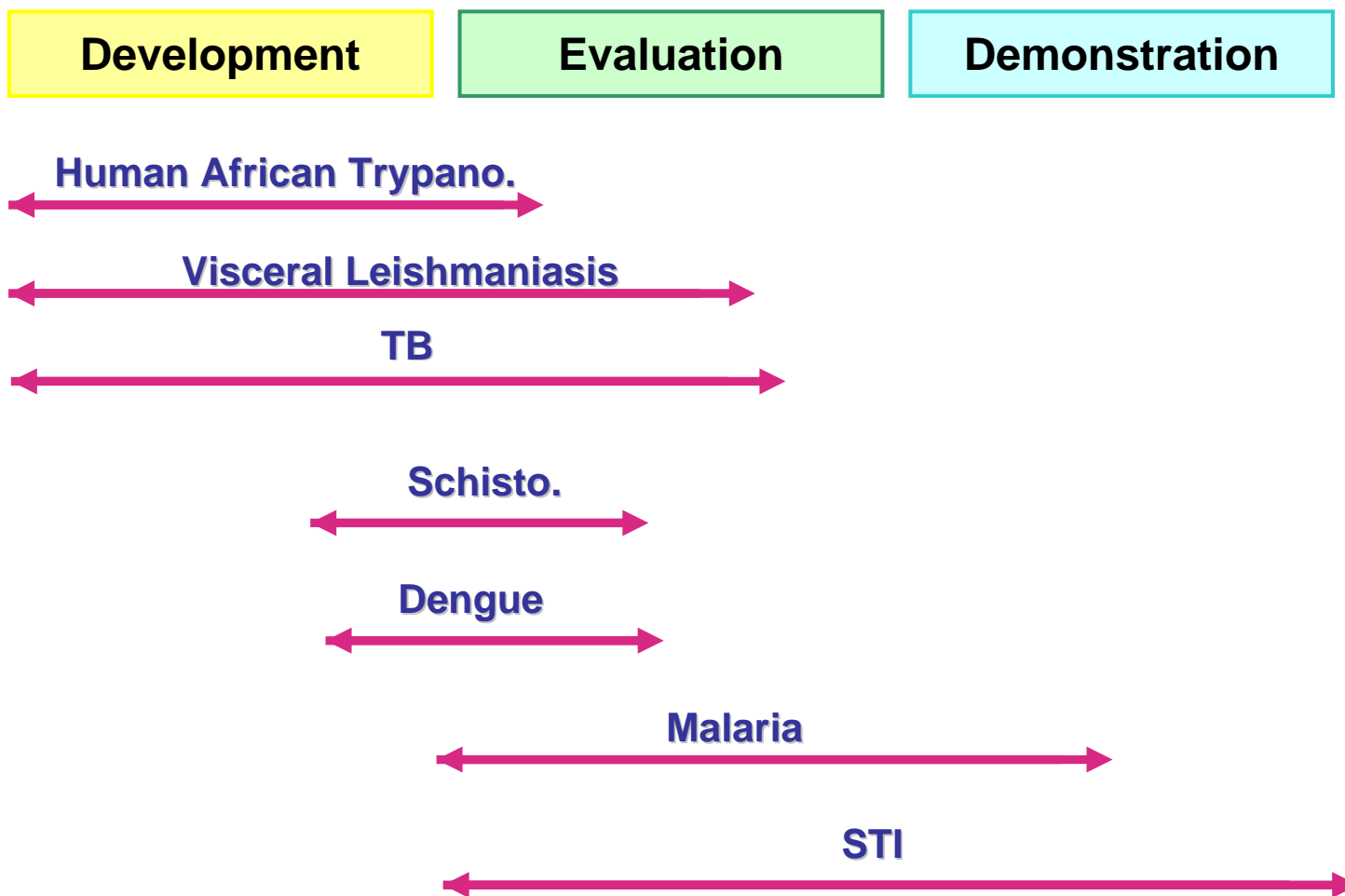
D = Deliverable to those who need it



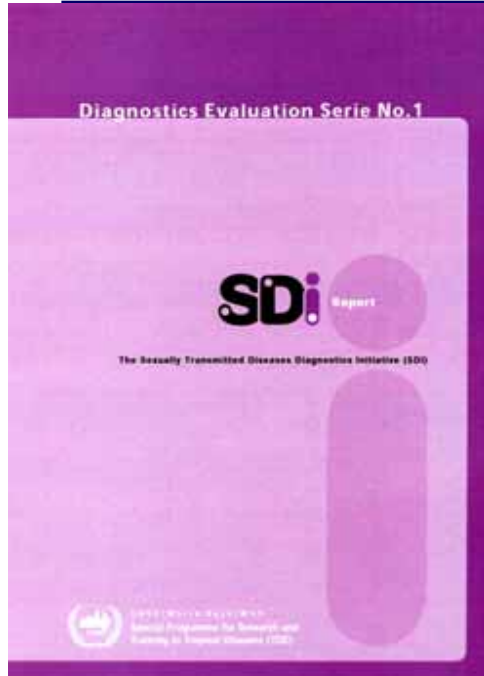
WHO/TDR Diagnostics R&D Strategy



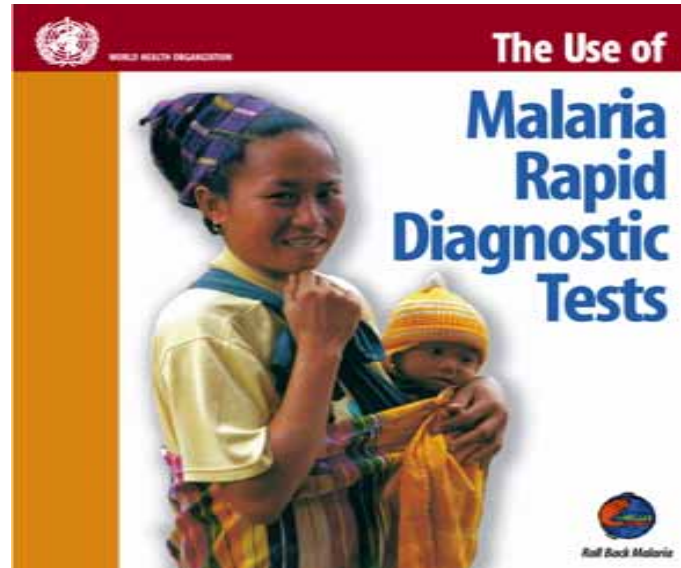
WHO/TDR Diagnostic R&D Activities 2006-7



WHO/TDR Diagnostic R&D Outputs



Diagnostic Evaluations



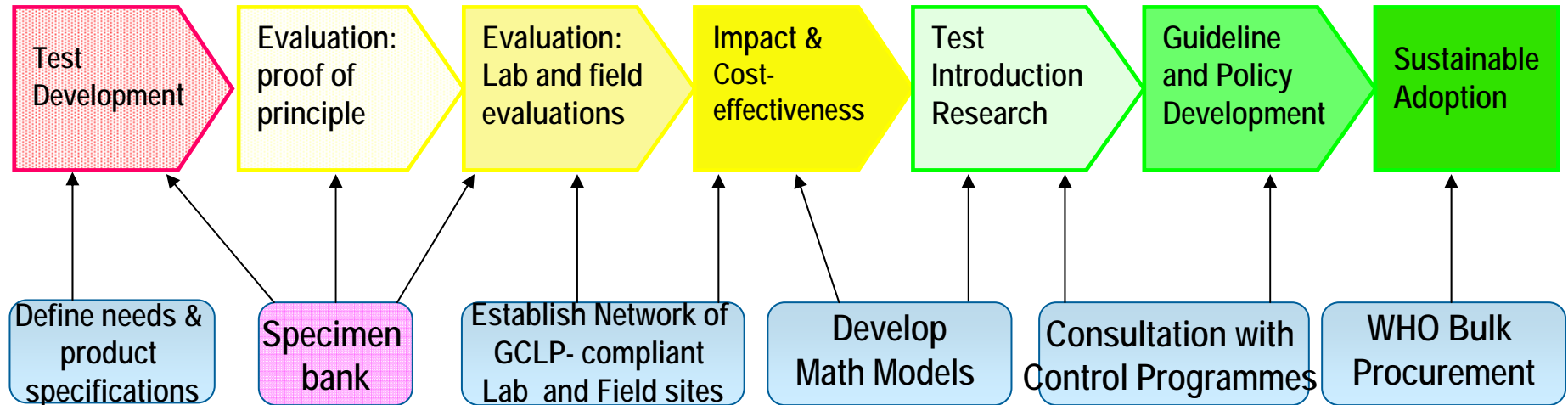
User Guide for Rapid Diagnostics



RDT Training Package



WHO/TDR HAT Diagnostics Activities 2004-5



Novel target discovery using proteomic signature detection

- Evaluation of IgM Latex Test
- Polysomnography for staging



TDR HAT Diagnostics Meeting

London, Feb 3 2006

- Brainstorming meeting held in conjunction with the Royal Society for Tropical Medicine HAT meeting on Feb 2, hosted by the London School of Hygiene and Tropical Medicine
- Participants included TDR funded PIs, HAT experts, representatives from FIND and MSF
- Summary of the way forward:
 1. Development of a database for published and unpublished data on diagnostics and other clinical trials for HAT
 2. Commissioning of systematic reviews on current diagnostic methods
 3. Establishment/upgrading of specimen and strain banks in DECAs
 4. Capacity building in DECAs for diagnostics R&D and clinical trials
 5. Funding improvements on existing tools
- Need for maximizing opportunities for synergy with ongoing studies

